



# Annual Report ARYA

“Attracting and Retaining Youth in Agriculture”  
– An approach towards youth empowerment

**2020**



ICAR-Agricultural Technology Application Research Institute, Kolkata  
Bhumi Vihar Complex, Block- GB, Sector-III,  
Salt Lake, Kolkata, West Bengal- 700097





# Annual Report

On

**“Attracting and Retaining Youth in Agriculture”  
– An approach towards youth empowerment**

**2020**

**ICAR-Agricultural Technology Application Research Institute, Kolkata**

Bhumi Vihar Complex, Block- GB, Sector-III,  
Salt Lake, Kolkata, West Bengal- 700097



- Published by** : **Director**  
ICAR- Agricultural Technology Application Research Institute  
BhumiVihar Complex, Sector-III, Block- GB  
Salt Lake, Kolkata – 700097
- Compiled and edited by** : **Dr. P.P. Pal**, Principal Scientist  
**Dr. Subhramalya Dutta**, Senior Research Fellow (Former)  
**Ms. Shreya Das**, Senior Research Fellow (Present)
- Correct citation** : “Attracting and Retaining Youth in Agriculture” – An approach  
towards youth empowerment  
ICAR- Agricultural Technology Application Research Institute, Kolkata

© 2021, ICAR- Agricultural Technology Application Research Institute, Kolkata

**Printed at** : Semaphore Technologies Pvt. Ltd.

---

## Preface



Attracting and Retaining Youth in Agriculture (ARYA), an endeavour of Indian Council of Agricultural Research, New Delhi was launched in 2016 as a pilot project to attract and empower the rural youths to take up various agriculture, allied and service sector enterprises and to enable them to establish network groups to take up capital and resource intensive activities like processing, value addition and marketing as well as to demonstrate functional linkage with different institutions and stakeholders. The identified enterprises of ARYA offer great opportunity to work with the rural youths with the background of current nutritional insecurity and socio-economic constraints. The emphasis has been on capturing and improving the understanding on performance of interventions in different agro-ecologies and farming systems for sustainable income and gainful employment generation in village level. This also facilitates quantification of various enterprises in different bio-physical and socio-economic context. In this way ARYA-KVKs play an important role in preparing village level planning for profitable enterprises and its implementation.

Compilation of ARYA Annual Report of ICAR-ATARI Kolkata for 2020 depicts a close assessment of endeavour of identified 9 ARYA-KVKs of West Bengal and Odisha under supervision and guidance of ICAR-ATARI Kolkata. Simultaneous attainment in the domain of institutional interventions, sustainable income and employment generation, capacity development of the rural youths through various skill development training programme etc. were regularly monitored and put on records. Annual Report of ARYA 2020 includes all the required and relevant information pertaining to achievements of ARYA-KVKs coping with the challenges of rural migration, employment generation as well as livelihood pattern for the empowerment of the youths.

All the staff members of ARYA-KVKs of Zone-V and Indian Council of Agricultural Research, New Delhi deserve appreciation for their contribution and guidance for compiling this report within the stipulated time. The untiring efforts of the staff of this Institute monitoring ARYA project through field visit and interaction with the identified youths have contributed a lot towards giving this Annual Report a desirable shape.

*S. K. Roy*

(S. K. Roy)

Director



## Acknowledgement

Implementation of ARYA project through nine Krishi Vigyan Kendras under zone V has mainly been successful owing to intense coordination, effective collaboration and exemplary convergence among all the organs dedicated towards on and off farm entrepreneurship development. The identified youths with appropriate knowledge and skill support from the KVK, financial institutes, line department officials and others have excelled in all fronts of business development, mainly with the available as well as potential enterprises in the districts. The fallout of this project can easily be attributed to the continuous guidance of Indian Council of Agricultural Research, more specifically the Deputy Director General (Agril. Extension) of ICAR, regular monitoring by the Dean / Directors of the State Agriculture Universities, timely input of host organizations and the youths who actually gave rise to the noble concepts of farm entrepreneurship development.

Though the contribution of all the implementing KVKs including Senior Scientist and Head, other scientists of KVK, Nodal Officer at national level and the team of ICAR- ATARI Kolkata under the leadership of the Director can't be expressed in words but still it should be acknowledged to showcase the cumulative efforts that helped us bring out this valuable document.

Analysis and compilation of raw data or information received from 9 KVKs were definitely an arduous job which has been eventually carried out by Shree Swayambhu Ghosh, SRF and Dr. K.S. Das, Principle Scientist, ICAR-ATARI Kolkata and Co-PI of ARYA project.

Acknowledgement is also extended to all those who have one way or other strengthened our efforts in publishing Annual Report 2020 in this present form.



(P.P.Pal)





## CONTENTS

| Sl. No. | Subjects                            | Page No. |
|---------|-------------------------------------|----------|
| 1.      | Introduction                        | 01       |
| 2.      | Objectives                          | 01       |
| 3.      | Name of ARYA KVKs under Zone-V      | 01       |
| 4.      | Achievements of KVK, Nimpith        | 02       |
| 5.      | Achievements of KVK, Purulia        | 12       |
| 6.      | Achievements of KVK, Uttar Dinajpur | 24       |
| 7.      | Achievements of KVK, Hooghly        | 44       |
| 8.      | Achievements of KVK, Cuttack        | 60       |
| 9.      | Achievements of KVK, Nayagarh       | 72       |
| 10.     | Achievements of KVK, Sambalpur      | 97       |
| 11.     | Achievements of KVK, Ganjam - 1     | 113      |
| 12.     | Achievements of KVK, Puri           | 120      |



## Introduction

In order to create interest and confidence among rural youths in agriculture, there is a need to make agriculture more profitable. Retaining youths in Agriculture and making agriculture more profitable are thus big challenges. Also, there is a continuous increase in the migration of rural youths to urban areas. On the other hand, the majority of farmers are small and marginal land holders which pose challenge to food security for the growing population. Thus, realizing the importance of the rural youths

in agricultural development especially from the point of view of food security of the country, Indian Council of Agricultural Research initiated a programme “Attracting and Retaining Youth in Agriculture” through different identified KVKs of this country. Accordingly, 5 KVKs from Odisha namely, Cuttack, Nayagarh, Sambalpur, Ganjam-1, Puri and 4 KVKs from West Bengal namely, Nimpith, Kalyan, Uttar Dinajpur, Hooghly carried out this programme under Zone-V.

## Objective

### The objectives of this project are-

- i. To attract and empower the rural youths to take up various agriculture allied and service sector enterprises.
- ii. To demonstrate sustainable, attractive, remunerative and climate smart agri-based job opportunities for rural youths at village level and create gainful employment.
- iii. To upgrade youth-capacity in specific agri-preneurship model adoption.
- iv. To establish network groups to take up resource and capital intensive activities like processing, value addition and marketing.
- v. To backstop technology dissemination chain and it’s scaling up.
- vi. To demonstrate functional linkage with different institutions and stakeholders.
- vii. To curb rural migration.

### Name of ARYA KVKs under Zone-V

| Sl. No. | KVK Name  |
|---------|---|
| 1       | Ramkrishna Ashram KVK, Nimpith, South 24 Paraganas, West Bengal |
| 2       | Kalyan KVK, Purulia, West Bengal                                |
| 3       | Uttar Dinajpur KVK, West Bengal                                 |
| 4       | Hooghly KVK, West Bengal  |
| 5       | Cuttack KVK, NRRI-Cuttack, Odisha                               |

| Sl. No. | KVK Name              |
|---------|-----------------------|
| 6       | Nayagarh KVK, Odisha  |
| 7       | Sambalpur KVK, Odisha |
| 8       | Ganjam-I KVK, Odisha  |
| 9       | Puri KVK, Odisha      |

## 1. Achievements of Ramkrishna Ashram KVK, Nimpith

### 1.1 Project Initiation

- The project started in the year 2015-16 with a view to empower rural youths with latest technological advancements so as to retain them in agricultural field and minimize migration.
- Rural Youth are very important in sustaining the agriculture sector as they are mostly progressive and can introduce new ideas and technologies into practice.
- However, a considerable proportion of this dynamic Rural Youth is gradually abstaining from agriculture sector, year after year.
- In this back drop the project was initiated with three interventions i.e.
  - Fishery based intervention
  - Horticulture based intervention
  - Livestock based intervention

### Objectives

- To demonstrate sustainable, attractive, remunerative and climate smart agri-based job opportunities for rural youth at village level
- To upgrade youth-capacity in specific agri-preneurship model adoption

- To backstop technology dissemination chain and its up-scaling

### 1.2 District Profile

According to census 2011, 29 C.D. Blocks and 7 Statutory Towns are there. There are total 2,042 villages in this district. The density of Population (Population per square km) of the District is 819 per square km.

- *Total Population-* 81,61,961
- *Percentage of youth:* about 38% of the district population.
- *Farming System Followed:* Rainfed farming system, cropped area is 361550 ha.
- *Employment pattern*

Out of total population, 36.32% are worker and rest 63.68% are non-worker (district statistic handbook 2014). Out of worker, 15.43 % falls in cultivar groups, 34.68% are under agricultural labours, 8.2 % are house-hold and Industry workers and rest 41.69 % are other workers. (Distribution of Population over different categories of workers and non-workers by sex in the district of South 24 Parganas -2011; source district statistic handbook 2014).

### 1.3 Identification of youth

The youths (age group of 18-40 year) of any society are the most important work force and are supposed to be the greatest asset of the district for the development of agriculture. They are dynamic, energetic, resilient, progressive and innovative. However, a considerable portion of this dynamic Rural Youth is gradually abstaining from agriculture sector. In this backdrop, ICAR launched the long-time expected ARYA project, with an aim to retain youths in Agriculture creating lucrative job opportunities within the agriculture. Our KVK, being a part of it, emphasised the following points in selecting youth beneficiaries for this project.

- Unemployed
- Participatory and innovative
- Having preliminary knowledge in respective enterprise
- Age between 18-40 years
- Minimum land holding of 0.04 ha for catfish hatchery and 0.05 ha for horticulture nursery
- Youths selected were energetic, dynamic and smart, having minimum education level of class VI or above.

### 1.4 Name of cooperating Institutions for technical support

- ICAR -ATARI, Zone V, Kolkata
- Central Institute of Fisheries Education (CIFE), Kolkata

- Central Institute of Brackishwater Aquaculture (CIBA), Kakdwip
- Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia

### 1.5 Enterprise details

#### a) Catfish hatchery

##### Objective:

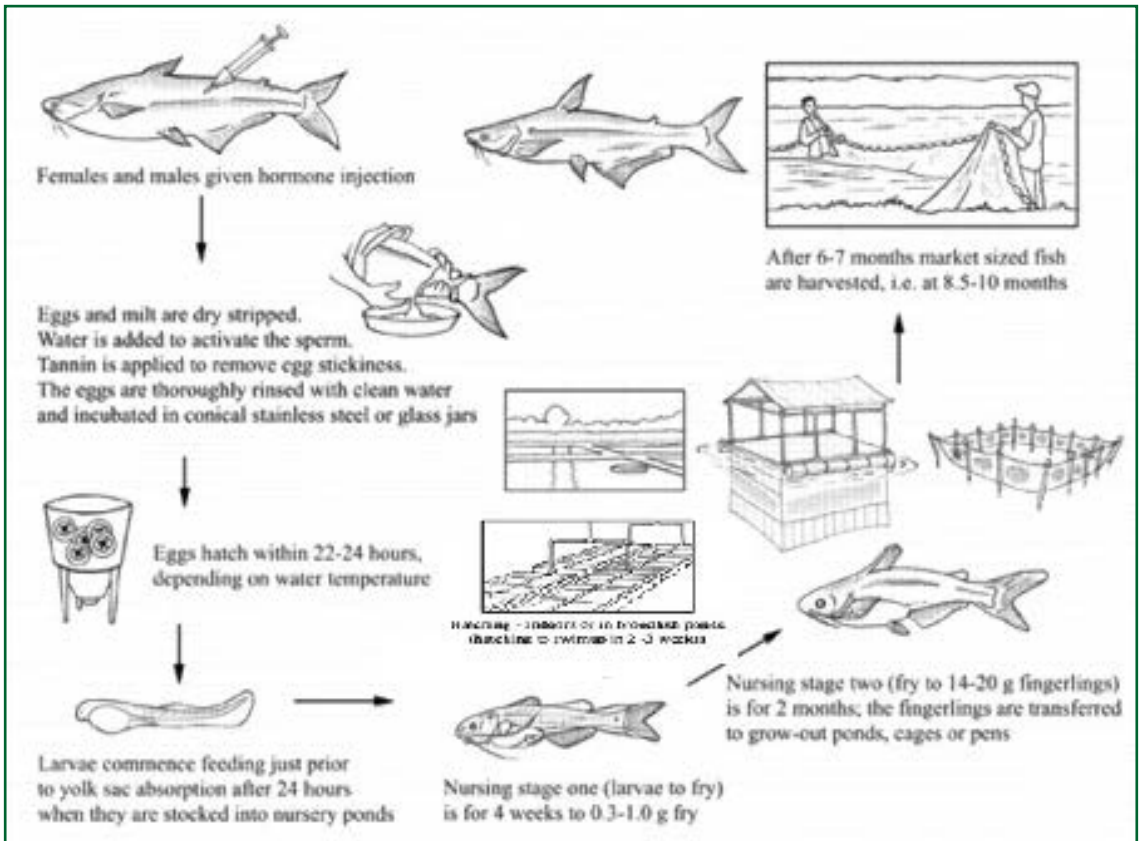
- Revival of Paddy cum Fish culture
- Fishery in derelict ponds
- Supply of quality seed at reasonable rate at door step with augmentation of income
- Conservation of endangered fish species

##### Details:

Like the carps, the breeding season of the catfish, too, extends from April to August. To get maximum seeds, it is imperative to breed the fish in captivity. Breeding of catfish viz. the Asian catfish, *Clarias batrachus*, involves identification of brooders, hormone injection to the female fish, castration of the male fish, stripping of eggs from the female fish and ultimately fertilization by mixing milt and the stripped eggs.

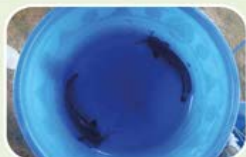
- A triggering dose of hormone injection is administered to gravid females which help in loosening of eggs in the ovary which in turn facilitates easy stripping of eggs from the female within 12-16 hrs.
- The abdomen of the male fish is cut open and the two testis lobes are taken out, cut into small pieces, collected on a piece of fine meshed net dipped in a small bowl filled with 0.9 per cent saline solution and

- then squashed by finger pressing within the piece of net and the sieved milt is collected in the bowl containing the saline solution
- The female fish is held by the head and pressure is applied on its swollen belly to collect the eggs in a bowl
- The milt suspension (in 0.9 per cent saline solution) is collected with the help of a dropper and is spread uniformly over the stripped eggs and then the bowl is vigorously shaken for a few seconds for fertilization
- Freshwater is added in the bowl and the washings are poured out
- The clean fertilized eggs in the bowl are then transferred on the surface of the mosquito net frames kept immersed in the glass hatching pool for further development
- Within 24 hrs. the eggs hatch out and after 3 days the small fish are fed with freshly hatched brine shrimp for 7-8 days after which the growing fry are fed with worms till they are ready to be sold after 21 days.



**Technical details :**

The breeding season of the Catfish, extends from April to August.



Breeding of catfish viz. the Asian catfish, involves identification of brooders



Hormone injection to the female fish, which help in loosening of eggs in the ovary which in turn facilitates easy stripping of eggs from the female within 12-16 hrs.



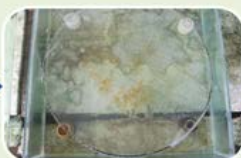
The abdomen of the male fish is cut open and the two testis lobes are taken out in fine meshed net dipped in a small bowl filled with 0.9 % saline solution and the milt is squeezed in the bowl



The female fish is held by the head and pressure is applied on its swollen belly to collect the eggs in a bowl



The milt suspension is collected with the help of a dropper and is spread uniformly over the stripped eggs and the bowl is shaken for a few seconds for fertilization



Fertilized eggs are washed and then transferred on the surface of the mosquito net in the glass hatching tray for further development



Within 24 hrs. the eggs hatch out and after 3 days the small fish are fed with freshly



hatched brine shrimp for 7-8 days after which the growing fry are fed with worms till they are ready to be sold after 21 days

**b) Horticulture Nursery**

**Objective:**

- To raise disease free and quality seedlings/ saplings of horticultural crops
- To distribute horticultural plant materials among farmers.
- To introduce the exotic species of horticultural plants in the locality among farming community.
- Provide additional employment and livelihood opportunity during lean agricultural operation period.

**Details:**

A nursery is a managed site, designed to produce seedlings grown under favorable conditions until they are ready for planting. All

nurseries primarily aim to produce sufficient quantities of high quality seedlings to satisfy the needs of users. They are an important source supplying the seedlings for meeting the demand of fruit, pulp for paper, fuel wood, timber and other demands of the industries.

- A nursery is usually arranged in a series of beds with pathway between them.
- An open area is needed at one end, where work such as sieving of soil and filling of containers can be done.
- Containers, polybag, fertilizers, chemicals, electricity, tools, equipment, machineries, water and laborers are the major input to nursery.
- For success in propagation, framed structures of shade net house is important to provide controlled

environment. A Shade house is a structure enclosed by agro nets or any other woven material to allow required sunlight, moisture and air to pass through the gaps.

- In our Horticulture nursery project, a shade net house of 400 sq.m area was provided. Green coloured shade net of 50 per cent shading intensity was used to cover the nursery area. This structure creates an appropriate micro climate conducive to the plant growth.

- As, irrigation is the main part to make a nursery successful, a One HP electric pump with suction and delivery pipes was provided to each beneficiary.

- For all nursery operations like cutting, budding, grafting etc., a grafting tool kit was provided.

- 200 kg poly packets were provided for raising saplings (like mango, sapota, guava, ornamental plants, etc.) in it.





**i. Input /Support provided to youth groups**

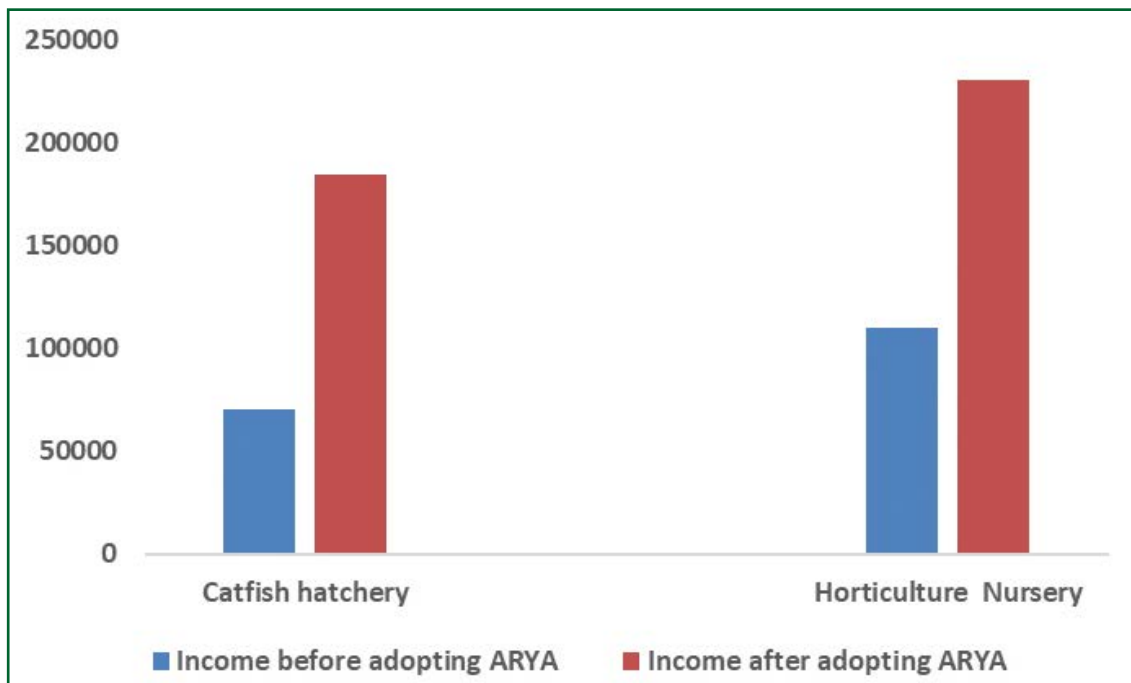
*Capacity development:* (Training, Exposure Visit, Invited KVK, Focal group discussion, demonstration etc.)

**Support provided to youth groups**

| Activities                     | Catfish Hatchery  | Horticulture Nursery   |
|--------------------------------|---|--|
| On campus training             | 1   | 1  |
| On spot advisory               | 4   | 3  |
| Kisan mobile advisory services | 12  | 10   |
| Input support                  | Glass Aquaria<br>Thermocol sheet<br>Water reservoir<br>Air Blower<br>1 HP Electric Pump<br>BREEDING ACCESSORIES.<br>Pipe line.<br>Hormone<br>Brine Shrimp | 50 % Shade Net<br>1 HP Electric Pump<br>Delivery Pipe<br>Poly Packets<br>Tool sets - (Grafting Knife,<br>Secateurs, saw, sprayer, spade,<br>Plant hormone) |
| Field visit                    | 8   | 8  |

**ii. Progress made**

| Enterprise name      | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |           |                     | % increase | Economic of enterprise |            |      |
|----------------------|-----------------------|-----------|--|-----------|---------------------|------------|------------------------|------------|------|
|                      |                       |           | Before adopting ARYA                             |           | After adopting ARYA |            | Gross cost             | Net return | BCR  |
| Catfish hatchery     | 12                    | 6         | Gross income (Rs.)                               | 70000.00  | 185000.00           | 164.29     | 55000/-                | 130000/-   | 3.36 |
|                      |                       |           | Time spent with family (Hrs) per day             | 6         | 20                  | 233.33     |                        |            |      |
|                      |                       |           | Contribution to family expenditure (%)           | 20        | 71                  | 255        |                        |            |      |
|                      |                       |           | Retained at village (months)                     | 4         | 12                  | 200        |                        |            |      |
| Horticulture Nursery | 10                    | 6         | Gross income (Rs.) per month                     | 110000.00 | 231000.00           | 110        | 135000/-               | 96000/-    | 1.71 |
|                      |                       |           | Time spent with family (Hrs) per day             | 5         | 18                  | 260        |                        |            |      |
|                      |                       |           | Contribution to family expenditure (%)           | 24        | 58                  | 141.67     |                        |            |      |
|                      |                       |           | Retained at village (months)                     | 3         | 12                  | 300        |                        |            |      |



### iii. Name of youths involved

| Sl. No. | Name of the Youth | Village Name        | Block          | Name of adopting enterprise |
|---------|-------------------|---------------------|----------------|-----------------------------|
| 1       | Shibalal Maity    | Paschim Jata        | Mathurapur -II | Catfish hatchery            |
| 2       | Ananda Das        | Bhubaneshwari       | Kultali        | Catfish hatchery            |
| 3       | Ashutosh Maity    | Nagendrapur         | Mathurapur -II | Catfish hatchery            |
| 4       | Sujata Naskar     | Dakshin Bijoyanagar | Jaynagar-II    | Catfish hatchery            |
| 5       | Tanusreeghosh     | Dakshin Moukhali    | Canning-II     | Catfish hatchery            |
| 6       | Goutam Purkait    | Chuprijhara         | Jaynagar-II    | Catfish hatchery            |
| 7       | Amaresh Khastagir | Rajapur,            | Mathurapur-II  | Horticulture Nursery        |
| 8       | Mithun Mondal     | Nagendrapur,        | Mathurapur-II  | Horticulture Nursery        |
| 9       | Monisha Debbarman | Uttarpara,          | Joynagar-I     | Horticulture Nursery        |
| 10      | Sunanda Sardar    | Gopalganj           | Kultali        | Horticulture Nursery        |
| 11      | Surajit Baidya    | Dakshin Kankandighi | Mathurapur -II | Horticulture Nursery        |
| 12      | Tarun Sardar      | Chapatala Road      | Joynagar-II    | Horticulture Nursery        |

**N.B. – The youths have to operate their enterprises for at least 2 years for earning sufficient amount to generate any capital.**

**iv. Income level**

| Enterprise           | Area (Acre)/ No.       | Cost of production (Rs. per unit) | Return (Rs. Per unit) | Net Income (Rs. per unit) |
|----------------------|------------------------|-----------------------------------|-----------------------|---------------------------|
| Catfish Hatchery     | 300 sqft each (6 No.)  | 55000/-                           | 185000/-              | 130000/-                  |
| Horticulture Nursery | 4000 sqft each (6 No.) | 135000/-                          | 231000/-              | 96000/-                   |

**v. Impact**

By undertaking the different enterprises under the ARYA project, the youths are achieving gainful employment and are spending most of their time in the village. This has created new avenues for income generation in the village and is contributing

in the upliftment of village economy with diversified livelihood options. Even in this Covid scenario, the production of seeds and planting materials in the village itself has resulted in profitable livelihood opportunities among the village youths.

**(A) Capacity Building**

| Thematic Area                       | Topic of training                                       | No. of courses | No. of beneficiaries |        |       |
|-------------------------------------|---|----------------|----------------------|--------|-------|
|                                     |   |                | Male                 | Female | Total |
| Breeding of endangered fish species | Breeding of indigenous catfish in backyard system       | 1              | 23                   | 2      | 25    |
| Horticulture nursery                | Training programme on Multipurpose horticulture nursery | 1              | 19                   | 1      | 20    |



**SUCCESS STORY- 1**

|   |   |
|---|---|
| Name of farmer                            | Monisha Debbarman   |
| Age                                       | 32  |
| Aadhaar No                                | 7549-3519-4939  |
| Address                                   | C/O – Samaresh Debbarman<br>Vill - Uttarpara,<br>Block – Joynagar-I<br>Dist- South 24 Parganas. |
| Contact details (Phone, mobile, email Id) | +919903233480   |

|   |  |
|---|--|
| Landholding (in ha.)                    | 0.05   |
| Education                               | Madhyamik  |
| Family members                          | 3  |
| Household income (before ARYA activity) | Working as house wife.   |
| Training received from RAKVK            | Received skill development training on Management of multipurpose horticulture Nursery.  |
| ARYA intervention                       | One Horticulture Nursery was established in 400 sqm of land in the year 2020-21<br>Continuous technical backstopping and training was provided to the beneficiary as well as her family members for her successful establishment in the new venture. |
| Present production                      | Vegetable seedlings : 1,38,300 no., Flower seedlings 45,750 no.  |
| Marketing and income                    | First year: 2,31,000/- (expected to reach 4-5 lakh in 2-3 years)   |
| Cost of cultivation                     | First year: Rs. 1,35,000/- (Manure, fertilizer, pesticides, seed, labourer etc.)   |
| Average net income per month            | Rs. 12000/- per month (Oct., 2020 to March, 2021)  |
| Social and Environmental impact         | Increase in social prestige and acceptability of the youth.<br>Contribution to environmental improvement through production of planting materials and its plantation.  |
| Horizontal/ Vertical spread             | More number of farmers are getting interest in this new system of horticulture nursery system.<br>This climate smart system of cultivation is very much environment safe and produces better quality leaf with very less use of pesticides.          |

### (B) Profile of ARYA youths earning more than Rs. 10000 per month

| Income/ month (Rs.) | Name of the Youth | Age | Educational qualification | Phone no   | Aadhaar no     | Land holding (ha) | Name of adopting enterprise |
|---------------------|-------------------|-----|---------------------------|------------|----------------|-------------------|-----------------------------|
| 12, 000             | Monisha DebBarman | 32  | Madhyamik                 | 9903233480 | 7549-3519-4939 | 0.05              | Horticulture Nursery        |

### (C) Dignitaries visited ARYA villages: NIL

### (D) Newspaper coverage: NIL

### (E) Publications: NIL

### (F) Migration status

It is expected that by adopting the enterprises, the rural youth will remain attached to their villages for successful operation of the selected activities which will give them lucrative return than they

used to get previously. Besides, the enterprises have also provided scope for engagement of other local youths thereby diminishing the chances of overall migration.



Horticulture Nursery



Catfish Hatchery

## 2. Achievements of KVK Kalyan, Purulia

### 2.1 Project Initiation: 2018-2019

#### Name of ARYA villages

Table-1

| Sl. No. | KVK name                       | Name of ARYA village | Established enterprise     |
|---------|--------------------------------|----------------------|----------------------------|
| 1       | KVK Kalyan Purulia West Bengal | Jambad               | Scientific Lac Cultivation |
| 2       |                                | Ilu                  |                            |
| 3       |                                | Jargo                |                            |
| 4       |                                | Karmadih             |                            |

### 2.2 District Profile:

Purulia District, an integral part of Chotanagpur plateau under the sub humid, sub tropical red and lateritic agro climatic zone of West Bengal lying between 22.6° and 23.5° North Latitude and 85.75° and 86.65° East Longitude, 255 mt. high from mean sea level, has earned the distinction as drought prone area, because of its significant and distinct characteristics among other districts of West Bengal. The topography of the land is highly undulating where 29.69 per cent of the total land of the district comes under forest areas. Temperature varies from 7.8 to 48.6 °C with average erratic rainfall of 1216 mm. 73 per cent agricultural lands belong to small and marginal farmers. Cultivation is predominantly mono-cropped under rainfed condition with Aman paddy as the only crop.

### 2.3 Identification of youth:

Identification of youth involved has been done based on the level of interest shown in orientation programmes keeping in mind the capability of the interested youths to sustain the enterprise post withdrawal of the project.

### 2.4 Name of cooperating Institutions for technical support:

- Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia
- Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar
- Institute of Agriculture, PalliSiksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
- West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata.
- PFDC, Dept. of Agriculture and Food Engineering, IIT Kharagpur
- Agricultural Technology Application and Research Institute-ICAR, Kolkata.
- Indian Institute of Natural Resins and Gums, Namkum, Ranchi
- Sidho Kanho Birsa University, Purulia
- Line Departments, Purulia.
- ATMA, Purulia.

## 2.5 Enterprise details

### a) Scientific Lac Cultivation:

#### i. Detailed description:

Lac is a resinous substance secreted by a specialized group of plant bugs, *Lacciferlacca*, that suck sap and create its own shelter on the host trees. It has two strains – Kusumi and Rangini. They can thrive on the tender branches of many tree species, but primarily on - Kusum (*Schleicheraoleosa*), Palash (*Butea monosperma*) and Ber (*Zyziphus mauritiana*) which makes these trees commercially important. Due to its diverse usage in paint, jewelry, pharmaceutical coating, food, electric industry etc, lac has a very promising market and thereby can be a sustainable source of livelihood for farmers dwelling near forest or sub-forest areas where host trees of lac are in abundance.

In Purulia, West Bengal, 29.69 per cent of land mass comes under forest areas where the host trees of lac insects grow widely. Lac cultivation had been a traditional activity in this district and it earns its very name, Purulia (from '*Puru+lah*' meaning thick encrustation of lac) from this age old farming practice. However, traditional ways of lac cultivation are plagued with many setbacks in terms of pruning pattern, optimum brood quantity, inoculation method and disease and pest management. As a result, the conventional farming of this crop fetches meager production that can neither sustain the interest of producer nor

generate appreciable income to attract youth to adopt this agro-enterprise.

The increase in demand for natural fibers and resins in the past decade has escalated the demand for lac in multiple industries as well, as a result of which supply of lac is falling short thereby generating the utmost need of promotion of scientific methods for lac production to ensure steady supply of crop which in turn may provide assured source of income to the farmers to alleviate poverty.

Keeping in mind the above mentioned aspects, 'Scientific Lac Cultivation' has been selected after careful considerations, to be an agro-enterprise functioning under ARYA Project in the district of Purulia, with a view to develop micro-entrepreneurship that may sustain the livelihood of youth and reduce migration.

This ARYA enterprise is comprised of four components:

- Introduction of scientific practices for cultivation through orientation of rural youth.
- Selection of beneficiaries who are interested and are capable of dedicating themselves to generate a livelihood and emerge as entrepreneurs
- Distribution of inputs to support the buildup of the enterprise and
- Demonstrate the evolved scientific techniques to other farmers for horizontal dissemination through monitoring, documentation and reporting.

### ii. Input /Support provided to youth groups

In order to develop micro-entrepreneurship in this agro-enterprise KVK Kalyan provided the following through ARYA project:

1. Technical support through orientation programmes and exposure visit
2. Broodlac for inoculation
3. Secateur and daoli for pruning and lac harvest
4. Scrapping knife
5. Spray machines
6. Pesticides
7. Fertilizer
8. *Flemingia semialata* saplings as alternate cultivable host plant for brood lac conservation and lac production
9. Regular monitoring to aid in decision making regarding issues generated
10. Collaboration with IINRG Ranchi, state departments and progressive farmers for supporting beneficiaries with technical knowhow and marketing strategies

### iii. Progress made

**Table-2**

| Enterprise name            | No. of youth involved  | Unit/ No. | Measurable indicators of output in suitable unit             |  | % increase      | Economic of enterprise      |                             |      |
|----------------------------|--|-----------|--|--|-----------------|-----------------------------|-----------------------------|------|
|                            |  |           | Before adopting ARYA   | After adopting ARYA  |                 | Gross cost (Rs. in lakh)    | Net return (Rs. in lakh)    | BCR  |
| Scientific Lac Cultivation | 07<br>(03 out of 07 involved in kusmi lac cultivation & 04 involved in rangeeni lac cultivation) | 07        | a) No. of trees inoculated (rangeeni) =450                   | a) No. of trees inoculated (rangeeni) = 700                      | (a)55.6         | Rangeeni<br>(per 100 trees) | Rangeeni<br>(per 100 trees) | 2.13 |
|                            |  |           | b) No. of trees inoculated (kusmi) =16                       | b) No. of trees inoculated (kusmi) =25                           | (b)90.0         | = 0.15                      | = 0.32                      |      |
|                            |  |           | c) Brood lac conservation (in%) rangeeni = 15-20%            | c) Brood lac conservation (in %) rangeeni = 45-65%               | (c)200-225      | Kusmi<br>(per 10 trees) =   | Kusmi<br>(per 10 trees) =   | 1.60 |
|                            |  |           | d) Brood lac conservation (in %) kusmi= 27-30%               | d) Brood lac conservation (in %) kusmi= 45-60%                   | (d) 66.7-100    | 1.50                        | 2.40                        |      |
|                            |  |           | e) Yield of stick lac (kg) rangeeni = 300-350 (>=0.5kg/tree) | e) Yield of stick lac (kg) rangeeni = 1048-1240 (>= 1.10kg/tree) | (e) 249.3-254.3 |                             |                             |      |
|                            |  |           | f) Yield of stick lac (kg/tree) kusmi= 15-20                 | f) Yield of stick lac (kg/tree) kusmi= 40-65                     | (f) 166.7-225.0 |                             |                             |      |



#### iv. Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth | Village Name |
|---------|-------------------|--------------|
| 1       | Rina Mahato       | Ilu          |
| 2       | Anima Mahato      | Karmadih     |
| 3       | Prasenjit Mahato  | Karmadih     |
| 4       | Bikram Khutdar    | Jargo        |
| 5       | Jaleswar Mahato   | Jambad       |
| 6       | Alpana Mahato     | Jambad       |
| 7       | Sampoorna Mahato  | Jambad       |

#### v. Capital Generation

**Table-4**

| Particulars/ Equipment | Quantity (No.) |
|------------------------|----------------|
| Spraying machines      | 03             |
| Secateur               | 05             |
| Daoli                  | 10             |
| Scraping knife         | 10             |

#### vi. Income level \*

**Table-5**

| Enterprise                 | No. of trees (host plants) | Cost of production (Rs. per tree) | Return (Rs. Per tree) | Net Income (Rs. Per tree) |
|----------------------------|----------------------------|-----------------------------------|-----------------------|---------------------------|
| Scientific Lac Cultivation | Kusum - 25                 | 15000.00                          | 24000.00              | 9000.00                   |
|                            | Ber - 85                   | 600.00                            | 1100.00               | 500.00                    |
|                            | Palas - 615                | 350.00                            | 550.00                | 250.00                    |

\*- Since lac cultivation deals with different host plants that are of forest/sub-forest origin, area cannot be specified and beneficiaries have different host plants [(3 hosts viz., palas (*Butea monosperma*), kusum (*Schleichera oleosa*) and ber (*Zizyphus zuzube*)] the cost of production will vary and hence the area and economics are calculated based on total no. of host trees the beneficiaries possess and cost of production per tree

#### vii. Impact

- Promotion of lac cultivation to the surrounding villages through horizontal expansion
- Development of interest in women to cultivate lac owing to the profit generated
- Utilization of underutilized forest resource to generate employment and income
- Rural youth drawn towards the enterprise to generate income other than migrating to nearby states

## Capacity Building

Table-6

| Thematic Area                                | Topic of training   | No. of courses | No. of beneficiaries |        |       |
|--|---|----------------|----------------------|--------|-------|
|  |   |                | Male                 | Female | Total |
| <b>Scientific Lac Cultivation Enterprise</b> | Income generation through scientific lac cultivation                          | 01             | 13                   | 02     | 15    |
|  | Techniques involved in pruning of lac hosts trees and inoculation of broodlac | 01             | 11                   | 04     | 15    |
|  | Disease and pest management in lac  | 01             | 07                   | 08     | 15    |
|  | Harvest and post harvest storage techniques in lac cultivation                | 01             | 12                   | 03     | 15    |

### b) Vermicompost Production:

#### i. Detailed description:

There is no doubt that in Purulia, where on side pollution is increasing due to accumulation of organic wastes and on the other side there is shortage of organic manure, which could increase the fertility and productivity of the land and produce nutritive and safe food. So the scope for vermicomposting is enormous.

The soils of Purulia district having lower soil pH, lower water retention capacity, low in organic matter content and lower fertility status. The most of the fertile top soils are lost through runoff every year during the rainy season. By the addition of vermicompost as organic source in to soil it may raise to some extent soil pH, water retention capacity and fertility status.

During vermicomposting, the important plant nutrients present in the organic waste are released and converted into forms that are more soluble and available to plants. Vermicompost also contains biologically active substances such as plant growth regulators. Moreover, the earthworms provide a protein source for soil macro and micro biota.

Vermicompost is the best out of organic manure. On proper handling of the organic waste *i.e.*, proper maintenance of certain physical and chemical properties by the normal activities of various earthworms it converted into vermicompost which will act as a conditioner for the soil health as well as a rich nutrient source for the crops.

In recent years organic agriculture is getting most popularity and demand for quality organic manures is increasing. But sufficient source of organic manures are not available. So, Vermicompost production under ARYA project is a better option to the unemployed rural youths for generating additional income as well as minimizing the environmental pollution.

This ARYA enterprise is comprised of following components viz., Introduction of vermicompost production through orientation of rural youth. Selection of interested beneficiaries as an entrepreneur. Distribution of inputs to support the buildup of the enterprise and to demonstrate the vermicompost production techniques to the interested nearby farmers for horizontal dissemination through monitoring, documentation and reporting.

**Capacity Building:**

**Table-6**

| Thematic Area | Topic of training                     | No. of courses | No. of beneficiaries |        |       |
|---------------|---------------------------------------|----------------|----------------------|--------|-------|
|               |                                       |                | Male                 | Female | Total |
|               | Production technology of vermicompost | 01             | 13                   | 07     | 20    |

**c) Nursery raising of vegetable seedlings:**

**i. Detailed description:**

Seedlings will be raised in pro-trays placed inside polyhouse to prevent from insect infestation. Vermicompost and sand @ 1:1 or well decomposed, nutrient enriched and sterilized cocopeat would be used as the growing medium for nursery production. The pro-trays are initially filled with growing medium and shallow depressions of about 0.5 cm depth are made in each cell for seeds sowing. Each cell is sown with one seed and germination starts in 5-7 days of sowing. Seedlings may be sprayed with Acephate (0.75 l/litre of water) to avoid any thrips infection. The seedlings will be ready for planting in 30-35 days after sowing. About 40 g seed is required to plant 1000 m<sup>2</sup> of green house area. The soil inside the polyhouse is loosened to fine tilth and then beds are formed at 75 cm width with 45 cm height and leaving 45 cm working space between two beds. Before bed formation, well decomposed organic manure or Vermicompost along with sand, saw dust is added to soil @

10 kg per m<sup>2</sup>. The beds are drenched with 4% formaldehyde (4 litres/m<sup>2</sup> of the bed) and covered with polythene sheet for 3-5 days. Afterwards, the polythene is removed; the beds are raked repeatedly every day to remove the trapped formaldehyde fumes completely prior to planting.

This ARYA enterprise is comprised of four components, viz.,

- Introduction of scientific practices for nursery raising of vegetable seedlings in poly house through orientation of rural youth.
- Selection of beneficiaries who are interested and are capable of dedicating themselves to generate a livelihood and emerge as entrepreneurs
- Distribution of inputs to support the buildup of the enterprise and

Demonstrate the evolved scientific techniques to other farmers for horizontal dissemination through monitoring, documentation and reporting.

**Capacity Building:**

**Table-6**

| Thematic Area                          | Topic of training             | No. of courses | No. of beneficiaries |        |       |
|--|-------------------------------|----------------|----------------------|--------|-------|
|  |                               |                | Male                 | Female | Total |
| Nursery Raising of Vegetable Seedlings | Vegetable seedling production | 01             | 12                   | 08     | 20    |

**d) Goatery:**

**i. Detailed description:**

Entrepreneurship development through Identification and conservation of higher growth rate germplasm resources of Black Bengal Goat in its natural habitat and Shirohi Goat farming through intensive system in Purulia district.

Purulia is the western most part of the state West Bengal surrounded by Ayodhya hill range of Chhotonagpur Plateau. The landscape is characterized by lines of sharply raising rocky projection with almost flat topped arches clothed in luxurious vegetation. The rest of the district has a gently undulation topography with occasional hillocks of hard rocks. The animal catchment of the selected villages more or less native in nature i.e. the breed (Black Bengal Goat). Admixture of other germplasm are difficult due to its geographical barrier. The villages have a good number of (6000 approx. as per 8th livestock sample, 2007) of world famous Black Bengal Goat with high reproductive efficacy in term of fecundity and fertility. The goat usually get matured at an earlier age of 4-6 months, give birth twice in a year or almost twice in every 14<sup>th</sup> months with an average litter size of 2 kids per kidding. However, the striking features of this locally available of Black Bengal Goat is the body weight which is higher than the

animals in the other region. The weight of the buck is 30 kg approx. and the doe is not less than 20 kg.

**Objectives:**

1. Identification and establishment of higher growth rate variety of Black Bengal Goat by phenotypic characterization and then confirmation by randomized genetic characterization.
2. Selective breeding of higher body weight and optimum reproductive performance.
3. Formation of superior germplasm doe her and buck mother farm of Black Bengal Goat in its natural habit by the selected entrepreneurs.
4. Open nuclear breeding through artificial insemination by the goat farmer co-operative or cluster farm in the locality.
5. Marketing through state wise distribution pedigree animal for introduction of desirable straits among the other population.
6. Comparative performance among the entrepreneurship development process through Shirohi breeds of Goat Farming through intensive system of management.

**Capacity Building Programme:**

**Table-6**

| Thematic Area | Title of the Training   | No. of Course | No. of beneficiaries |        |       |
|---------------|-------------------------|---------------|----------------------|--------|-------|
|               |                         |               | Male                 | Female | Total |
| Goatery       | Scientific Goat Farming | 01            | 28                   | 17     | 45    |

## Success Story of ARYA Youth:



|  |  |
|--|--|
| <b>1. Name of Enterprise</b>           | <b>Lac Cultivation</b>   |
| <b>2. Name of Beneficiary</b>          | Bikram Khutdar<br>S/o Nabin Khutdar  |
| <b>3. Address</b>                      | Vill.- Jargo<br>PO- Jargo<br>Block- Jhalda I-723212  |
| <b>4. Introduction/<br/>Background</b> | Bikram Khutdar is 25 years old and has dropped from college. He has a keen interest in agriculture and allied sectors and believes in development of agri-entrepreneurship through hard work, technological support and innovative ideas. He has been exposed to lac cultivation from childhood as it has been for generations in his family. He has received training from KVK Kalyan Purulia and thereafter addressed the issues that reduce productivity of the crop  |
| <b>5. Progress Made</b>                | <ul style="list-style-type: none"> <li>• Before being associated with ARYA Programme Bikram used to cultivate lac in the conventional manner as he has been taught by his elders.</li> <li>• After receiving training and technological support he has carefully identified the problems that prevented him from obtaining potential productivity out of the crop.</li> <li>• He has also learned to preserve his brood lac for inoculation in upcoming seasons thereby reducing his cost of production. He has also managed to inoculate lac in more number of host plants that were available to him and were not being utilized. He has managed to take kusum trees on lease to increase his cultivation</li> <li>• He is now encouraging youths in his village to get associated with the enterprise for income generation and better livelihood.</li> <li>• Besides he keeps himself updated about the information of markets, agricultural inputs, etc. He has developed healthy relation with the Govt. officials.</li> </ul> |
| <b>6. Benefit to Youth</b>             | The factors responsible for his success are: <ul style="list-style-type: none"> <li>• Individual efforts &amp; hard working</li> <li>• Support from KVK Kalyan, Purulia; Dept. of Agriculture, Dept. of Horticulture, Purulia, Govt. of W.B.</li> <li>• Training provided by KVK Kalyan, Purulia &amp; selected as ARYA Entrepreneur.</li> </ul>   |

|   |  |                         |                         |            |
|---|--|-------------------------|-------------------------|------------|
| <b>7. Change in Economic Status</b>           | <b>01 unit= 300 ber trees and 05 kusum trees</b>   |                         |                         |            |
|   | <b>Particulars</b>   | <b>Gross cost (Rs.)</b> | <b>Net return (Rs.)</b> | <b>BCR</b> |
|   | Rangeeni lac   | 32000.00                | 90000.00                | 2.81       |
|   | Kusmi lac  | 60000.0                 | 110000.00               | 1.83       |
| <b>8. Constraints faced</b>                   | Lack of availability of quality brood lac<br>Poor marketing & storage facilities   |                         |                         |            |
| <b>9. Perception of others in the Village</b> | Lac is age old agricultural produce that provides income with minimum labour<br>Management of pest and diseases successfully will lead to good income generation throughout the year   |                         |                         |            |
| <b>10. Conclusion</b>                         | Lac cultivation is an age-old practice in Purulia. However, people do not consider the need to cultivate it scientifically and thereby reduces the production drastically. The demand for natural resins has been quite high in the last decade and therefore with proper guidance and technological support through projects like ARYA can make sure that the productivity of this valuable crop may be restored to its full potential which can further retain youths like Bikram Khutdar in their respective villages to develop entrepreneurship in this enterprise for a sustainable and better livelihood. |                         |                         |            |



## (A) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000

### 1. Scientific Lac Cultivation Enterprise

| Sl. No | Name of youth    | Village  | Block                 | Average annual income from lac (Rs.) |
|--------|------------------|----------|-----------------------|--------------------------------------|
| 1      | Rina Mahato      | Ilu      | Jhalda-I (Kusmi)      | 35000.00                             |
| 2      | Anima Mahato     | Karmadih |                       | 38000.00                             |
| 3      | Prasenjit Mahato | Karmadih |                       | 41000.00                             |
| 4      | Bikram Khutdar   | Jargo    |                       | 112000.00                            |
| 5      | Jaleswar Mahato  | Jambad   | Purulia II (Rangeeni) | 40000.00                             |
| 6      | Sampoorna Mahato | Jambad   |                       | 37000.00                             |
| 7      | Alpana Mahato    | Jambad   |                       | 42000.00                             |

**Rural youth undergone ARYA Training:**

| Sl.No. | Name                     | Village    | Name of the enterprise | Average annual income (Rs.) |
|--------|--------------------------|------------|------------------------|-----------------------------|
| 1      | Tushar Mahato            | Kasmadih   | Goat                   | 12000                       |
| 2      | Rahim Chandra Mahato     | Kasmadih   | Goat                   | 10000                       |
| 3      | Sankar Mahato            | Bishria    | Goat                   | 18500                       |
| 4      | Jatindranath Mahato      | Kasmadih   | Goat                   | 25000                       |
| 5      | Ajoy Mahato              | Jargo      | Goat                   | 27000                       |
| 6      | Amar Mandal              | Nawadih    | Goat                   | 17000                       |
| 7      | Sumitra Mahato           | Jambad     | Goat                   | 60000                       |
| 8      | Kalabati Mahato          | Jambad     | Goat                   | 30000                       |
| 9      | Chandra Mohan Singh Mura | Bamni      | Goat                   | 35000                       |
| 10     | Niranjan Sing Mura       | Bamni      | Goat                   | 25000                       |
| 11     | Jagannath Mudi           | Bagdisha   | Goat                   | 15000                       |
| 12     | Sisir Mudi               | Bagdisha   | Goat                   | 25000                       |
| 13     | Sanchilal Mudi           | Bagdisha   | Goat                   | 45000                       |
| 14     | Sakhiram Mudi            | Bagdisha   | Goat                   | 17000                       |
| 15     | Rampada Sing Mura        | Hasadi     | Goat                   | 23000                       |
| 16     | Budheshwar Sing Laya     | Hasadi     | Goat                   | 42000                       |
| 17     | Sanatan Sing Mura        | Hasadi     | Goat                   | 27000                       |
| 18     | Ramesh Sing Mura         | Hasadi     | Goat                   | 55000                       |
| 19     | Bimal Chandra Mahato     | Karmadih   | Goat                   | 45000                       |
| 20     | Jatindranath Mahato      | Karmadih   | Goat                   | 38000                       |
| 21     | Pradip Mahato            | Jambad     | Goat                   | 45000                       |
| 22     | Ajoy Das                 | Manipathor | Goat                   | 22000                       |
| 23     | Ramesh Bauri             | Khoyrasole | Goat                   | 37000                       |
| 24     | Tarapada Das             | Khoyrasole | Goat                   | 35000                       |
| 25     | Rathin Ghosh             | Khoyrasole | Goat                   | 42000                       |
| 26     | Makhan Ankura            | Khoyrasole | Goat                   | 30000                       |
| 27     | Samodar Shikar           | Barrasor   | Goat                   | 47000                       |
| 28     | Ashik Pal                | Bagasol    | Goat                   | 25000                       |
| 29     | Joydeb Das               | Ranipathar | Goat                   | 38000                       |
| 30     | Sayed Khairul Hossain    | Bashra     | Goat                   | 40000                       |

| Sl.No. | Name                 | Village    | Name of the enterprise | Average annual income (Rs.) |
|--------|----------------------|------------|------------------------|-----------------------------|
| 31     | Nityananda Pal       | Nakrakonda | Goat                   | 50000                       |
| 32     | Nanichara Bauri      | Krishnapur | Goat                   | 40000                       |
| 33     | Santosh Kumar Maji   | Khoyrasole | Goat                   | 35000                       |
| 34     | Ashish Chandra Ghosh | Parsundi   | Goat                   | 32000                       |
| 35     | Suren Chandra Dhibar | Khoyrasole | Goat                   | 22000                       |
| 36     | Mukesh Roy           | Khoyrasole | Goat                   | 24000                       |
| 37     | Samir Mahato         | Majhihira  | Goat                   | 45000                       |
| 38     | Biplab Mahato        | Majhihira  | Goat                   | 34000                       |
| 39     | Ritesh Mahato        | Majhihira  | Goat                   | 42000                       |
| 40     | Ajit Kumar Mahato    | Majhihira  | Goat                   | 36000                       |
| 41     | Haripada Mahato      | Majhihira  | Goat                   | 20000                       |
| 42     | Harekrishna Mahato   | Majhihira  | Goat                   | 15000                       |
| 43     | Arabinda Mahato      | Majhihira  | Goat                   | 17000                       |
| 44     | Laxmi Mahato         | Majhihira  | Goat                   | 35000                       |
| 45     | Kanika Mahato        | Majhihira  | Goat                   | 24000                       |

### (B) Dignitaries visited ARYA villages:

| Sl. No. | Name of the visitor                    | Designation  |
|---------|--|--|
| 1       | Srimat Swami Sarbalokananda Ji Maharaj | Secretary, Ramakrishna Mission Ashrama, Narendrapur        |
| 2       | Srimat Swami Rajibesananda Ji Maharaj  | Asstt. Secretary, Ramakrishna Mission Ashrama, Narendrapur |
| 3       | Rahul Majumdar                         | District Magistrate and Collector                          |
| 4       | Mr. Santiram Mahato                    | Minister (SHG and Self employment and PUP), Govt. of WB    |
| 5       | Mr. Mriganka Mahato                    | Ex MP, Purulia   |
| 6       | Asish Bandopadhyay                     | DDA (Admin.), Purulia                                      |
| 7       | Mr. Sajal Kumar Bhowmik                | Project Director (ATMA), Purulia                           |
| 8       | Dr. Sudip Bhakat                       | Deputy Director Dept. of Horticulture and FPI, Purulia     |
| 9       | Dr. Uttam Biswas                       | Deputy Director (ARD), Purulia                             |
| 10      | Dr. Suman Mahato                       | District Veterinary Officer, Purulia                       |
| 11      | Mr. Pranab Kumar Naskar                | General Manager, DIC                                       |
| 12      | Srimat Swami Vaskarananda Ji Maharaj   | Secretary, Kalyan  |



(C) Newspaper coverage: None

(D) Publications: None

(E) Migration status-Nil



Activities carried out under Scientific Lac Cultivation Enterprise

### 3. Achievements of Uttar Dinajpur KVK

The District of Uttar Dinajpur of Eastern Plains Region of the state of West Bengal belongs to 150 disadvantaged districts of the country, wherein the present research project has been conceptualized. The physical stretch of project area spreads over two distinct agro-climatic zones *viz. terai* and old alluvial, which itself adds further complexity. So, even within a given agro-climatic zone, the existing variability in farming systems and associated livelihood opportunities are being influenced by techno-agro-climatic factors as well as sub-regional variations in terms of land capability, resource endowment and externalities like vulnerability context. Along with marginality of soils in terms of native nutrient pool, poor irrigation endowment and inadequacy of situation specific technology options for appropriate crop sequencing that have given rise to poor productivity and low income from agriculture. The average daily per capita rural income of this already identified **disadvantaged district of the country** is only Rs. 10.34, which is lowest in the state. Although Uttar Dinajpur is located along a principal highway axis and is well connected with Siliguri, Nepal, Bhutan, adjoining Bihar and Kolkata, the dearth of medium and large industry in the district severely restricts the scope for alternative non-farm employment. High levels of rural poverty across the region also inhibit the growth of local markets.

Out of around 9.36 lakh working population in the district, 69.2 per cent are agricultural workers to signify the importance of agricultural sector over the employment provisioning of native people. But, as

alternative cropping patterns is yet to take firm root in the district, there remains poor carrying capacity of local labour markets to provide regular employment to around 39.7 per cent of its agricultural wage labourers. During the season of agricultural slack, a pronounced tendency has thus developed for male agricultural workers to seek casual employment opportunities by migrating to other states and districts. This nevertheless has the social downside of destabilizing rural families and forcing an increasing number of women to carry the dual responsibility of looking after their families while seeking out locally available work. With this backdrop, the expansion of agriculture and sustainable generation of income are the main constraints of agricultural sector. Fishery, Horticulture and Home science play pivotal role for augmenting additional income as well as retaining the farmers within the village with sustainable and lucrative income through ARYA programmes.

#### 3.1 Project Initiation:

Rural youths are very important parameters in sustaining the agriculture sector as they are mostly progressive and can introduce new ideas and technologies into practices. However, a considerable proportion of these dynamic rural youths are gradually abstaining from agriculture, year after year. In this respect the project was initiated during 2019-20 with following agri-preneurial based intervention-

- ❖ Home Science based intervention
- ❖ Fishery based intervention
- ❖ Horticulture based intervention

**Objective:**

The objectives of the project are-

- (i) To build up and strengthen agri-preneurial capacities of the target youth including women through information and skill facilitation.
- (ii) To attract and empower the rural youths to take up various agriculture allied and service sector enterprise.
- (iii) To demonstrate sustainable, attractive, remunerative and climate smart agri-based job opportunities for rural youths at village level and create gainful employment.
- (iv) To establish network groups to take up resource and capital intensive activities like processing, value addition and marketing.
- (v) To demonstrate functional linkage with different institutions and stakeholders.

**Name of ARYA villages**

**Table 1**

| Sl. No. | KVK name           | Name of ARYA village | Established enterprise                                       |
|---------|--------------------|----------------------|--|
| 1.      | Uttar Dinajpur KVK | Jhuriagach           | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Dhondugachh          | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Gulamigachh          | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Jhuriagachh          | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Matiali              | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Bhatol               | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Bihinagar            | Value addition of Mushroom<br>Value addition of vermicompost |
|         |                    | Surta                | Fish fingerlings production                                  |
|         |                    | Andheria             | Fish fingerlings production                                  |
|         |                    | Fatepur              | Fish fingerlings production                                  |
|         |                    | Chopra               | Fish fingerlings production                                  |
|         |                    | Goalgachh            | Value addition & processing in pineapple                     |

### 3.2 District Profile:

According to census 2011, 2 numbers of sub-divisions and 9 numbers of CD Blocks are there in the Uttar Dinajpur district. There are 98 numbers of GPs and 1516 villages in the district. The density of population of the district is 956 per square km.

- Geographical Area: 3142 sq km
- Population: 3007134 (Male-1551066 & Female-1456068)
- Numbers of families dependent on agriculture: 239500
- Numbers of persons based on agriculture: 1297557
- Average rainfall: 2041 mm
- Farming system: Rainfed
- Soil type: sandy to sandy loam

### 3.3 Identification of youth:

The youths (age group of 18-35 years) of any community are the most important work force and are supposed to be the greatest asset of the district for the development of agriculture. They are dynamic, energetic, resilient, progressive and innovative. They are the most resilient work force which is ready to accept changes according to the changing scenario of the society as well as the ecology. Especially the rural youths play an important role for the sustainable development of the agriculture sector because they are enthusiastic and can innovate and practice new strategies for its progress and upliftment. But, there is a gradual increase in the migration of

rural youths to urban areas for search of work and better livelihood in recent years. Accordingly, for implementing this project the youths are identified on the basis of following aspects-

- Unemployment
- Participatory and innovativeness
- Having preliminary knowledge on mushroom, vermicompost and fish culture.
- Age between 18-35 years.
- Less or no land holding for selecting youths for mushroom and vermicompost activities
- Should possess one or two numbers of ponds for fishery
- Women participation
- In case of horticulture based intervention, youths were selected from a family having previous experience in pineapple cultivation.
- The youths selected are energetic, dynamic and smart, having education level up to class x or xii.

### 3.4 Name of cooperating Institutions for technical support:

- i. ICAR-ATARI, Kolkata
- ii. ICAR-CIFRI, Barrackpore
- iii. ICAR-CIFA, Bhubaneswar
- iv. Dept. of Fishery, Govt. of W.B.
- v. Department of Fruit Science and Processing, UBKV, Coochbehar

### 3.5 Enterprise Details:

#### a) Value addition and marketing of Mushroom

##### i. Detailed Description:

Mushroom cultivation has its advantage over traditional farming and has potential for entrepreneurship development and man days creation for youths. However owing to high moisture content and delicate nature, mushroom are highly perishable and cannot be stored for more than 24 hours at ambient temperature. There is also growing market for processed-dried and packed mushrooms. Selected beneficiaries were trained in making mushroom powder by drying fresh mushroom by sun drying and machine drying, pickling of mushroom is also done specially to handle oyster mushroom bulk production, likewise mushroom powder was used to make different value added items like chunks, papad and chutney, mushroom sauce etc. Under ARYA project value addition and marketing channels for mushroom has been explored.

##### ii. Input /Support provided to youth groups:

At KVK Uttar Dinajpur, youths selected under ARYA learned the fundamental aspects of mushroom

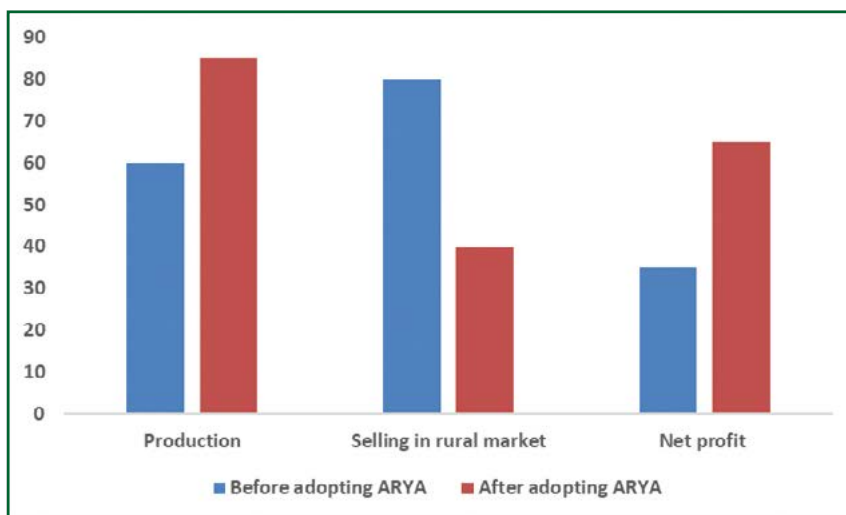
farming and had hands on training. Various inputs like spawn, fungicides, PP, fertilizers etc provided to youths. They initiated their cultivation at homestead level and after gaining confidence many of them expended their cultivation by making investments for constructing separate sheds. Youths were trained in value addition of mushrooms and now they are preparing various products of mushrooms like pickle, powder, chunks, papad etc.

##### iii. Progress made:

Initially the SHGs, Farmers' Clubs and individual farmers started producing fresh mushroom and sell it in the local markets as well as in big markets through middlemen. Common Interest Group (CIG) named Pragati Mushroom Farmers group has been formed by KVK under ARYA project and gradually by this process total daily production of mushroom from each group is picked up and channelized to bigger market at Siliguri, Nepal, Bhutan etc. Moreover, realizing the demand of processed mushroom in the form of pickle in the north-eastern states the members of the SHGs were trained with that particular skill and started producing mushroom pickle, papad, chunks and other value added products with their surplus produce. KVK helped them to get the produce *fssai* certification.

**Table-2**

| Enterprise name                          | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit                               |  | % increase | Economic of enterprise |                  |      |
|--|-----------------------|-----------|--|--|------------|------------------------|------------------|------|
|  |                       |           | Before adopting ARYA   | After adopting ARYA  |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Value addition and marketing of mushroom | 25                    | 06        | 1. Production (60%)<br>2. Selling in rural market (80%)<br>3. Net profit (35%) | 1. Production (85%)<br>2. Selling in urban market (60%)<br>3. Net profit (65%) | 35         | 27000                  | 38000            | 2.41 |


**iv. Name of youths involved:**
**Table-3**

| Sl. No. | Name of the Youth | Village Name | Name of adopting enterprise              |
|---------|-------------------|--------------|--|
| 1       | Sukhdev Singha    | Matiali      | Value addition and marketing of mushroom |
| 2       | Md. Ali           | Bhatol       |  |
| 3       | Madhu Mandal      | Jhuriagach   |  |
| 4       | Jaideb Das        | Jhuriagach   |  |
| 5       | Uday Das          | Jhuriagach   |  |
| 6       | Sanjoy Mandal     | Jhuriagach   |  |
| 7       | Chitto Mandal     | Jhuriagach   |  |
| 8       | Komal Biswas      | Jhuriagach   |  |

| Sl. No. | Name of the Youth    | Village Name           | Name of adopting enterprise |
|---------|----------------------|------------------------|-----------------------------|
| 9       | Ashu SinghaKamal Das | Merthagach             |                             |
| 10      | Sribas Das           | Dhondugach             |                             |
| 11      | Manoranjan Sarkar    | Dhondugach             |                             |
| 12      | Anima Majumder       | Dhondugach             |                             |
| 13      | Anjali Bose Das      | Dhondugach             |                             |
| 14      | Rita Das             | Dhondugach             |                             |
| 15      | Soma Das             | Dhondugach             |                             |
| 16      | Md. Shahin           | Birsinghgach           |                             |
| 17      | Bipul Biswas         | College para, Islampur |                             |
| 18      | Bhuban Das           | College para, Islampur |                             |
| 19      | Amrish Biswas        | Aliganj                |                             |
| 20      | Pratima Singha       | Suffalgach             |                             |
| 21      | Puja Adhikary        | Suffalgach             |                             |
| 22      | Gaur Debnath         | Suffalgach             |                             |
| 23      | Mangali Hasda        | Duliagach              |                             |
| 24      | Priya Soren          | Duliagach              |                             |
| 25      | Shushila Tudu        | Gulamigach             |                             |

**v. Capital Generation:**

Nil

**vi. Income level:**
**Table-4**

| Enterprise                               | Area (Acre)/ No. | Cost of production (Rs. Per unit)     | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|--|------------------|---------------------------------------|-----------------------|---------------------------|
| Value addition and marketing of mushroom | 06               | 27000.00 (excluding bamboo str. cost) | 65000.00              | 38000.00                  |

**vii. Impact:**

Market linked technology of mushroom cultivation contribute to the nutritional security of farm households, a farm family is able to add at least weekly 500gm of mushrooms per person, a rich source of protein contributed to their food security. Commercial mushroom cultivation has played a major role towards entrepreneurship development and man days creation. As

substantial migration of young male workers outside the district has been restricted to some extent. Mushroom CIG members were able to produce different value added products and thereby had generated atleast 120 mandays per annum along with net profit of Rs.38000.00 in small scale production unit of capacity 200 kg/ annum. Farmers engaged in mushroom cultivation have been facilitated at state as well as national level.

## b) Value addition and marketing of vermicompost for sustainable agriculture

### i. Detailed description:

Under ARYA Project component on value added vermicompost experienced farmers were selected as base members and in this component these farmers along with other interested youths were trained in this new aspect of value added compost or enriched vermi-compost. They were trained on various aspect like mixing of bio-fertilizer in ready compost, handling of bio inoculants, preservation of first lot for better results, transfer of first lot inoculants to second lot compost for its enrichment, time and crop area specific marketing techniques etc . Trainees were made aware about crop specific bio-fertilizers and bio-fungicides and their role in enhancing plant growth and controlling different diseases. Linking between youths, bio input production labs and distribution for popularization of enriched compost were the main tasks conducted under this ARYA component. Full technical support was provided from KVK as well as our host university i.e. Uttar Banga

Krishi ViswaVidyalya, Pundibari, Coochbehar in this regard.

### ii. Input /Support provided to youth groups:

At KVK Uttar Dinajpur, youths selected under ARYA for this component learned the fundamental aspects of vermin-composting and more emphasis was given on its enrichment. Various inputs like vermi worms, Bio fertilizers and bio fungicide inoculums were provided to youths. Different marketing channels were explored and potential producers were linked with buyers.

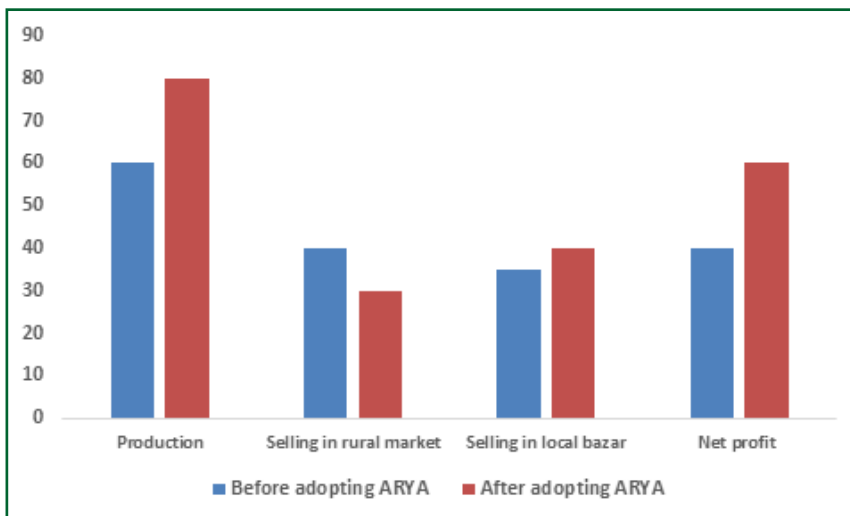
### iii. Progress made:

Awareness among farming community about value added enriched vermin-compost production was given from beneficiary as well as KVK side. Management of left over residues towards better soil health and maximization of system productivity was emphasized. Entrepreneurship development of selected youths is in progress and for better market linkages three FIG had been made on organic manure production in different blocks and it is anticipated that soon these will be converted into FPCs for dynamic growth.

Table-5

| Enterprise name                               | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit   |  | % increase | Economic of enterprise |                  |      |
|---|-----------------------|-----------|--|--|------------|------------------------|------------------|------|
|   |                       |           | Before adopting ARYA   | After adopting ARYA  |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Value addition and marketing of vermi compost | 20                    | 10        | 1. Production (60%)<br>2. Selling in rural market (40%)<br>3. Selling in local bazaar (35%)<br>4. Net profit (40%) | 1. Production (80%)<br>2. Selling in urban market (70%)<br>3. Selling in local bazaar (40%)<br>4. Net profit (60%) | 32         | 32000                  | 35500            | 2.11 |





**iv. Name of youths involved:**

**Table-6**

| Sl. No. | Name of the Youth | Village Name  | Name of adopting enterprise                   |
|---------|-------------------|---------------|---|
| 1       | Biswajit Basak    | Kalagach      | Value addition and marketing of vermi-compost |
| 2       | Prashanta Sarkar  | Aliganj       |   |
| 3       | Shushila Tudu     | Gulamigach    |   |
| 4       | Bindiya Toppo     | Dhuliagach    |   |
| 5       | Aleya Begum       | Satramgach    |   |
| 6       | Shyam Lala        | Bihinagar     |   |
| 7       | Bikas Das         | Bihinagar     |   |
| 8       | Tarak Debnath     | manngach      |   |
| 9       | Shanti Sarkar     | Nandajhar     |   |
| 10      | Soma Das          | Dhondugach    |   |
| 11      | Budhan Lal Singha | Chuchuradangi |   |
| 12      | Dulali Tudu       | Kalagach      |   |
| 13      | Mangal Soren      | Kalagach      |   |
| 14      | Khairun Nesha     | Chandagach    |   |
| 15      | Fajirun Nesha     | Chandagach    |   |
| 16      | Md. Alimuddin     | Chandagach    |   |
| 17      | Sabina Begum      | Dolua         |   |
| 18      | Sureya Begum      | Dolua         |   |
| 19      | Parimal Haldar    | Teenmile      |   |
| 20      | Laba Paul         | Kachakali     |   |

**v. Capital Generation:**

Nil

**vi. Income level:**
**Table-7**

| Enterprise                                   | Area (Acre)/ No.                                | Cost of production (Rs. Per unit)  | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|--|---|------------------------------------|-----------------------|---------------------------|
| Value addition and marketing of vermicompost | 10 units (06 vermi -beds Unit (3'x6') each bed) | 32000.00 (excluding low cost str.) | 67500.00              | 35500.00                  |

**vii. Impact:**

Most of the rural folks are becoming aware that using composts is an effective way to increase healthy plant production, help save money, reduce the use of chemical fertilizers and conserve natural resources. Youths engaged in this enterprise are becoming economically sound and socially respected for their work.

**c) Fish Fingerlings Production**
**i. Detailed Description:**

In Uttar Dinajpur, most of the ponds are perennial and seasonal in nature. There is a immense scope for increasing the fish production and pre capital income by promoting young entrepreneurs for production of fish fingerlings and it is best suited for the unemployed in their own area. Fishers of Uttar Dinajpur district in West Bengal have experienced that there is a very good market and customer demand all round the year for the live fingerlings of major carps (IMC) of size 12-15 cm (40-80 gm) in northern parts of North Bengal which includes Islampur, Chopra, Siliguri and eastern parts Bihar like Purnia.

As per the guidance of KVK expert, the involved youths prepared ponds with strengthened bundh, eradication of weed fishes and aquatic insects followed by application of lime @ 200-300 kg/ ha. After 7 days of lime application, ponds were manured with cow dung @ 3-4q/ ha and single super phosphate @ 30-40 kg/ ha. Then the ponds were stocked with IMC fry (catla, rohu, mrigal etc.) with a stocking of 0.3 million/ ha. Some species of locally important medium carps can also be raised along with carps depending on their compatibility and demand Food requirement is met through available natural fish food and provision of supplementary feed of mixture of mustard oil cake and rice bran at 1:1 ratio by weight. Other ingredients such as fish meal, soybean flour, vitamin-mineral mixture etc. are also suggested to be incorporated for improving the feed quality. Regular water quality management, manuring and disease management were the key points maintained for fingerlings production. Sampling at every 30 days was done for checking the health status and alternative bath treatment with KMnO4 and salt as preventive measure followed for disease management. The fry/

fingerlings were protected from fish eating birds by fixing nylon net and plastic rope over the top of the pond. Multiple-stocking and Multiple-harvesting management was practiced to maintain optimal fish standing crop in pond.

**ii. Input /Support provided to youth groups:**

The identified rural youths were given hands on practical training in the KVK. They participated skill development training on fish fingerlings production followed by one

day exposure visit to progressive farmers’ field was given to enrich the knowledge through lecture, interaction, learning by doing. The technical guidance from KVK was also provided as and when desired by them. Besides these, input such as fish seeds, hapa and mustard oil cake as feed was provided to them from ARYA project.

**iii. Progress made:**

The progress made in the enterprise on fish fingerlings production is presented in Table-8.

**Table- 8**

| Enterprise name                             | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                                 | % increase | Economic of enterprise |                  |      |
|---|-----------------------|-----------|--|---------------------------------|------------|------------------------|------------------|------|
|   |                       |           | Before adopting ARYA (Rs./ annum)                | After adoptig ARYA (Rs./ annum) |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Fish fingerlings production (for 1 ha pond) | 04                    | 04        | 510500.00  | 765750.00                       | 50         | 521625.00              | 244125.00        | 1.47 |

**iv. Name of youths involved:**

**Table- 9**

| Sl. No. | Name of the Youth | Village Name | Name of adopting enterprise |
|---------|-------------------|--------------|-----------------------------|
| 1.      | Shyam Mardi       | Surta        | Fish fingerlings production |
| 2.      | Tapan Ruidas      | Andheria     | Fish fingerlings production |
| 3.      | Lakhiram Hemram   | Surta        | Fish fingerlings production |
| 4.      | Kandan Soren      | Surta        | Fish fingerlings production |

**v. Capital Generation:**

Nil

**vi. Income level:**

The income level in the enterprise on fish fingerlings production is presented in Table -10.

**Table-10**

| Enterprise                                     | Area (Acre)/<br>No. | Cost of production<br>(Rs. Per unit) | Return<br>(Rs. Per unit) | Net Income<br>(Rs. Per unit) |
|--|---------------------|--------------------------------------|--------------------------|------------------------------|
| Fish fingerlings production<br>(for 1 ha pond) | 04                  | 521625.00                            | 765750.00                | 244125.00                    |

**vii. Impact:**

After adopting ARYA programmes, most of the engaged rural youths achieved gainful and sustainable employment throughout the year. As a result they have attained a better socio-economic livelihood with a remunerative profit which encourages other youths of this district to establish such enterprise.

After seeing this improvement of livelihood and substantial increase in annual income of the ARYA youths, 20 other youths of the nearby villages of the district also adopted this enterprise.

**d) Value addition and processing in pineapple**

**i. Detailed Description:**

The operational area is a Pineapple belt. Pineapple is harvested during June to September. Fresh produces are sold in local and distant market. But farmers don't get proper price for their produce due to market glut. They leave their produce in the field as they don't get the price to pay the labourer

for harvesting the crop. The produce is rotten in the field. As pineapple is 18 months crop, farmers spent a lot during this period but don't get the profit. Pineapple cultivable land is reduced gradually. So, pineapple farmers and SHG members from the pineapple farmers are selected for the ARYA programme under the enterprise of Value addition and Pineapple processing. One orientation programme was made to let them know how they keep their produce for long time by processing and value addition. First of all, one training was conducted for scientific management of pineapple for quality produce and different processing techniques and processed products of pineapple. The next programme was hands on training of the participants on pineapple processing. They learned to make processed product like Pineapple Jam, Jelly, squash, RTS etc.

**ii. Input /Support provided to youth groups:**

The identified rural youths were given hands on training in the KVK.

**iii. Progress made:**

Processing unit can not be established due to procurement of processing equipments at flag end of financial year (2020-21) because of some unavoidable circumstances.

**iv. Name of youths involved**

Nil

**v. Capital Generation**

Nil

**vi. Income level**

Nil

**(A) Capacity Building**

**Table-11**

| Thematic Area | Topic of training   | No. of courses | No. of beneficiaries |        |       |
|---------------|---|----------------|----------------------|--------|-------|
|               |   |                | Male                 | Female | Total |
| Mushroom      | Package of practice for mushroom cultivation and its value addition | 3              | 45                   | 15     | 60    |
| Vermicompost  | Value added vermicompost Production                                 | 3              | 36                   | 24     | 60    |
| Fishery       | Package and practice of fingerlings production                      | 1              | 25                   | 0      | 25    |
| Horticulture  | Processing and value addition of pineapple                          | 2              | 20                   | 25     | 45    |

## Success Story 1

### 1. Name of the Enterprise: VALUE ADDITION AND MARKETING OF MUSHROOM



**2. Name of Beneficiary:** Sribas Das

**3. Address**

Village Dhondugachh, post Sonapur

Block Chopra, Uttar Dinajpur, West Bengal-733207

Mob. No.6297402840

### 4. Introduction/Background:

Sribas Das aged 37 years is resident of village Dhondugach of Chopra block of Uttar Dinajpur district of West Bengal. He is engaged with mushroom cultivation since last five years after getting training from Uttar Dinajpur Krishi Vigyan Kendra. His wife is also equally supportive to him and Sribas gradually gave up his tea garden labour work and got engaged in mushroom cultivation and marketing. In the mean time they both got training on value addition of Mushrooms in one of the component of ARYA Project running in Uttar Dinajpur KVK and got very much interested in this aspect. Actually they got the solution to problem of mushroom disposal during peak festive season or sudden strikes in hilly region when demand of fresh mushroom is less. This problem is faced by many other mushroom farmers. With Technical support from KVK He was able to make different value added products like mushroom pickle, chunks, papad and dry powder etc. from excess mushrooms.

### 5. Progress made:

a) A successful young Agri entrepreneur of Uttar Dinajpur district who was once a migratory labour at Kerela.

- b) Does value addition to her farm produce by processing of various products like mushroom pickle, mushroom chunks, *mushroom powder etc.* and sells at **good market price with fssai certification.**
- c) Used to sell his products in exclusive organic *haat* named “**Sunday Haat**” and popular for fresh mushrooms and its value added products.
- d) **Active member of “Ma Laxmi Mushroom Society and Pragati mushroom Farmer Group Sonapur, Uttar Dinajpur.”** Role model for other farmers and Actively participated in different local melas, agriculture fairs and other exhibition along with his group members. He has popularized mushroom cultivation in different localities of the district.
- e) Acting as **master trainer** in agriculture technology dissemination activities with help of Krishi Vigyan Kendra, Agriculture department & SHGs of block. District and state.

### 6. Benefit to youth:

Along with monetary benefits, moreover there is improvement in economic as well as social

status of this particular farm family in the locality.

### 7. Change in economic status of the youth due to adoption of ARYA project:

Mr. Sribas Das, a tea Garden worker, with her dedication and institutional technical support now earning monthly profit of Rs.15000-25000. Along with his supportive family he is able to meet his family needs time to time.

### 8. Constraints faced:

- Non-availability of quality spawn.
- Lack of good infrastructure for making value added products.
- Lack of good marketing linkages.

### 9. Perception of others in the village:

As the change in economic status of the youth is apparent so the perception of others in the village is also good. They are appreciating the efforts of farmer as well as institutes. Many of them came to know about the scheme and enterprise of youth.

### 10. Conclusion:

Market led technology of mushroom cultivation and its value addition has paved the way of rural youth towards economic and social empowerment. They are gradually becoming more self reliant and exploring new ways of selling and marketing. Though good infrastructural support is definitely needed for sustainable growth.

### ACTION PHOTOGRAPHS



*Sribas Das engaged in packing of mushroom for marketing*



*Pragati mushroom center visited by nearby village youths*

## Success Story 2

### 1. Name of the Enterprise: VALUE ADDITION AND MARKETING OF VERMICOMPOST



**2. Name of Beneficiary:** Prashanta Sarkar

**3. Address:**

Village Aliganj, post Islampur

Block Islampur, Uttar Dinajpur, West Bengal-733205

Mob. No.9932560228

#### 4. Introduction/Background:

Prashanta Sarkar, a young entrepreneur and motivation to many others is resident of Aliganj village of Islampur block of Uttar Dinajpur district. He is engaged in Vermicompost production since last six years. Under ARYA project he has got training on value added vermicompost production from Uttar Dinajpur Krishi Vigyan Kendra. He was engaged in dairy business too and marketing of milk products as well as compost. During covid outbreak, though his business got affected in the beginning and faced problems of marketing. But gradually he has started his business with enriched vermicompost since last year. His per annum turnover is near about 30 tonnes

#### 5. Progress made:

- A successful young Agri entrepreneur who is running dairy as well as enriched vermicompost business together.
- Does value addition to her farm produce by processing of various products.
- Used to sell his produce in local as well as big markets like Siliguri to different input dealers.

d) Under technical guidance of Uttar Dinajpur KVK, Prashanta Sarkar is marketing his products after proper testing to different rural belts of the district.

e) **Active member of “Krishi Kalyan Jaibo Sar” FIG and Role model** for other farmers and has **popularized enriched compost** in different localities of the district.

f) Acting as **master trainer** in agriculture technology dissemination activities with help of Krishi Vigyan Kendra, Agriculture department & SHGs of block. District and state.

#### 6. Benefit to youth:

Along with monetary benefits, moreover there is improvement in economic as well as social status of this particular farm family in the locality.

#### 7. Change in economic status of the youth due to adoption of ARYA project:

Mr. Prashanta Sarkar with her dedication and institutional technical support now earning monthly profit of Rs.25000- 35000. Along with his supportive wife he is able to meet his family needs time to time.



### 8. Constraints faced:

- Lack of good marketing linkages.
- Non-availability of low cost storage facilities.
- Lack of good infrastructure for enriched vermicompost production.

### 9. Perception of others in the village:

As the change in economic status of the youth is apparent so the perception of others in the village is also good. They are appreciating the

efforts of farmer as well as institutes. Many of them came to know about the scheme and enterprise of youth.

### 10. Conclusion:

Market led technology of vermicompost and its value addition has paved the way of rural youth towards economic and social empowerment. They are gradually becoming more self reliant and exploring new ways of selling and marketing. Though good infrastructural support is definitely needed for sustainable growth.

### ACTION PHOTOGRAPHS



*Commercial vermicompost unit run under ARYA*



*Packaging of enriched vermicompost*

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Sl. No. | Income/ Month (Rs.) | Name of the Youth | Address  | Educational qualification | Phone no.  | Aadhaar no.  | Land holding | Enterprise                  |
|---------|---------------------|-------------------|--|---------------------------|------------|--------------|--------------|-----------------------------|
| 1.      | 13000               | Anima Majumder    | Village Dhondugachh, post Sonapur Block Chopra, WB | B.A                       | 9593953163 | 297575804973 | 0.8 acre     | Mushroom                    |
| 2.      | 17500               | Sribash Das       | Village Dhondugachh, post Sonapur Block Chopra, WB | 10 <sup>th</sup>          | 6297402840 | 329104718595 | 1.0 acre     | Mushroom                    |
| 3.      | 16000               | Shushila Tudu     | Viii. Gulamigach, post Gorugach, Chopra, WB        | VIII                      | 7584034354 | 507906692411 | 0.2 acre     | Mushroom                    |
| 4.      | 12000               | Madhu Mandal      | Vill. Jhuriagach, PO-Ghorugach, Chopra, WB         | VIII                      | 8250088386 | 915792875016 | 1.2 acre     | Mushroom                    |
| 5.      | 14000               | Md. Shahin        | Vill Birsingach PO Kaligach, Chopra WB             | B.A.                      | 9641759706 | 585768185002 | 8.0 acre     | Mushroom                    |
| 6.      | 11000               | Bindia Toppo      | Vill Dhuliagach PO-Ghorugach, Chopra, WB           | VIII                      | 6294062196 | 269725822061 | 0.2 acre     | Vermicompost                |
| 7.      | 19500               | Shyam Ch. Lala    | Vill Bihinagar PO Machol Karandighi, WB            | HS                        | 9932609342 | 351456818258 | 4.0 acre     | Vermicompost                |
| 8.      | 14500               | Budhan Lal Singha | Vill Paschim Nandjhar, PO Nando, G-I, WB           | VIII                      | 8016960027 | 541097280198 | 2.8 acre     | Vermicompost                |
| 9.      | 12500               | Biswajit Biswas   | Vill, Kalagach, PO chopra WB                       | HS                        | 9679417828 | 965414034260 | 0.8 acre     | Vermicompost                |
| 10.     | 25000               | Prashanta Sarkar  | Vill. Aliganj Islampur U/Dinajpur                  | 10th                      | 9932560228 | 243380557559 | 5.0 acre     | Vermicompost                |
| 11.     | 12000               | Shyam Mardi       | Vill. Surta P.O. Jagdishpur U/Dinajpur             | HS                        | 8172004490 | 606766804467 | 1.0 acre     | Fish fingerlings production |
| 12.     | 20500               | Tapan Ruidas      | Vill. & P.O. Andheria U/Dinajpur                   | VIII                      | 6297252113 | 913992275961 | 1.0 acre     | Fish fingerlings production |

| Sl. No. | Income/ Month (Rs.) | Name of the Youth | Address                                      | Educational qualification | Phone no.  | Aadhaar no.  | Land holding | Enterprise                  |
|---------|---------------------|-------------------|--|---------------------------|------------|--------------|--------------|-----------------------------|
| 13.     | 18500               | Lakhiram Hemram   | Vill. Surta<br>P.O. Jagdishpur<br>U/Dinajpur | VIII                      | 8116780084 | 761470542475 | 1.5 acre     | Fish fingerlings production |
| 14.     | 11000               | Kandan Soren      | Vill. Surta<br>P.O. Jagdishpur<br>U/Dinajpur | VIII                      | 7585929981 | 706751836989 | 1.0 acre     | Fish fingerlings production |

**(C) Dignitaries visited ARYA villages**

- Prof. P. Pal, Director of Extension Education, UBKV, Pundibari, Coochbehar

**(D) Newspaper coverage**

Nil

**(E) Publications**

- Dudhiya mushroomer chas o bibhinn jinis tyari (Milky mushroom cultivation and value addition)
- Samridh kecho sar tyrir padhati (Enriched vermocompost production technique)
- Labhajanak upaye charaponar chash (Production of fish fingerlings: A profitable venture)

- Anaraser bhivinna prakriyakaran (Processing of pineapple)

**(F) Migration status**

Migration of rural youths to the nearby towns and cities is a common phenomenon of the district. Implementation of ARYA project in Uttar Dinajpur district of West Bengal by Uttar Dinajpur KVK attracts youths in self employment generation through value addition of mushroom, value addition of vermicompost production, fish fingerlings production and processing of pineapple on a regular basis to earn sizeable income throughout the year. Mostly the youths who were used to migrate earlier have been included in this project and overall 89 youths brought under ARYA have remained in the villages leaving the habit to migrate.

**Enterprise: Value addition and marketing of Mushroom**



Button mushroom harvesting for sale



Famer inspecting oyster mushroom unit



*Youth selling mushroom products*



*Packaging of fresh produce for marketing*

**Enterprise: Value addition and marketing of vermi-compost**



*Checking the condition of vermicompost*



*Commercial vermicompost unit in ARYA*



*Packaging of enriched vermicompost*



*Packaged vermicompost*

### Enterprise: Fish Fingerlings Production



Capacity building training on fish fingerlings



Field level discussion with ARYA youth



Releasing of fish seeds



Onboard discussion regarding broadcasting of fish feed



Netting operation by ARYA youths



Harvested fish fingerlings

## 4. Achievements of Hooghly KVK

**4.1 Project initiation:** The project has been started from the year 2018-19.

### Name of ARYA villages

**Table-1**

| Sl. No. | KVK name    | Name of ARYA village | Established enterprise        |
|---------|-------------|----------------------|-------------------------------|
| 1       | Hooghly KVK | Panisheola           | Nursery raising of vegetables |
| 2       |             | Panisheola           | Nursery raising of vegetables |
| 3       |             | Panisheola           | Nursery raising of vegetables |
| 4       |             | Kakgachi             | Nursery raising of vegetables |
| 5       |             | Korola               | Nursery raising of vegetables |
| 6       |             | Bakharpur            | Nursery raising of vegetables |
| 7       |             | Kantul               | Nursery raising of vegetables |
| 8       |             | Gotu                 | Backyard poultry              |
| 9       |             | Potue                | Backyard poultry              |
| 10      |             | Kantul               | Backyard poultry              |
| 11      |             | Sahabazar            | Backyard poultry              |
| 12      |             | Kantul               | Backyard poultry              |
| 13      |             | Kantul               | Backyard poultry              |
| 14      |             | Dhitra               | Mushroom Cultivation          |
| 15      |             | Rajbalhat            | Mushroom Cultivation          |
| 16      |             | Bagbazar             | Mushroom Cultivation          |
| 17      |             | Durgadaspur          | Mushroom Cultivation          |
| 18      |             | Boinchipota          | Mushroom Cultivation          |
| 19      |             | Bamunpara            | Mushroom Cultivation          |
| 20      |             | Taherpur             | Vermicompost production       |
| 21      |             | Ramnagar Paschimpara | Vermicompost production       |
| 22      |             | Gourangapur          | Vermicompost production       |
| 23      |             | Uttar Adar           | Vermicompost production       |
| 24      |             | Chandpur             | Vermicompost production       |
| 25      |             | Kharagarh            | Vermicompost production       |

## 4.2 District Profile

### Agro-climatic zone and jurisdiction (District/State Boundaries):

Hooghly district is one of the districts of the state of West Bengal in India. It can alternatively be spelt Hoogli or Hugli. The district is named after the Hooghly River. The

headquarter of the district are at Chinsurah (Chuchura). There are four subdivisions in the district namely Chinsurah Sadar, Chandannagar, Serampore and Arambag. The great river Ganga flows through this district and enhances its importance. The district is a rich Zone both in agriculture and industry in West Bengal.



### Geography Location of the District

**Latitude:** North : 23° 01' 20" N South : 22° 39' 32" N  
**Longitude:** East : 88° 30' 15" E West : 87° 30' 20" E  
**Location of the District Headquarters:** Latitude: 22° 55' N Longitude: 88° 24' E  
**Boundary:** The boundary of the Hooghly district is covered by the Hooghly river (sharing with Nadia in the East & North 24 Parganas in the South - East) in the East, Bardhaman in the North. Howrah in the South, Paschim Medinipore in the West, Bankura in the North-West. Nature of Land The district is a completely flat land with no

place having more than an elevation of 200 meters. Most of the land of the district is alluvial type of soil due to well distribution of river system. Rivers Damodar, Dwarkeswar, Hooghly (Ganga), Mundeswari and Saraswati are the main rivers of Hooghly. State : West Bengal, India Administrative division : Burdwan Headquarters : Chinsura Area : 3149 square Km (1216 sq mile) Major High ways : NH 2, NH 6, G.T. Road Average annual precipitation : 1500 mm. Demographics Population : 5520389 (as per census 2011) Population density : 1753/ sq Km (1540/ sq

(mile) Literacy : 82.55% Sex ratio: 958 (958 females per 1000 males) Population Growth : 9.49 % (2001 – 2011)

### Climate:

The average annual rainfall of the district varies from 1200 mm to 1700 mm. The span of winter is not prolonged as compared to other North and South Eastern States. The average minimum temperature varies from 15°C- 20°C and maximum temperature varies from 28°C-35°C.

### Soil:

As this district lies in Gangetic alluvial plains the predominant group of soil is sandy loam to loamy soils covering area of 32.0 per cent and 48.0 per cent cultivated of total area respectively. Clay soil persists in 8 per cent area and clay loam in 12.0 per cent area of the total cultivated areas. As far as problem is concerned flood is the major problem in Balagarh of AES-I and Arambah sub-divisions of ASE-II area.

### Land Utilization:

The total geographical area of this district is 314900 ha of which 2188717 ha (69.5 per cent) is under cultivation. Out of the total area under cultivation 62 per cent area is covered by irrigation. There are lower DVC projects in the district. The main source of irrigation is ground water. According to Agriculture Censuses 2000-2001 there are 3,32,008 no of farming families of which 38,309 nos. belongs to marginal category, 8,377 nos. belongs to small category, 10331 nos. belongs medium category and rest 15 nos. belongs to big farmers category. Since more than 95 per cent of land belongs to small and marginal farmers and average size of land holdings ranges from 0.66 ha it becomes difficult for application of advanced technology in farmers field. Paddy is the major crops this district which covers an area of 80 per cent of the total cultivated area of the district during kharif. Other major crops are Vegetables, Oilseed, Potato, Wheat & Pulses, The major cropping patterns of the districts Sesame/Jute/ AUS/ Vegetable-Kharif rice/ Vegetable- Vegetable/ Oilseeds/ Potato/ Pulses/ Boro rice.

### District level data on agriculture, livestock and farming situation (2020-21, WB)

| Sl. No. | Item                            | Information   |
|---------|---------------------------------|---|
| 1.      | Major Farming system/enterprise | Rice-Rice-Jute<br>Rice-Potato-Sesame<br>Rice-Vegetables - Rice<br>Rice-Potato-Rice                      |
| 2.      | Agro-climatic Zone              | New Alluvial Zone   |
| 3.      | Agro ecological situation       | Agro-Ecological Zone 15.1 described as “Bengal Basin”, hot moist, sub-humid Agro-Ecological Sub-region. |
| 4.      | Soil type                       | Gangetic Alluvial Soil<br>Vindhya Alluvial Soil   |



| Sl. No. | Item   | Information   |
|---------|--|---|
| 5.      | Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others | Aus rice – 453.26 Kg ha <sup>-1</sup><br>Kharif Maize – 2332.6 Kg ha <sup>-1</sup><br>Mustard – 1124.85 Kg ha <sup>-1</sup><br>Potato – 35.97 MT ha <sup>-1</sup><br>Jute – 16.33 bales/ha<br>Bhadoi Kalai – 695.5 Kg ha <sup>-1</sup><br>Sugar Cane – 61.02 MT ha <sup>-1</sup><br>Aman rice – 4559.23 Kg ha <sup>-1</sup><br>Arhar – 1306.5 Kg ha <sup>-1</sup><br>Wheat – 2454.4 Kg ha <sup>-1</sup><br>Gram – 1351.18 Kg ha <sup>-1</sup><br>Lentil – 1261.71 Kg ha <sup>-1</sup><br>Pea – 1076.9 Kg ha <sup>-1</sup><br>Khesari – 1023.80 Kg ha <sup>-1</sup><br>Boro Paddy – 5430.31 Kg ha <sup>-1</sup><br>Summer Ground Nut – 2536.07 Kg ha <sup>-1</sup><br>Summer Moong – 828.05 Kg ha <sup>-1</sup><br>Sesame – 842.35 Kg ha <sup>-1</sup><br>Summer Maize – 2480.89 Kg ha <sup>-1</sup><br>Mango – 7.534 MT ha <sup>-1</sup><br>Banana – 21.077 MT ha <sup>-1</sup><br>Papaya – 26.613 MT ha <sup>-1</sup><br>Tomato – 19.502 MT ha <sup>-1</sup><br>Cabbage – 24.425 MT ha <sup>-1</sup><br>Cauliflower – 25.969 MT ha <sup>-1</sup><br>Brinjal – 16.936 MT ha <sup>-1</sup><br>Onion – 22.473 MT ha <sup>-1</sup><br>Red Pepper (Rabi) – 1.952 MT ha <sup>-1</sup><br>Red Pepper (Kharif) – 1.138 MT ha <sup>-1</sup> |
| 6.      | Production of major livestock products like milk, egg, meat etc.                               | Milk – 376.18 thousand tones<br>Egg – 1979.57 lakh nos.<br>Meat – 25402 thousand tones<br>Fodder – 3315 MT<br>Table Fish – 41,400 MT  |

**Month wise mean weather data (1<sup>st</sup> Apr, 2020 – 31<sup>st</sup> March, 2021)**

| Month | Rainfall (mm) | Temperature °C |         | Relative Humidity (%) |         |
|-------|---------------|----------------|---------|-----------------------|---------|
|       |               | Maximum        | Minimum | Maximum               | Minimum |
| April | 52.7          | 38.1           | 23.6    | 89                    | 38      |
| May   | 107.6         | 36.2           | 25.3    | 86                    | 63      |
| June  | 273.1         | 32.5           | 26.5    | 88                    | 72      |

| Month     | Rainfall (mm) | Temperature ° C |         | Relative Humidity (%) |         |
|-----------|---------------|-----------------|---------|-----------------------|---------|
|           |               | Maximum         | Minimum | Maximum               | Minimum |
| July      | 312.5         | 31.8            | 26.3    | 92                    | 81      |
| August    | 353.8         | 31.6            | 26.3    | 94                    | 81      |
| September | 242.3         | 31.0            | 25.8    | 92                    | 76      |
| October   | 214.7         | 30.7            | 24.0    | 95                    | 83      |
| November  | 0.0           | 27.4            | 16.4    | 87                    | 56      |
| December  | 7.9           | 24.1            | 11.8    | 82                    | 54      |
| January   | 0.0           | 25.5            | 11.6    | 79                    | 43      |
| February  | 16.2          | 30.4            | 14.1    | 85                    | 61      |
| March     | 11.2          | 37.6            | 21.3    | 88                    | 45      |

### 4.3 Identification of youth

The ARYA project was implemented at Hooghly district keeping its specific objectives for sustaining and maintaining rural youth in agriculture. The project has four enterprises namely Nursery raising of vegetables, Backyard poultry rearing, Mushroom cultivation and Vermi-compost production technology. Total 100 rural youths were selected, 25 from each enterprise, from the whole district after thorough screening using extension tools like group discussion, training need identification, etc. and the youths are energetic, hard-working.

### 4.4 Name of cooperating Institutions for technical support

- i. Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, W.B. – 741252.
- ii. West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata.
- iii. Agricultural Technology Application and Research Institute-ICAR, Kolkata.

iv. State Departments.

v. ATMA.

### 4.5 Enterprise details

Hooghly KVK has been working on the four enterprises namely-Nursery raising of vegetables, Backyard poultry production Mushroom cultivation and Vermi-compost production technology since 2013-14. The enterprises are selected on the basis of the potentialities of the enterprise in the district with its marketing scope. The details of the enterprise are given below-

#### Detailed description

#### a) Nursery raising of vegetables:

This enterprise includes nursery raising technology with the help of poly tunnel; different nursery tools etc. along with its plant protection measures. For raising quality disease free seedling of vegetables hi-tech technology like use of plug tray, cocopeat, shade net, etc. are being applied. Off- season as well as seasonal

vegetables seedlings are prepared and marketed successfully.

- b) Backyard poultry:** This enterprise includes rearing of improved backyard poultry breed for better performance along with feed management and protective measures. It also includes regular deworming, vaccination and other routine activities. Trainings are given for preparation of low cost poultry shed and marketing strategies.
- c) Mushroom Cultivation:** This enterprise includes cultivation technology of different

types of mushroom for round the year production along with mushroom spawn production technology. Besides, protection measures for mushroom production, proper maintenance of cropping room, proper packaging, marketing strategies etc. are trained.

- d) Vermicompost production:** This enterprise includes vermi-compost production technology, vermi maintenance, low cost vermi-compost structure, its protective measures etc. It also includes proper packaging with marketing strategies.

**i. Input /Support provided to youth groups**

| Sl. No.           |                               | Particulars/ Equipment          | Quantity (No.) |
|-------------------|-------------------------------|---------------------------------|----------------|
| 1.                | Nursery raising of vegetables | Polythene                       | 5 pcs          |
|                   |                               | Plug tray                       | 200 pcs        |
|                   |                               | Plug tray                       | 20 pcs         |
|                   |                               | Rose Cane                       | 01 pcs         |
|                   |                               | Secateurs                       | 10 pcs         |
|                   |                               | Budding & Grafting Knife        | 10 pcs         |
|                   |                               | Earthen pot                     | 4000 pcs       |
|                   |                               | Scissor                         | 10 pcs         |
|                   |                               | Grafting/ budding polythene     | 10 Kg          |
|                   |                               | Air layering white polythene    | 5 Kg           |
|                   |                               | Mosquito Net                    | 10 pcs         |
|                   |                               | Blitox                          | 8 pcs          |
|                   |                               | Carbendazim                     | 8 pcs          |
|                   |                               | SAAF/ Sprint                    | 8 pcs          |
|                   |                               | Confider                        | 8 pcs          |
| Rooting hormone   | 10 pcs                        |                                 |                |
| Earthen Flat Plot | 20 pcs                        |                                 |                |
| 2.                | Backyard poultry              | Kadaknath ( 14 days old chicks) | 60 nos.        |

| Sl. No. |                         | Particulars/ Equipment         | Quantity (No.) |
|---------|-------------------------|--------------------------------|----------------|
| 3.      | Mushroom Cultivation    | Wooden Box                     | 6 pcs          |
|         |                         | Conical Flask 250 ml           | 6 pcs          |
|         |                         | Test tube 100 ml               | 30 pcs         |
|         |                         | Petridis (9 cm)                | 30 pcs         |
|         |                         | Cotton                         | 6 Roll         |
|         |                         | Dextrose - 500g                | 6 pcs          |
|         |                         | Agar Agar - 250g               | 6 pcs          |
|         |                         | Pp packets (9"X6")             | 6 Kg           |
|         |                         | Shade net 50%                  | 1 pcs          |
| 4.      | Vermicompost production | Export quality HDPE vermin bed | 15 pcs         |

## ii. Progress made

**Table-2**

| Enterprise name               | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit (Income in Rs.) |                     | % increase | Economic of enterprise |                  |      |
|-------------------------------|-----------------------|-----------|--|---------------------|------------|------------------------|------------------|------|
|                               |                       |           | Before adopting ARYA   | After adopting ARYA |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Nursery raising of vegetables | 7                     | 5         | 80,000   | 2,05,000            | 156.3      | 80,000                 | 1,25,000         | 2.56 |
| Backyard poultry              | 6                     | 6         | 85,000   | 2,55,000            | 200.0      | 1,10,000               | 1,45,000         | 2.32 |
| Mushroom Cultivation          | 7                     | 6         | 1,90,000   | 5,55,000            | 192.0      | 2,80,000               | 2,75,000         | 1.98 |
| Vermicompost production       | 6                     | 5         | 75,000   | 1,95,000            | 160.0      | 80,000                 | 1,15,000         | 2.44 |

## iii. Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth | Village Name | Name of adopting enterprise   |
|---------|-------------------|--------------|-------------------------------|
| 1       | Goutam Das        | Panischeola  | Nursery raising of vegetables |
| 2       | Subrata kanrar    | Panischeola  | Nursery raising of vegetables |
| 3       | Nagyan Bag        | Panischeola  | Nursery raising of vegetables |

| Sl. No. | Name of the Youth       | Village Name         | Name of adopting enterprise   |
|---------|-------------------------|----------------------|-------------------------------|
| 4       | Abdul Ahit              | kakgachi             | Nursery raising of vegetables |
| 5       | BholanathSikhder        | Korola               | Nursery raising of vegetables |
| 6       | Sahanara khatun         | Bakharpur            | Nursery raising of vegetables |
| 7       | Sanjib Kr. Ghosh        | Kakgachi             | Nursery raising of vegetables |
| 8       | Sk Safiruddin           | Gotu                 | Backyard poultry              |
| 9       | Soumya Das              | Potue                | Backyard poultry              |
| 10      | Subrata Ghosh           | Uttar Simla          | Backyard poultry              |
| 11      | Syed samimaktar         | sahabazar            | Backyard poultry              |
| 12      | Jahima Khatun           | Kantul               | Backyard poultry              |
| 13      | Rahatara Began          | Kantul               | Backyard poultry              |
| 14      | Moumita Pal             | Gourangapur          | Vermicompost production       |
| 15      | Sasti Chandra Das       | Ramnagar Paschimpara | Vermicompost production       |
| 16      | Tapan Adhikary          | Kharagarh            | Vermicompost production       |
| 17      | Sujit Datta             | Uttar Adar           | Vermicompost production       |
| 18      | Hiranmay Dhara          | Chandpur             | Vermicompost production       |
| 19      | Sanjit Kr. Patra        | Taherpur             | Vermicompost production       |
| 20      | Rajesh Surual           | Dhitra               | Mushroom Cultivation          |
| 21      | Uday Kr. Roy            | Rajbalhat            | Mushroom Cultivation          |
| 22      | Biswajit Paul           | Bagbazar             | Mushroom Cultivation          |
| 23      | Prateek Kr. Chakraborty | Durgadaspur          | Mushroom Cultivation          |
| 24      | Utpal Paul              | Boinchipota          | Mushroom Cultivation          |
| 25      | Amit Roy                | Bamunpara            | Mushroom Cultivation          |

#### iv. Capital Generation

**Table-4**

| Particulars/ Equipment            | Quantity (No.) |
|-----------------------------------|----------------|
| Polly Tunnel                      | 4              |
| Backyard poultry raring structure | 5              |
| Feeder                            | 20             |
| Drinker                           | 20             |

| Particulars/ Equipment             | Quantity (No.) |
|------------------------------------|----------------|
| Mushroom production unit structure | 6              |
| Mini Spawn production unit         | 2              |
| Straw cutter machine               | 1              |
| Vermicompost bed                   | 36             |

#### v. Income level

**Table-5**

| Enterprise                    | Area (Acre)/ No.                            | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|-------------------------------|---|-----------------------------------|-----------------------|---------------------------|
| Nursery raising of vegetables | Polly tunnel-20'X30' and 20'X50' open field | 80,000.00                         | 2,05,000.00           | 1,25,000.00               |
| Backyard poultry              | 500 nos.                                    | 1,10,000.00                       | 2,55,000.00           | 1,45,000.00               |
| Mushroom Cultivation          | 1000 sq.ft.                                 | 2,80,000.00                       | 5,55,000.00           | 2,75,000.00               |
| Vermicompost production       | 12 beds                                     | 80,000.00                         | 1,95,000.00           | 1,15,000.00               |

#### vi. Impact

##### (A) Capacity Building

**Table-6**

| Thematic Area                 | Topic of training  | No. of courses | No. of beneficiaries |        |       |
|-------------------------------|--|----------------|----------------------|--------|-------|
|                               |  |                | Male                 | Female | Total |
| Nursery raising of vegetables | <ul style="list-style-type: none"> <li>Seed bed preparation</li> <li>Nursery management</li> <li>Disease pest management</li> </ul>                                      | 2              | 20                   | 5      | 25    |
| Backyard poultry              | <ul style="list-style-type: none"> <li>Backyard poultry rearing technology</li> <li>Feed preparation</li> <li>Disease management</li> </ul>                              | 2              | 20                   | 5      | 25    |
| Mushroom Cultivation          | <ul style="list-style-type: none"> <li>Mushroom Cultivation Technology</li> <li>Spawn production</li> <li>Pest and Disease management</li> <li>Value addition</li> </ul> | 2              | 13                   | 12     | 25    |
| Vermicompost production       | <ul style="list-style-type: none"> <li>Compost preparation</li> <li>Vermicompost preparation</li> </ul>  | 2              | 18                   | 7      | 25    |

## Success Story -1



- 1. Name of the Enterprise:** Backyard Poultry
- 2. Name of Beneficiary:** Soumya Das
- 3. Address:** Vill: Potue, P.O. Bighati, P.S. Bhadreswer, Dist. Hooghly

**4. Introduction/Background:** Soumya Das is a dynamic and energetic small farmer. He is the only earning member of his family. He mainly depends upon agriculture for his livelihood. But he has an interest in poultry farming since long ago. That's why he himself started backyard poultry farming. Afterwards he faced many problems regarding feed management, protective measures etc. So, he made contact with KVK to learn scientific poultry farming technology. Keeping in view the interest of Mr. Majumder KVK has decided

to involve him under ARYA project and accordingly he was given training and support for development of backyard poultry as an enterprise. Within a short period of time he made it a successful venture.

**5. Progress made:** At present his earning has reached to 1.3-1.5 lakh per year through production and selling of egg and meat. He made contact with different SHGs for selling his product. Now he became popular in his area. His details of production are given below:

| Sl.No.       | Item | Production (kg.) | Market Price (Rs.)     |
|--------------|------|------------------|------------------------|
| 1            | Meat | 700              | 1,54,000 (@Rs. 220/kg) |
| 2            | Eggs | 15000            | 75000 (@Rs. 5/pc)      |
| <b>Total</b> |      |                  | <b>2,29,000.00</b>     |

**6. Benefit to youth:** He has been provided training and support for development of backward poultry unit. Technical guidance has also been provided for production

of poultry as he is hard-working and interested. He will start compost production from poultry litter very shortly which will be additional avenue for him.

**7. Change in economic status of the youth due to adoption of ARYA project:**

| Sl.No. | Indicator        | Before adoption of ARYA | After adoption of ARYA |
|--------|------------------|-------------------------|------------------------|
| 1      | Net Income (Rs.) | 90,000/-                | 2,20,000/-             |

### 8. Constraints faced:

- 1) He has lack of fund for establishment of unit at the initial stage.
- 2) He faced marketing problem to some extent.

### 9. Perception of others in the village:

He made his enterprise a successful one within a short period of time, so he became popular in his area. The other villagers show interest by seeing his success. Many of them have made contact with him and KVK also.

**10. Conclusion:** Mr. Majumder is a dynamic and energetic small farmer. His interest in poultry farming and his effort made him a successful entrepreneur in the locality. He is becoming popular in the area. Many rural youths made contact with him for information and showed interest for poultry farming. His success will motivate other farm women, farmers, and rural youths and increases the possibilities of horizontal expansion of the technology in the area.

### 11. Photographs of the enterprise:



*Backyard Poultry rearing*



## Success Story -2



- 
- 1. Name of the Enterprise:** Vermicompost Production
  - 2. Name of Beneficiary:** Sanjit Kumar Patra
  - 3. Address:** Vill: Taherpura, P.O.Nanda, P.S, Singur, Dist. Hooghly
- 

**4. Introduction/Background:** Sanjit Kumar Patra is a dynamic, young, energetic farmer. From his very young age he was interested in agriculture. His family has a small land holding of 2 acres. He helped his father in his cultivation practices. Now, he is the only earning member of his family. He mainly depends upon agriculture for his livelihood. He used to cultivate some parts of his total cultivated land organically. During this cultivation process he used to purchase organic inputs. As the price of organic input is high in the market he decided to produce organic inputs by himself 3-4 years earlier. During this time he faced some problems like selection of specific earthworm, what type of raw materials to be used, when to harvest etc. In the mean time he heard the name of KVK from an ex trainee of Hooghly

Krishi Vigyan Kendra. He came to KVK with him to get information about vermicompost production technology training, training schedule, training duration etc. Keeping in view the interest of Mr.Patra KVK has decided to involve him under ARYA project and accordingly he was given training and support for development of vermicompost production unit as an enterprise. Within a short period of time he made it a successful venture.

**5. Progress made:** At present his earning has reached to 2.4-2.6 lakh per year through production and selling of vermicompost and earthworm. He made contact with local panchayats, co-operatives, input dealers and SHGs for selling his product. Now he became popular in his area. His details of production are given below:

| Sl.No.       | Item         | Production (kg.) | Market Price (Rs.)      |
|--------------|--------------|------------------|-------------------------|
| 1            | Vermicompost | 31,500           | 2,52,000/- (@Rs. 8 /kg) |
| 2            | Earthworm    | 10               | 8000/- (@Rs. 1000/kg)   |
| <b>Total</b> |              |                  | <b>2,60,000.00</b>      |

**6. Benefit to youth:** He has been provided training and support for development of Vermicompost production unit. Technical guidance has also been provided for production

of vermicompost as he is hard-working and interested. He will start vermish production from his production unit as a by product very shortly which will be additional avenue for him.

## 7. Change in economic status of the youth due to adoption of ARYA project:

| SINo. | Indicator        | Before adoption of ARYA | After adoption of ARYA |
|-------|------------------|-------------------------|------------------------|
| 1     | Net Income (Rs.) | 75,000/-                | 1,78,500/-             |

## 8. Constraints faced:

- 1) He has lack of fund for establishment of unit at the initial stage.
- 2) He faced marketing problem.
- 3) He faced problem of separating earthworm from vermi-compost during harvesting.

## 9. Perception of others in the village:

He made his enterprise a successful one within a short period of time. He became popular and a role model in his area. The other villagers show interest after watching his success. Many of them have made contact with him and KVK also.

**10. Conclusion:** Mr. Patra is a dynamic and energetic small farmer. His interest in vermicompost production and his effort made him a successful entrepreneur in the locality. He is becoming popular in the area. Many rural youths made contact with him for information and showed interest for vermicompost production. His success will motivate other farmer and farm women and rural youths and increases the possibilities of horizontal expansion of the technology in the area.

## 11. Photographs of the enterprise:



Vermicompost production unit



Practical Class



Class room training



Vermicompost production unit



Vermicompost production unit



Finished product (ready for sale)

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Sl. No.                                   | Name of the Youth   | Village Name | Name of adopting enterprise   |
|---|---------------------|--------------|-------------------------------|
| <b>Youths earning more than Rs. 10000</b> |                     |              |                               |
|   | Amit Sarkhel        | Gotu         | Nursery raising of vegetables |
|   | Animesh Sarkar      | Gotu         | Nursery raising of vegetables |
|   | Goutam Das          | Panischeola  | Nursery raising of vegetables |
|   | Tarun Kr. Majumder  | Maheshpur    | Backyard poultry              |
|   | Nasrin Layla        | Khantul      | Backyard poultry              |
|   | Soumya Das          | Potue        | Backyard poultry              |
|   | Sadhana Biswas      | Fatkia       | Mushroom Cultivation          |
|   | Sukumar Mondal      | Gopalnagar   | Mushroom Cultivation          |
|   | Avishek Paul        | Sahabazar    | Mushroom Cultivation          |
|   | Sanjoy Kr. Ghosh    | Kakgachi     | Mushroom Cultivation          |
|   | Amit Ganesh Samanta | Deshapara    | Mushroom Cultivation          |
|   | Nitya Gopal Das     | Panchghara   | Mushroom Cultivation          |
|   | Uday Kumar Roy      | Rajbalhat    | Mushroom Cultivation          |
|   | Sanjit Kumar Patra  | Taherpur     | Vermicompost Production       |

**(C) Dignitaries visited ARYA villages:** Officials from line department.

**(D) Newspaper coverage:** Not covered

**(E) Publications:** Not yet.

**(F) Migration status:** The enterprises which are selected for this project are very promising and successful. The rural youths who have been supported from the project has shown a good result. Consequently, a good number of rural youths are coming to this Kendra for

information about the enterprises. So, there is a huge scope for horizontal dissemination of the specific enterprises in the ARYA villages as well as other areas of the district. The unemployed rural youths can take the enterprise for their livelihood development.

Therefore, it can be concluded that these successful enterprises will decrease the migration of rural youths from villages. It is

also stated that this Kendra has received positive response from 125 rural youths for adoption of those enterprises.



Nursery Raising of Vegetables



Backyard Poultry Rearing



*Mushroom Production Unit*



*Vermicompost Production Unit*

# ACHIEVEMENTS OF CUTTACK KVK

## 5. Achievements of Cuttack KVK

### 5.1 Project Initiation

ARYA (Attracting and Retaining Youth in Agriculture) initiated at KVK Cuttack in the year 2018-19

#### Name of ARYA villages

Table-1

| Sl. No. | KVK name | Name of ARYA village          | Established enterprise              |
|---------|----------|-------------------------------|-------------------------------------|
| 1       | Cuttack  | Bramhansailo, Kantapada       | Protected cultivation of vegetables |
| 2       | Cuttack  | Mulabasanta, Nischintakoili   | Protected cultivation of vegetables |
| 3       | Cuttack  | Dahijanga, Niali              | Protected cultivation of vegetables |
| 4       | Cuttack  | Tantira, Tangi-Choudwar       | Mushroom Production                 |
| 5       | Cuttack  | Madhuban, Badamba             | Mushroom Production                 |
| 6       | Cuttack  | Badabhumi, Badamba            | Mushroom Production                 |
| 7       | Cuttack  | Laptuan, Mahanga              | Goatery, poultry                    |
| 8       | Cuttack  | Kankali, Tangi-Choudwar       | Goatery, poultry                    |
| 9       | Cuttack  | Mohanapur, Salipur            | Poultry                             |
| 10      | Cuttack  | Gatirout-Patna, Cuttack Sadar | Poultry                             |
| 11      | Cuttack  | Khandasahi, Nischintakoili    | Goatery, poultry                    |
| 12      | Cuttack  | Bhaunria, Mahanga             | Goatery, poultry                    |
| 13      | Cuttack  | Sahapur, Mahanga              | Goatery, poultry                    |
| 14      | Cuttack  | Sundarda, Niali               | Goatery, poultry                    |
| 15      | Cuttack  | Pahanga, Niali                | Poultry                             |

### 5.2 District Profile

|                            |  |
|----------------------------|--|
| Total cultivated Area      | 1,88,150 ha  |
| Irrigation                 | 42% in Kharif, 39% in Rabi   |
| Major crop (Kharif)        | Paddy, Vegetables (Brinjal, Okra, cauliflower, Tomato, Cowpea, Bitter gourd) |
| Major crop (Rabi)          | Green gram, Black gram, Groundnut, Cauliflower, Cabbage                      |
| Major Enterprises          | Poultry, Mushroom, Dairy, Fruit sapling nursery                              |
| Potential Agri-Enterprises | Poultry, Mushroom, Hi-tech vegetable farming                                 |

### 5.3 Identification of youth

We identified rural youths based on their financial and educational status, assessment of their needs in the present situation and interest showing towards protected cultivation

- No of youth selected for training: 75
- No of youths selected for establishing entrepreneurial units (1<sup>st</sup> phase): 15

- No of youths selected for establishing entrepreneurial units (2<sup>nd</sup> phase): 30

### 5.4 Name of cooperating Institutions for technical support

Central Horticultural Experimental Station, Bhubaneswar

Central Institute for Women in Agriculture, Bhubaneswar

Central Poultry Development Organization, Bhubaneswar

### 5.5 Enterprise details

#### a) Mushroom Production

##### Detailed description

| Sl.No. | Particulars   | Enterprise details  |
|--------|---|---------------------|
| 1      | Name of the Enterprise  | Mushroom Production |
| 2      | Target of Enterprise  | 15                  |
| 3      | Youth selected for entrepreneurial unit (1 <sup>st</sup> phase) | 5                   |
| 4      | Youth selected for entrepreneurial unit (2 <sup>nd</sup> phase) | 10                  |
| 5      | Avg. size of entrepreneurial unit                               | 200 no. of beds     |

##### Input /Support provided to youth groups

| Sl.No. | Particulars                              | Enterprise details   |
|--------|--|--|
| 1      | Critical Inputs to 1 <sup>st</sup> phase | Mushroom spawn bottle:- 100 bottles<br>Polythene sheet:- 1 bundle (10 kg)<br>Manual sprayer:- 16 ltr |
| 2      | Critical Inputs to 2 <sup>nd</sup> phase | DigitalWeighingMachine(1 g-10 kg)<br>ChaffCuterwithstand<br>DigitalHygrometer<br>Plastictray         |

##### Progress made

| Sl. No. | Particulars | Enterprise details  |
|---------|-------------|---|
| 1       | Cultivation | Started off Paddy Straw mushroom cultivation and during winter season Oyster mushroom Cultivation |
| 2       | Training    | 2no. (5 days duration for 20 no. of rural youths).  |

**Table-2**

| Enterprise name         | No. of youth involved | Unit/No.                       | Measurable indicators of output in suitable unit |                        | % increase | Economic of enterprise |                  |      |
|-------------------------|-----------------------|--------------------------------|--|------------------------|------------|------------------------|------------------|------|
|                         |                       |                                | Before adopting ARYA                             | After adopting ARYA    |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Mushroom Production (q) | 10                    | 10 (Unit size-200 no. of beds) | 2  | 3                      | 50         | 100800                 | 123500           | 2.21 |
|                         |                       |                                | Income Rs. 32000/ month                          | Income Rs.48000/ month | 50         |                        |                  |      |

### Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth     | Village Name                    | Name of adopting enterprise      |
|---------|-----------------------|---------------------------------|----------------------------------|
| 1       | Jagannath Das Boss    | Malha Sahi, Mangalabag, Cuttack | Paddy straw mushroom cultivation |
| 2       | Priyaranjan Mohapatra | Anantapur, Salepur              | Paddy straw mushroom cultivation |
| 3       | Pabitra Kumar Biswal  | Tantira, Tangi-choudwar         | Paddy straw mushroom cultivation |
| 4       | Sunil Kumar Beura     | Chitreswar, Tangi-choudwar      | Paddy straw mushroom cultivation |
| 5       | Shiba Prasad Dhala    | Chhanipur, Salepur              | Paddy straw mushroom cultivation |
| 6       | Kunas Behera          | Gatiroutpatna, Cuttack Sadar    | Paddy straw mushroom cultivation |
| 7       | Anil Kumar Swain      | Routraypur, Banki-dampada       | Paddy straw mushroom cultivation |
| 8       | Santosh Kumar Muduli  | Badabhumi, Badamba              | Paddy straw mushroom cultivation |
| 9       | Samir Kumar Sahoo     | Madhuban, Badamba               | Paddy straw mushroom cultivation |
| 10      | Bikash Kumar Rana     | Gopinathpur, Badamba            | Paddy straw mushroom cultivation |

### Income level

**Table-5**

| Enterprise          | Area (Acre)/ No.                | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|---------------------|---------------------------------|-----------------------------------|-----------------------|---------------------------|
| Mushroom Production | Paddy straw mushroom (200 beds) | 100800                            | 223500                | 123500                    |

### Impact

One of the youths, Pabitra Biswal, had taken up paddy straw mushroom cultivation and found substantial increase in his income level i.e. Rs 48000 from 35 ft × 20 ft area in a month. He

is interested to increase his area of production and he is intended to cultivate paddy straw mushroom throughout the year.



## b) Coloured broiler production

### Detailed description

| Sl. No. | Particulars   | Enterprise details          |
|---------|---|-----------------------------|
| 1       | Name of the Enterprise  | Coloured broiler production |
| 2       | Target of Enterprise  | 15                          |
| 3       | Youth selected for entrepreneurial unit (1 <sup>st</sup> phase) | 10                          |
| 4       | Youth selected for entrepreneurial unit (2 <sup>nd</sup> phase) | 10                          |
| 5       | Avg. size of entrepreneurial unit                               | 200                         |

### Input /Support provided to youth groups

| Sl. No. | Particulars                              | Enterprise details   |
|---------|--|--|
| 1       | Critical Inputs to 1 <sup>st</sup> phase | Vanaraja & Aseel chicks<br>(provided after brooding and vaccination)<br>Feeder and drinker<br>Essential vaccine, medicines and supplements<br>Feed for 30 days |
| 2       | Critical Inputs to 2 <sup>nd</sup> phase | Vanaraja & Aseel chicks<br>Wire mesh for housing   |

### Progress made

| Sl. No. | Particulars                    | Enterprise details   |
|---------|--------------------------------|--|
| 1       | Poultry rearing                | Rearing is going on in low cost sheds  |
| 2       | Training                       | 1 no. (5 days duration for 20 no. of rural youth).                             |
| 3.      | Literature /Extension Bulletin | Prepared one technical bulletin on “Poultry farming for employment generation” |

**Table-2**

| Enterprise name             | No. of youth involved | Unit/ No.                | Measurable indicators of output in suitable unit             |  | % increase | Economic of enterprise |                  |      |
|-----------------------------|-----------------------|--------------------------|--|--|------------|------------------------|------------------|------|
|                             |                       |                          | Before adopting ARYA   | After adopting ARYA  |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Coloured poultry production | 10                    | 10 (Unit size-200 birds) | Early bird mortality 8-12%<br>Body weight at 3 months 1.2 kg | Early bird mortality 2%<br>Body weight at 3 months 1.95 kg | 62.5       | 62000                  | 91000            | 2.47 |

## Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth      | Village Name              | Name of adopting enterprise |
|---------|------------------------|---------------------------|-----------------------------|
| 1       | Kamalakanta Mohanty    | Uchhapada, Tangi-Choudwar | Poultry                     |
| 2       | Pravati Pani           | Ganeswarpur, Salipur      | Poultry                     |
| 3       | Asisha Ranjan Bhuyan   | Laptuan, Mahanga          | Poultry                     |
| 4       | Kapilendra Mohanta     | Kankali, Tangi-Choudwar   | Poultry                     |
| 5       | Shyama Salima          | Kankali, Tangi-Choudwar   | Poultry                     |
| 6       | Manoj Das              | Sukhleswar                | Poultry                     |
| 7       | Mamata Das             | Sahapur Kumuda            | Poultry                     |
| 8       | Dibyajyoti Rout        | Laptuan                   | Poultry                     |
| 9       | Laxminarayan Mohapatra | Chhatipur                 | Poultry                     |
| 10      | Bibekananda Parida     | Pahanga                   | Poultry                     |
| 11      | Abhiram Mallick        | Sundarda                  | Poultry                     |
| 12      | Bubuli ku. Swain       | Brahmanasailo             | Poultry                     |
| 13      | Pradipta ku. Dash      | Laptuan                   | Poultry                     |
| 14      | Mousami Jena           | Sahapur                   | Poultry                     |
| 15      | Prasant Rout           | Babathakan                | Poultry                     |

## Income level

**Table-5**

| Enterprise                  | Area (Acre)/ No.    | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|-----------------------------|---------------------|-----------------------------------|-----------------------|---------------------------|
| Coloured poultry production | 200 birds in 3 lots | 62000                             | 153000                | 91000                     |

## Impact

Looking at the success of ARYA Youth, nearby youth are also interested in rearing poultry.

Impact will be observed after completion of cycle and will be intensified in the next year

## c) Black Bengal Goat Production

### Detailed description

| Sl. No. | Particulars   | Enterprise details           |
|---------|---|------------------------------|
| 1       | Name of the Enterprise  | Black Bengal Goat Production |
| 2       | Target of Enterprise  | 15                           |
| 3       | Youth selected for entrepreneurial unit (1 <sup>st</sup> phase) | 5                            |
| 4       | Youth selected for entrepreneurial unit (2 <sup>nd</sup> phase) | 10                           |
| 5       | Avg. size of entrepreneurial unit                               | 35                           |

### Input /Support provided to youth groups

| Sl. No. | Particulars                              | Enterprise details  |
|---------|--|---|
| 1       | Critical Inputs to 1 <sup>st</sup> phase | Wire mesh for housing 50 ft × 6<br>Digital Weighing Balance ( upto 50 kg) |
| 2       | Critical Inputs to 2 <sup>nd</sup> phase | Bucks(10 Nos)<br>Feed and Supplements<br>Essential treatment support      |

### Progress made

| Sl. No. | Particulars | Enterprise details                                  |
|---------|-------------|---|
| 1       | Cultivation | Started black bengal goat rearing                   |
| 2       | Training    | 1 no. (5 days duration for 20 no. of rural youths). |

**Table-2**

| Enterprise name           | No. of youth involved | Unit/No.              | Measurable indicators of output in suitable unit |                     | % increase | Economic of enterprise |                  |      |
|---------------------------|-----------------------|-----------------------|--|---------------------|------------|------------------------|------------------|------|
|                           |                       |                       | Before adopting ARYA                             | After adopting ARYA |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Black Bengal Goat Rearing | 6                     | 6 (Unit size- 35 no.) | Yield (q / unit) 2 q/unit                        | 3 q/unit            | 50         | 148000                 | 103000           | 3.14 |

### Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth    | Village Name     | Name of adopting enterprise |
|---------|----------------------|------------------|-----------------------------|
| 1       | Asisha Ranjan Bhuyan | Laptuan, Mahanga | Goatery                     |
| 2       | Manoj Das            | Sukhleswar       | Goatery                     |

| Sl. No. | Name of the Youth  | Village Name            | Name of adopting enterprise |
|---------|--------------------|-------------------------|-----------------------------|
| 3       | Mamata Das         | Sahapur Kumuda          | Goatery                     |
| 4       | Kapilendra Mohanta | Kankali, Tangi-Choudwar | Goatery                     |
| 5       | Karunakar Jerai    | Kankali, Tangi-Choudwar | Goatery                     |
| 6       | Prasant Rout       | Babathakan              | Goatery                     |

## Capital Generation

**Table-4**

| Particulars/ Equipment | Quantity (No.) |
|------------------------|----------------|
| –                      | –              |

## Income level

**Table-5**

| Enterprise                   | Area (Acre)/ No. | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|------------------------------|------------------|-----------------------------------|-----------------------|---------------------------|
| Black Bengal Goat Production | 35 nos.          | 45000                             | 148000                | 103000                    |

## Impact

After adoption of scientific black Bengal goat rearing, the kid's growth is more pronounced and helping to achieve higher body weight at

marketing age. Many nearby youths of the same village and adjacent ones are now interested in reaping the benefit from the program.

### d) Protected cultivation of tomato, cucumber and capsicum

#### Detailed description

| Sl.No. | Particulars   | Enterprise details                                     |
|--------|---|--|
| 1      | Name of the Enterprise  | Protected cultivation of tomato, cucumber and capsicum |
| 2      | Target of Enterprise  | 15   |
| 3      | Youth selected for entrepreneurial unit (1 <sup>st</sup> phase) | 5  |
| 4      | Youth selected for entrepreneurial unit (2 <sup>nd</sup> phase) | 10   |
| 5      | Avg. size of entrepreneurial unit                               | 500 m <sup>2</sup>                                     |

## Input /Support provided to youth groups

| Sl.No. | Particulars                              | Enterprise details  |
|--------|--|---|
| 1      | Critical Inputs to 1 <sup>st</sup> phase | Agro shade Net -75%<br>(2 bundles Agroshade net -75% provided to each)<br>Seed-Hybrid tomato cultivar<br>Plant protection chemicals-thiomithoxam<br>Soluble NPK & micronutrient |
| 2      | Critical Inputs to 2 <sup>nd</sup> phase | Yet to be supplied  |

## Progress made

| Sl.No. | Particulars | Enterprise details  |
|--------|-------------|---|
| 1      | Cultivation | Started off season coriander, capsicum and Tomato cultivation |
| 2      | Training    | 1no. (5 days duration for 40 no. of rural youths).            |

**Table-2**

| Enterprise name                 | No. of youth involved | Unit/No.                            | Measurable indicators of output in suitable unit |                     | % increase | Economic of enterprise |                  |      |
|---------------------------------|-----------------------|-------------------------------------|--|---------------------|------------|------------------------|------------------|------|
|                                 |                       |                                     | Before adopting ARYA                             | After adopting ARYA |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Protected cultivation of tomato | 3                     | 3<br>(Unit size-500m <sup>2</sup> ) | Yield ( q / unit)<br>36 q/unit                   | 50 q/unit           | 38         | 43000                  | 117000           | 3.72 |
|                                 |                       |                                     | Income<br>Rs./month)<br>Rs. 16000                | Rs.22500            | 40         |                        |                  |      |

## Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth    | Village Name         | Name of adopting enterprise     |
|---------|----------------------|----------------------|---------------------------------|
| 1       | Abinash Balabantaray | Mulabasanta, Mahanga | Protected cultivation of tomato |
| 2       | Sunil Kumar Sahoo    | Dahijanga, Niali     | Protected cultivation of tomato |
| 3       | Dipu Swain           | Dahijanga, Niali     | Protected cultivation of tomato |

## Income level

**Table-5**

| Enterprise                      | Area (Acre)/<br>No. | Cost of production<br>(Rs. Per unit) | Return<br>(Rs. Per unit) | Net Income<br>(Rs. Per unit) |
|---------------------------------|---------------------|--------------------------------------|--------------------------|------------------------------|
| Protected cultivation of tomato | 500 m <sup>2</sup>  | 43000                                | 160000                   | 117000                       |

## Impact

During rainy season, one of the youths, Abinash Balabantaray, had taken up coriander under protected structure as off season crop and found substantial increase

in his income level, i.e., Rs 7,800 from 45 ft x 15 ft area in 75 days. He is interested to increase his area of production in the coming off season.

## (A) Capacity Building

**Table-6**

| Thematic Area                            | Topic of training                                 | No. of courses | No. of beneficiaries |        |       |
|--|---|----------------|----------------------|--------|-------|
|  |   |                | Male                 | Female | Total |
| Mushroom Production                      | Mushroom Production on entrepreneurial basis      | 1 (5 Days)     | 19                   | 1      | 20    |
| Mushroom Production                      | Mushroom cultivation and its value addition       | 1 (5 Days)     | 17                   | 3      | 20    |
| Broiler production                       | Scientific Poultry Production                     | 1 (5 Days)     | 17                   | 3      | 20    |
| Black Bengal goat farming                | Scientific goat farming for enterprise generation | 1 (5 Days)     | 20                   | 0      | 20    |
| Protected cultivation of Vegetable crops | Hi-tech vegetable cultivation                     | 1 (5 Days)     | 32                   | 8      | 40    |

## Success Story of ARYA Youth



### 1. Thematic Area - Entrepreneurship development under ARYA

#### Title- Mushroom Production

#### Background Information: -

Shri. Pabitra Biswal of village Tantira, Tangi-chaudwar, Cuttack now a satisfied and successful mushroom entrepreneur. Initially he is a worker in a private company during COVID-19 pandemic he lost his job. Who wanted to find a better way to get answers to his pressing family need as he could hardly get opportunity to earn income through paddy

#### Outcome: -

| Sl.No. | Type of Enterprise                 | Area/ Nos. | Production/ Month (q) | Expenditure (Rs.) / Month | Income / (Rs.) Month | Net Profit (Rs./Month) |
|--------|------------------------------------|------------|-----------------------|---------------------------|----------------------|------------------------|
| 01     | Production of Paddy Straw Mushroom | 200        | 1.25                  | 12600                     | 22500                | 10000                  |



and vegetable farming. Assessing his need and potentiality, KVK imparted vocational training on round the year mushroom production in campus, which motivated him to take up the mushroom cultivation, which requires low investment and can be utilized her waste land also which is a great demand in Cuttack district.

#### Description of Technology: -

Use of quality spawn, scientific method of mushroom bed preparation, harvesting techniques, value added products from mushroom.

#### Dissemination Process: -

Training by KVK, Cuttack, method demonstration KVK Scientist, small scale mushroom & spawn production, monitoring and feedback.

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Name of the Youth    | Father's/ Husband's Name | Address                 | Age | Mobile No. | Educational Qualification | Income/ Month (Rs.) | Name of adopting Enterprise |
|----------------------|--------------------------|-------------------------|-----|------------|---------------------------|---------------------|-----------------------------|
| Pabitra Kumar Biswal | Niranjan Biswal          | Tantira, Tangi chaudwar | 33  | 7978261855 | +3 Arts, PGDCA            | 22500               | Mushroom production         |

**(C) Dignitaries visited ARYA villages- Nil**

**(D) Newspaper coverage- Nil**

**(F) Publications- Nil**

**(G) Migration status- Nil**



*Imparted training on Mushroom Production*



*Demonstration on bed preparation of Paddy straw mushroom*



*Plucking of Mushroom by ARYA Youth*



*Field visit of an entrepreneurial unit*



*Brooding of chicks in progress*



*Poultry nearing maturity stage*





*ARYA youths on duty*



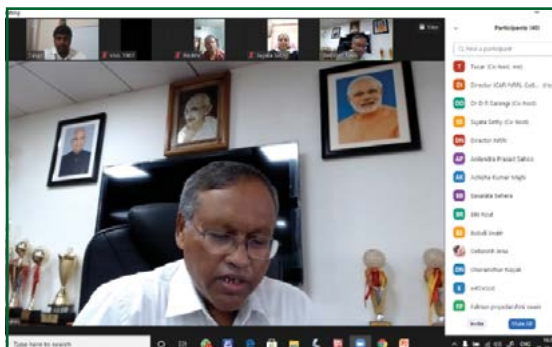
*ARYA youths on duty*



*ARYA youth with goats*



*Father of ARYA entrepreneur with some goats*



*Online training programme on Hi-tech vegetable cultivation*



*Field visit and diagnosis*



*Tomato harvesting under protected structure*

## 6. Achievements of Nayagarh KVK

The Nayagarh district comes under East and South Eastern coastal plain agro climatic zone. It covers an area of 3, 89,000 ha and has 9.63 lakh population as per 2011 census. It accounts 2.50 per cent of states territory and shares 2.29 per cent of the state population. It consists of 1531 inhabited villages. It has 8, 83, 051 rural population, 79,738 urban population representing 91.7% and 8.3% of the district population as per 2011 census. The youth constitute 33% i.e., (2, 91,406 nos) of the rural population. Gradually decrease in interest of rural youth which compels them to search alternative occupation for their livelihood. Least knowledge on scientific farming of agriculture is also the key factor for diverting their willingness for agriculture. To retain the rural youth in agriculture and allied sectors, government of India has launched the ARYA (Attracting and Retaining Youth in Agriculture) programme for minimizing the migration rate of the rural youth of the district. Under this programme

the youth are attracted for adopting resource specific need-based alternative remunerative occupation at a sustainable level.

### 6.1 Project Initiation: 2015-16

To attract and empower the Youth in Rural Areas to take up various Agriculture and allied activities through various potential enterprises of the district to represent them (Rural Youths) as successful Farm Youth.

#### 1. Mushroom production

Paddy straw mushroom is widely accepted among the community because of its excellent taste and flavor, simple and easy production technology, abundance of raw material and enrich in crude fibre and protein. Mushroom farming is both a science and an art. The potentiality of mushroom farming is in generating new employment opportunities.

**2. Backyard poultry rearing:** During the recent years, certain activities and enterprises have been proved to be potential in earning livelihood for the resource poor group and more particularly such activities can be promoted as agro based enterprises with scope and scale on a commercial basis. Backyard poultry has emerged as one such alternative option provides huge opportunities for rural poor backyard poultry production system.

**3. Stunted fingerlings production:** In the district, the total fish production is around 8090 MT with a pond area of 2171 ha with avg. productivity of 2.3 t/ha. For production of fish in a short period, there is a requirement of stocking large sized fingerlings called stunted fingerlings/ yearlings. In Nayagarh. Most of the ponds are community ponds and seasonal

ponds where there need to be stocking large fingerlings/ stunted fingerlings. The unemployed youth can be best suited for the production of stunted fingerlings/ yearlings to decrease the migration and employment generation in their own area for sustainable income and gainful employment.

- (ii) To enable the Farm Youth to establish net work groups to take up resource and capital intensive activities like processing, value addition and marketing, and
- (iii) To demonstrate functional linkages with different institutions and stakeholders for convergence of opportunities available under various schemes/ programmes for sustainable development of youth.

### Name of ARYA villages

Table-1

| Sl. No. | KVK name | Name of ARYA villages | Established enterprise        |
|---------|----------|-----------------------|-------------------------------|
| 1       | Nayagarh | Korada                | Stunted fingerling production |
|         |          | Balisina              |                               |
|         |          | Balabhadrapur         |                               |
|         |          | Nilakanthaprasad      |                               |
|         |          | Ambajhari             |                               |
|         |          | Minagadia             |                               |
|         |          | Belabani              |                               |
|         |          | Adipada               |                               |
|         |          | Kantabania            |                               |
|         |          | Benagadia             |                               |
|         |          | Barangagadia          |                               |
|         |          | Madhyakhanda          |                               |
|         |          | Niladripur            |                               |
|         |          | Adakata               |                               |
|         |          | Putuberana            |                               |
|         |          | Subulaya              |                               |
|         |          | Khedapada             |                               |
|         |          | Notar                 |                               |
| Korada  |          |                       |                               |
| Korada  |          |                       |                               |

| Sl. No.        | KVK name | Name of ARYA villages | Established enterprise   |
|----------------|----------|-----------------------|--------------------------|
| 2              | Nayagarh | Kalyanpur             | Backyard Poultry Rearing |
|                |          | Ambarapur             |                          |
|                |          | Bhetapalli            |                          |
|                |          | Ambarpur              |                          |
|                |          | Banamalipur           |                          |
|                |          | Badabanapur           |                          |
|                |          | Sikrida               |                          |
|                |          | Muduranga             |                          |
|                |          | Bhogara               |                          |
|                |          | Khedapada             |                          |
|                |          | Sarasara              |                          |
|                |          | Badabanapur           |                          |
|                |          | Godisahi              |                          |
|                |          | Godipalli             |                          |
|                |          | Jajangisahi           |                          |
|                |          | Balugaon              |                          |
|                |          | Badabanapur           |                          |
|                |          | Daspalla              |                          |
|                |          | Korada                |                          |
| Mahitama       |          |                       |                          |
| 3              | Nayagarh | Bandhadwar            | Mushroom Production      |
|                |          | Durgarasad            |                          |
|                |          | Sikharpur             |                          |
|                |          | Koska                 |                          |
|                |          | Sanagorada            |                          |
|                |          | Kunjabiharipurpatana  |                          |
|                |          | Ghantasahi            |                          |
|                |          | Satapada              |                          |
|                |          | Malisahi              |                          |
|                |          | Sinduria              |                          |
|                |          | Panibhandar           |                          |
|                |          | Benagadia             |                          |
|                |          | Banamalipur           |                          |
|                |          | Badabanapur           |                          |
|                |          | Godipalli             |                          |
|                |          | Benagadia             |                          |
|                |          | Itamati               |                          |
|                |          | Panibhandar           |                          |
|                |          | Subalabha             |                          |
| Khelapadiasahi |          |                       |                          |

## 6.2 District Profile

|     |  |                          |
|-----|--|--------------------------|
| 1.  | Geographical area of the district      | 3,94,110 ha (4242 sq.km) |
| 2.  | Height from mean sea level             | 90 mtr.                  |
| 3.  | No. of subdivisions                    | 1                        |
| 4.  | No. of Tahasils                        | 8                        |
| 5.  | No. of NAC                             | 2                        |
| 6.  | No. of CD blocks                       | 8                        |
| 7.  | No. of GPs                             | 180                      |
| 8.  | No. of revenue villages                | 1531                     |
| 9.  | Population in the district 2011 census | 9,62,000                 |
|     | Male                                   | 5,02,000                 |
|     | Female                                 | 4,60,000                 |
| 10. | ST population                          | 5.88%, 50,836            |
| 11. | SC population                          | 14.04%, 1,21,409         |
| 12. | Literacy                               | 79.12%                   |
|     | Male                                   | 82.66%                   |
|     | Female                                 | 57.64%                   |
| 13. | Population density                     | 247/sq. km.              |

## 6.3 Identification of youth

- Bench mark survey of the prevailing enterprises of the district.
- Study of market assessment of the existing market supply chain.
- Seeking expression of interest from youths for entrepreneurship development
- Preliminary screening of youths on the basis of personal information, qualification, age and resources etc.
- Organization of consultative workshop for stakeholder interest analysis.
- Invitation of successful entrepreneurs to share their experiences in the consultative workshop.
- Discussion on scope, opportunity and challenges of each enterprise in the consultative workshop.
- Identification of potential rural youths interested for different enterprises.
- Exposure visit to successful entrepreneur units about the opportunities in primary and secondary agriculture for making a satisfactory living in rural areas

### 6.4 Name of cooperating Institutions for technical support

- Dept. of Animal Husbandry, Nayagarh, Govt. Of Odisha
- Dept. of Horticulture, Nayagarh, Govt. Of Odisha
- Dept. of Fisheries, Nayagarh, Govt. Of Odisha
- National Bank for Agriculture and Rural Development (NABARD), Nayagarh
- State Bank of India (ADB), Nayagarh
- ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar
- OPOLFED, Bhubaneswar
- Integrated Poultry Development Project, Bhubaneswar

- CTMRT, OUAT, Bhubaneswar
- Padmashree Batakrushna Sahu, Fish Farm, Khorda
- Sri Kailash Ch. Sahu, Fish Farm, Puri

### 6.5 Enterprise details

#### a) Stunted Fingerling Production

**Detailed description:** In the district, the total fish production is around 6900 MT with a pond area of 2171 ha with average productivity of 2.3 tonne / ha. There is also a greater scope for increasing the fish production and per capita income by promoting young entrepreneurs for production of fish seed and fingerling.

**Input /Support provided to youth groups:**  
Nil

### Progress made

**Table-2**

| Enterprise name               | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                                  | % increase | Economic of enterprise |                  |      |
|-------------------------------|-----------------------|-----------|--|----------------------------------|------------|------------------------|------------------|------|
|                               |                       |           | Before adopting ARYA (Rs./ annum)                | After adopting ARYA (Rs./ annum) |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Stunted Fingerling Production | 20                    | 20        | 33,150   | 53,500                           | 61         | 21,350                 | 42,640           | 2.73 |

### Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth  | Village Name  | Name of adopting enterprise   |
|---------|--------------------|---------------|-------------------------------|
| 1.      | Samya Ranjan Sethi | Korada        | Stunted fingerling production |
| 2.      | Mantu Nayak        | Balisina      | Stunted fingerling production |
| 3.      | Subas Chandra Saoo | Balabhadrapur | Stunted fingerling production |

| Sl. No. | Name of the Youth       | Village Name     | Name of adopting enterprise   |
|---------|-------------------------|------------------|-------------------------------|
| 4.      | Prakash chanda Sundara  | Nilakanthaprasad | Stunted fingerling production |
| 5.      | Baikuntha Parida        | Ambajhari        | Stunted fingerling production |
| 6.      | Basant Patra            | Minagadia        | Stunted fingerling production |
| 7.      | Bharat Chandra Kaunr    | Belabani         | Stunted fingerling production |
| 8.      | Sunil Sahoo             | Adipada          | Stunted fingerling production |
| 9.      | Sanjaya kumar Jena      | Kantabania       | Stunted fingerling production |
| 10.     | Jitandra Kumar Sahoo    | Benagadia        | Stunted fingerling production |
| 11.     | Bikash Chandra Champati | Barangagadia     | Stunted fingerling production |
| 12.     | Laxmidhar Majhi         | Madhyakhanda     | Stunted fingerling production |
| 13.     | Monalisa Pradhan        | Niladripur       | Stunted fingerling production |
| 14.     | Amiya kumar Pradhan     | Adakata          | Stunted fingerling production |
| 15.     | Abhimayu Bhuyan         | Putuberana       | Stunted fingerling production |
| 16.     | Tikan Pradhan           | Subulaya         | Stunted fingerling production |
| 17.     | Lopamudra Samantray     | Khedapada        | Stunted fingerling production |
| 18.     | Subrat Nayak            | Notar            | Stunted fingerling production |
| 19.     | Rasmita Nayak           | Korada           | Stunted fingerling production |
| 20.     | Priyanka Rani           | Korada           | Stunted fingerling production |

## Income level

**Table-5**

| Enterprise                    | Area (Acre)/ No. | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|-------------------------------|------------------|-----------------------------------|-----------------------|---------------------------|
| Stunted fingerling production | 1 acre           | 1,50,500                          | 2,82,550              | 1,32,050                  |

## Impact

### Capacity Building

**Table-6**

| Thematic Area     | Topic of training                                    | No. of courses | No. of beneficiaries |        |       |
|-------------------|--|----------------|----------------------|--------|-------|
|                   |  |                | Male                 | Female | Total |
| Income Generation | Hands on training on Stunted fingerling production   | 1              | 15                   | 5      | 20    |
| Income Generation | Project formulation on Stunted fingerling production | 1              | 15                   | 5      | 20    |

## b) Back yard poultry

**Input /Support provided to youth groups:  
Nil**

**Detailed description:** It has emerged as one of the alternative option for livelihood security and improving the socio-economic status.

**Progress made**

**Table-1**

| Enterprise name  | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                                  | % increase | Economic of enterprise |                  |      |
|------------------|-----------------------|-----------|--|----------------------------------|------------|------------------------|------------------|------|
|                  |                       |           | Before adopting ARYA (Rs./ annum)                | After adopting ARYA (Rs./ annum) |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Backyard poultry | 20                    | 20        | 1,20,050   | 1,90,150                         | 68         | 68,550                 | 1,63,347         | 2.77 |

## Name of youths involved

**Table-2**

| Sl. No. | Name of the Youth     | Village Name | Name of adopting enterprise |
|---------|-----------------------|--------------|-----------------------------|
| 1.      | Sangram Keshari Patra | Kalyanpur    | Backyard poultry            |
| 2.      | Sukant kumar Sahoo    | Ambarapur    | Backyard poultry            |
| 3.      | Ajit Pradhan          | Bhetapalli   | Backyard poultry            |
| 4.      | Bipin kumar Jena      | Ambarpur     | Backyard poultry            |
| 5.      | Luptimayee Maha[atra  | Banamalipur  | Backyard poultry            |
| 6.      | Nirmal Pradhan        | Badabanapur  | Backyard poultry            |
| 7.      | Mamata sahuo          | Sikrida      | Backyard poultry            |
| 8.      | Bharati Jena          | Muduranga    | Backyard poultry            |
| 9.      | Dibyajyoti Pradhan    | Bhogara      | Backyard poultry            |
| 10.     | Amar Nayak            | Khedapada    | Backyard poultry            |
| 11.     | Sanjaya Pradhan       | Sarasara     | Backyard poultry            |
| 12.     | Diptiranjan Rout      | Badabanapur  | Backyard poultry            |
| 13.     | Rajiv Patra           | Godisahi     | Backyard poultry            |
| 14.     | Rakesh kumar Swain    | Godipalli    | Backyard poultry            |
| 15.     | Rama Chandra Chinara  | Jajangisahi  | Backyard poultry            |
| 16.     | Amarendra Indrajit    | Balugaon     | Backyard poultry            |
| 17.     | Chandan kumar Mandoi  | Badabanapur  | Backyard poultry            |
| 18.     | Bibekananda Rana      | Daspalla     | Backyard poultry            |
| 19.     | Sndhya rani Behera    | Korada       | Backyard poultry            |
| 20.     | Narendra Behera       | Mahitama     | Backyard poultry            |



## Income level

**Table-4**

| Enterprise       | Area (Acre)/<br>No. | Cost of production<br>(Rs. Per unit) | Return<br>(Rs. Per unit) | Net Income<br>(Rs. Per unit) |
|------------------|---------------------|--------------------------------------|--------------------------|------------------------------|
| Backyard poultry | -                   | 25,800                               | 48,550                   | 22,750                       |

## Impact

### Capacity Building

**Table-5**

| Thematic Area     | Topic of training                       | No. of<br>courses | No. of beneficiaries |        |       |
|-------------------|---|-------------------|----------------------|--------|-------|
|                   |   |                   | Male                 | Female | Total |
| Income Generation | Hands on training on Backyard poultry   | 1                 | 16                   | 4      | 20    |
| Income Generation | Project formulation on Backyard poultry | 1                 | 16                   | 4      | 20    |

### Vaccination of poultry birds was done for the following diseases

**Table-6**

| Sl no | Disease                 | Vaccine | Day of application   |
|-------|-------------------------|---------|----------------------|
| 1     | New castle and ranikhet | Lasota  | 7 <sup>th</sup> day  |
| 2     | Gumbro                  | IBD     | 14 <sup>th</sup> day |

## c) Mushroom Production

### Detailed description:

In Nayagarh district more than 8 Qtl of mushroom is being produced per day. Lack of proper processing and packaging are the major bottleneck for diminishing the market price and shelf life of the produce. A greater demand for primary processing and packaging of the mushroom is a major challenge for the district. Even with a promising scope to have better earning from agriculture, during the recent past a

trend has been observed wherein the rural youth particularly in resource poor category are moving away from agriculture. May be the poor income potentiality of the existing enterprises has not been able to attract the interest of this specific group to retain their vocation.

**Input /Support provided to youth groups:**  
Nil

**Progress made**

**Table-1**

| Enterprise name     | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                                | % Increase | Economic of enterprise |            |     |
|---------------------|-----------------------|-----------|--|--------------------------------|------------|------------------------|------------|-----|
|                     |                       |           | Before adopting ARYA (Rs./ anm)                  | After adopting ARYA (Rs./ anm) |            | Gross cost             | Net return | BCR |
| Mushroom Production | 20                    | 20        | 1,30,300   | 2,90,200                       | 20         | 85,520                 | 3,10,050   | 3.3 |

**Name of youths involved**
**Table-2**

| Sl. No. | Name of the Youth      | Village Name         | Name of adopting enterprise |
|---------|------------------------|----------------------|-----------------------------|
| 1.      | Ranjita Barada         | Bandhadwar           | Mushroom Production         |
| 2.      | Soudamini Lenka        | Durgarasad           | Mushroom Production         |
| 3.      | Mamata Das             | Sikharpur            | Mushroom Production         |
| 4.      | Narayan Nayak          | Koska                | Mushroom Production         |
| 5.      | Surendra Pradhan       | Sanagorada           | Mushroom Production         |
| 6.      | Bibekananda Bai        | Kunjabiharipurpatana | Mushroom Production         |
| 7.      | Sumita Parida          | Ghantasahi           | Mushroom Production         |
| 8.      | Sujata Nayak           | Satapada             | Mushroom Production         |
| 9.      | Bibhuti Bhusan Swain   | Malisahi             | Mushroom Production         |
| 10.     | Abdul Rahim Khan       | Sinduria             | Mushroom Production         |
| 11.     | Sujata Khilar          | Panibhandar          | Mushroom Production         |
| 12.     | Suchismita Swain       | Benagadia            | Mushroom Production         |
| 13.     | Swarnalata Mishra      | Banamalipur          | Mushroom Production         |
| 14.     | Puspalata Swain        | Badabanapur          | Mushroom Production         |
| 15.     | Manasi dalei           | Godipalli            | Mushroom Production         |
| 16.     | Kalpana Sahoo          | Benagadia            | Mushroom Production         |
| 17.     | Smrutiranjana Mansingh | Itamati              | Mushroom Production         |
| 18.     | Rani Khilar            | Panibhandar          | Mushroom Production         |
| 19.     | Bijaya Swain           | Subalabha            | Mushroom Production         |
| 20.     | Sankalpa Kumar Sahoo   | Khelapadiasahi       | Mushroom Production         |

## Income level

**Table-4**

| Enterprise             | Area (Acre)/<br>No. | Cost of production<br>(Rs. Per unit) | Return<br>(Rs. Per unit) | Net Income<br>(Rs. Per unit) |
|------------------------|---------------------|--------------------------------------|--------------------------|------------------------------|
| Mushroom<br>Production | 1 unit              | 5000/100 beds                        | 21000/100 beds           | 18000/100 beds               |

## Impact

### Capacity Building

**Table-5**

| Thematic Area     | Topic of training                          | No. of<br>courses | No. of beneficiaries |        |       |
|-------------------|--|-------------------|----------------------|--------|-------|
|                   |  |                   | Male                 | Female | Total |
| Income generation | Hands on training on mushroom production   | 1                 | 8                    | 12     | 20    |
| Income generation | Project formulation on mushroom production | 1                 | 8                    | 12     | 20    |

## Success Story of ARYA Youth

### Mushroom Production

#### Background:

**Smt Janaki Sahoo** hails from village Balugaon, Block-Nayagarh is a 34 year aged young dynamic youth. She was a typical house wife and always wanted to help her husband to provide financial support to the family income. Her family is a nuclear family. It was very difficult to mitigate financial constraints. Therefore, she wanted to start a small scale enterprise to support her family. In the mean time, she came in contact with KVK and interested to seek technical guidance for mushroom production and through ARYA project, she was selected as a beneficiary for mushroom production enterprise.

#### Intervention made

As per the guidance of KVK experts, she prepared mushroom bed in a scientific and systematic way. Now she can prepare 50 beds per day and her unit contains 1000 bed. She was also trained on market linkage strategy program for marketing of the produce.

#### Input/ support provided to youth groups

Mrs Sahoo participated in skill development training through hands-on and project formulation and marketing strategy for mushroom production followed by exposure visit to progressive farmer field to enrich the knowledge through interesting lecture, interaction, learning by doing and field visit. Also input such mushroom spawn, sprayer, chaff cutter, thermo-hygrometer, plastic tray and polythene was provided to her from

ARYA project. The technical guidance from KVK and Department of Horticulture, CTMRT, Bhubaneswar was provided as when desired by her.

#### Progress made

Initially, for mushroom production she invested Rs. 3000/- in terms of spawn, besan, paddy straw, polythene and labour and got 75 kg of raw mushroom with net income of Rs 12000/- from 100 beds/6month/unit. Retailer collects the entire mushroom from her field and sells at nearby market. She can able to engage 2 nos. of youth in her mushroom unit.

#### Benefit to farmers

- She got got a cost benefit ratio of 3.3.
- By getting the profit, she extened her unit 1000 beds for paddy straw and oyster mushroom production.
- Now he owned 1.4 acre pond by getting around 1lakh of profit.
- He sold his yearling nearby village in good price.

#### Factors contributing to success

- She has keen interest in value addition of oyster mushroom.
- Received financial support by Department of Horticulture, Nayagarh through bank assistance and technical support by KVK.
- High demand of mushroom in her locality as well as outside the district.

#### Constrains faced

- Quality spawn

- Non irrigation facility
- Labour problem
- Non availability of bounded paddy straw

**Perception of others in the village:** Three no. of youths are established mushroom unit in her village i.e seeing by learning.

**Conclusion:** Mrs Sahoo becomes a successful entrepreneur and recognizes as the role model for other mushroom growers in the district.



*(Smt Sahoo in her Mushroom Unit)*

## Stunted Fingerlings Production

### Introduction

Miss Rubina Sahoo of village Gamei, Block-Nuagaon is a 27 year aged young girl. After completion of her graduation, she could not get any job opportunity. For her keen interest in aquaculture sector, initially her father Mr. Abakash sahuo excavated a small pond of 20 decimal with seeking support of Watershed Department, Nayagarh to help her. Due to lack of knowledge in fishery sector, she came to contact with KVK scientist. Seeing her enthusiasm in aquaculture sector, KVK scientist suggested for stunted fingerlings production/ yearlings production and included her as a beneficiary for stunted fingerlings production under ARYA project in the year 2018-19.

### Intervention made

As per the guidance of KVK experts, she prepared pond by strengthening the bund, eradication of weed fish and aquatic insects followed by application of lime 50 kg/acre. After 7 days of lime application, pond was manured with RCD @ 2q and SSP 10 kg per acre. The pond was stocked with 1.20 lakh of IMC fry with feeding rice bran and GNOC 1:1 and vitamin mixture @2% per kg of feed. Regular water quality management, manuring and disease management were key point followed for stunted fingerling/yearling practice. Sampling at every 30 days was done for checking the health status and alternative bath treatment with  $KMnO_4$  and salt as preventive measure followed for disease management. She protected her fry/fingerlings from fish eating birds by fixing nylon net, plastic rope over the top of the pond.

### Input/ support provided to youth groups

Ms. Sahoo participated in skill development training on stunted fingerlings production followed by one day exposure visit to progressive farmer field to enrich the knowledge through interesting lecture, interaction, learning by doing and field visit. Also input such as dragnet, plankton net, happa, water pump and medicine (CIFAX) was provided to her from ARYA project. The technical guidance from KVK and fishery department was provided as when desired by her.

### Progress made

In this stunted fingerling production initially she invested Rs. 18,200/- in terms of seed, manuring, liming, feeding and labour and got 2.5q stunted fingerlings with an income of Rs 48,250/- in 20 decimal pond.

### Benefit to farmers

- She got a cost benefit ratio of 2.91.
- Now she owned 5 acre pond by getting around 3.0 lakh of profit.
- She sold yearling nearby village in good price.

### Factors contributing to success

- She has keen interest in fish production as well as value addition.
- Received technical support by KVK and Fishery department, Nayagarh.
- High demand of stunted fingerlings/yearlings in her locality and outside district.

**Constrains faced**

- In summer, pond water depth maintenance is the major problem faced by the farmer.
- Unavailability of aquaculture input (Medicine & chemicals) in the locality.
- Mortality of seed during transportation

**Perception of others in the village:** Some other youths are now interested for yearling production in leased community ponds.

**Conclusion:** She is very happy in this enterprise. She is planning for production of yearlings

with fish production. She and her family have undergone a remarkable change, emerging as role models in their village and nearby areas. She has been instrumental in encouraging more villagers to become fish farmers – there’s more than enough demand in their local area. Local agencies, KVKs, farmers and other allied departments organize demonstration programmes in her model pond based IFS unit. She is promoting the concept of using quality fish seeds, use of advanced fingerlings, use of probiotics and pelleted fish feed based on her experiences and the training that she had experienced by the KVK through ARYA project.



*(Stunted Fingerlings Production)*

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**
**Stunted Fingerlings Production**

|   |  |
|---|--|
| Name of farmer                                  | Sri Bijaya kumar Dora  |
| Age   | 32   |
| Aadhaar No                                      | 9178053071   |
| Address   | C/o-Duryadhana Dora, At- badagorada , GP- badagorada Block-Nayagarh, Dist-Nayagarh   |
| Contact details (Phone, mobile, email)          | 9178053078   |
| Landholding (in ha.)                            | 3 acre   |
| Education                                       | +2   |
| Family member                                   | 2 nos.   |
| House hold income (before ARYA)                 | Rs. 1.0lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 5,000 no of stunted fingerling/ annum from 0.75 acre pond  |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 1 no.  |
| Cost of cultivation                             | Rs. 25,000/-   |
| Average net income after intervention per month | Rs. 15,000/-   |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has purchased another 20 decimile of land for excavation of pond for stunted fingerlings production. |
| Horizontal/Vertical spread                      | 14%  |

|  |   |
|--|---|
| Name of farmer                         | Mr Manash Sethi   |
| Age                                    | 35  |
| Aadhaar No                             | -   |
| Address                                | At-Madanpur, GP- Madanpur, Block-Daspalla, Dist-Nayagarh          |
| Contact details (Phone, mobile, email) | -   |
| Landholding (in ha.)                   | 1.0ha   |
| Education                              | 9th   |
| Family member                          | 4 nos.  |
| House hold income (before ARYA)        | Rs.2.4akhs /annum   |
| Training received from KVK             | Yes   |
| ARYA interventions taken               | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-      |
| Present Production                     | 68,000 no of stunted fingerling production/ annum from 1.0ha pond |



|   |  |
|---|--|
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | Rs. 1.91 lakh  |
| Average net income after intervention per month | Rs. 27,000/-   |
| Social and Environmental impact                 | He has developed an IFS unit and owned a poultry unit containing around 300 no. of Vanaraja birds. |
| Horizontal/Vertical spread                      | 14%  |

|   |  |
|---|--|
| Name of farmer                                  | Mr. Sunil Nayak  |
| Age   | 32   |
| Aadhaar No                                      | 411195532225   |
| Address   | C/O- Sudarshana Nayak At-Nachhipurr GP- Nachhipurr, Block-Daspalla, Dist-nayagarh  |
| Contact details (Phone, mobile, email )         | 7854870629   |
| Landholding (in ha.)                            | 3 acre   |
| Education                                       | +2   |
| Family member                                   | 3  |
| House hold income (before ARYA)                 | Rs. 0.9 lakh/annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 90,000 nos. of stunted fingerling production/ annum from 2.8ha pond  |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | Rs. 1.5 lakh   |
| Average net income after intervention per month | Rs. 18,000/-   |
| Social and Environmental impact                 | Now he is maintaining a good social life and purchased another 2 acre of land for exaction of pond for stunted fingerlings production. |
| Horizontal/Vertical spread                      | 28%  |

|  |   |
|--|---|
| Name of farmer                         | Mr Bipin kumar Barada   |
| Age                                    | 29  |
| Aadhaar No                             | 218009917378  |
| Address                                | C/O-Chaitanya Barada, At-Gotisahi, GP-Gotisahi, Block-Nayagah |
| Contact details (Phone, mobile, email) | 8835173713  |
| Landholding (in ha.)                   | 2 ha  |
| Education                              | 9 <sup>th</sup>   |

|   |  |
|---|--|
| Family member                                   | 5  |
| House hold income (before ARYA)                 | 50,000/-   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 25,000 no of stunted fingerling production/ annum from 1.0ha pond  |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | 0.5 lakh   |
| Average net income after intervention per month | 15,200/-   |
| Social and Environmental impact                 | Now she is maintaining a good social life and he has purchased another 2 acre of land for exaction of pond for stunted fingerlings production. |
| Horizontal/Vertical spread                      | 25%  |

|   |  |
|---|--|
| Name of farmer                                  | Sri Rabindra kumar Sahoo   |
| Age   | 31   |
| Aadhaar No                                      | 552982311942   |
| Address   | C/O-Rasana kumar Sahoo, At-Bahadajhola GP- Bahadajhola, BI-Odogaon Dist-Nayagarh |
| Contact details (Phone, mobile, email Id)       | 8327707146   |
| Landholding (in ha.)                            | 2ha  |
| Education                                       | 10th   |
| Family member                                   | 4 nos.   |
| House hold income (before ARYA)                 | 1.2lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-                     |
| Present Production                              | 80,000 no of stunted fingerling/ annum from 1 ha pond                            |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos,   |
| Cost of cultivation                             | 35,000/-   |
| Average net income after intervention per month | 15,500/-   |
| Social and Environmental impact                 | Now he becomes an active ARYA beneficiary in his locality.                       |
| Horizontal/Vertical spread                      | 15%  |

|                |   |
|----------------|---|
| Name of farmer | Soumyaranjan Pradhan                                |
| Age            | 32  |
| Aadhaar No     | 819782614970  |
| Address        | At-Adakata, GP- Adakata, Block-Gania, Dist-Nayagarh |

|   |  |
|---|--|
| Contact details (Phone, mobile, email Id)       | 8249187223   |
| Landholding (in ha.)                            | 2ha  |
| Education                                       | +3   |
| Family member                                   | 4 nos.   |
| House hold income (before ARYA)                 | 1.2lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 80,000 no of stunted fingerling/ annum/ 1 acre   |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | 38,000/-   |
| Average net income after intervention per month | 22,500/-   |
| Social and Environmental impact                 | He is very happy in this enterprise. This year he planned to make a project of 1 acre pond for production of yearlings. Now he becomes an active ARYA beneficiary in his locality. |
| Horizontal/Vertical spread                      | 15%  |

### Mushroom Production

|   |  |
|---|--|
| Name of farmer                                  | Mrs. Rasmita Pradhan   |
| Age   | 29   |
| Aadhaar No                                      | 214536954781   |
| Address   | C/o-Sarat Pradhan,At-Gotisahi, GP- Gotisahi,BI-Odogaon, Dist- Nayagarh   |
| Contact details (Phone, mobile, email Id)       | 9348146678   |
| Landholding (in ha.)                            | 1.0 ac   |
| Education                                       | 10 <sup>th</sup>   |
| Family member                                   | 3 nos.   |
| House hold income (before ARYA)                 | 1.0lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 40,000/- to 50,000 per 20 days income from mushroom production.  |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | 1.5/- lakh /annum  |
| Average net income after intervention per month | 12,500/-   |
| Social and Environmental impact                 | Now she is maintaining a good social life and she has planned for another 25-30 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 51%  |



|   |  |
|---|--|
| Name of farmer                                  | Mrs. Janaki Sahoo  |
| Age   | 34   |
| Aadhaar No                                      | 712939469807   |
| Address   | W/O-Purna chandra Sahoo, At-Balugaon,GP-Balugaon,Block- Nayagarh,Dist-Nayagarh                                 |
| Contact details (Phone, mobile, email Id)       | 8908628365   |
| Landholding (in ha.)                            | 1.0 ac   |
| Education                                       | 9 <sup>th</sup>  |
| Family member                                   | 3 nos.   |
| House hold income (before ARYA)                 | 0.76 lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 15,000/- to 20,000 per 25 days income from mushroom production.  |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 1 no   |
| Cost of cultivation                             | 0.3/- lakh /annum  |
| Average net income after intervention per month | 15,000/-   |
| Social and Environmental impact                 | Now she is maintaining a good social life and she has planned for another 40-50 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 41.2%  |

|   |  |
|---|--|
| Name of farmer                                  | Mrs. Ranjita Barada  |
| Age   | 33   |
| Aadhaar No                                      | 2415587932547  |
| Address   | At: Bandhadwara, Block-Bhapur, Dist-Nayagarh                       |
| Contact details (Phone, mobile, email)          | 9348756927   |
| Landholding (in ha.)                            | 2.0  |
| Education                                       | Under Matric   |
| Family member                                   | 4 nos.   |
| House hold income (before ARYA)                 | Rs.0.05 lakhs /annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-       |
| Present Production                              | Rs.20,000/- to 30,000 per 25 days income from mushroom production. |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | Rs.0.35/- lakh /annum  |
| Average net income after intervention per month | Rs.16,400/-  |

|                                 |  |
|---------------------------------|--|
| Social and Environmental impact | Now she is maintaining a good social life and she has planned for another 20-25 nos. of mushroom beds per day. |
| Horizontal/Vertical spread      | 35.0%  |

|   |  |
|---|--|
| Name of farmer                                  | Mr. Narendra Ku Senapati   |
| Age   | 33   |
| Aadhaar No                                      | 245932561125   |
| Address   | At/Po-Bahadajhola, Block- Odagaon, Dist-Nayagarh   |
| Contact details (Phone, mobile, email)          | 9938772904   |
| Landholding (in ha.)                            | 3 acre   |
| Education                                       | Under Matric   |
| Family member                                   | 3 nos.   |
| House hold income (before ARYA)                 | 0.05 lakhs /annum  |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | Rs.25,000/- to 30,000 per 25 days income from mushroom production.   |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | 0.35/- lakh /annum   |
| Average net income after intervention per month | Rs.18,300/-  |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has planned for another 45-55 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 28.5%  |

|   |   |
|---|---|
| Name of farmer                          | Mrs. Jhunu Nayak  |
| Age                                     | 28  |
| Aadhaar No                              | 253265425782  |
| Address                                 | S/O- Surendra Nayak, At-Magarbandha, Block-Odagaon Dist-Nayagarh, Pin- 752092 |
| Contact details (Phone, mobile, email ) | 9438329990  |
| Landholding (in ha.)                    | 1.0 acre  |
| Education                               | 10 <sup>th</sup>  |
| Family member                           | 3 nos.  |
| House hold income (before ARYA)         | Rs.0.07 lakhs /annum  |
| Training received from KVK              | Yes   |
| ARYA interventions taken                | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-                  |
| Present Production                      | Rs.25,000/- to 30,000 per 25 days income from mushroom production.            |

|   |  |
|---|--|
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | Rs. 0.41/- lakh /annum   |
| Average net income after intervention per month | Rs.17,800/-  |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has planned for another 45-55 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 25.2%  |

|   |  |
|---|--|
| Name of farmer                                  | Mrs. Namita Swain  |
| Age   | 33   |
| Aadhaar No                                      | 977400687320   |
| Address   | At-China, GP- Kalikaprasad, Block-Nayagarh Dist-Nayagarh,  |
| Contact details (Phone, mobile, email)          | -  |
| Landholding (in ha.)                            | 0.8  |
| Education                                       | 10 <sup>th</sup>   |
| Family member                                   | 4 nos.   |
| House hold income (before ARYA)                 | Rs.0.06 lakhs /annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | Rs.20,000/- to 30,000 per 25 days income from mushroom production.   |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 1 no   |
| Cost of cultivation                             | Rs.0.32/- lakh /annum  |
| Average net income after intervention per month | Rs.16,250/-  |
| Social and Environmental impact                 | Now she is maintaining a good social life and has planned for another 40-50 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 23.1%  |

|  |   |
|--|---|
| Name of farmer                         | Mr Ganesh Kumar Sahoo                         |
| Age                                    | 30  |
| Aadhaar No                             | 313017857598                                  |
| Address                                | At-Dalaksahi, , Block- Odogaon, Dist-Nayagarh |
| Contact details (Phone, mobile, email) | 9777134996                                    |
| Landholding (in ha.)                   | 5.0ac   |
| Education                              | +2  |
| Family member                          | 4 nos.  |
| House hold income (before ARYA)        | Rs. 0.10 lakh /annum                          |

|   |   |
|---|---|
| Training received from KVK                      | Yes   |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 4,500/-   |
| Present Production                              | Rs.60,000/- to 75,000 per 25 days income from mushroom production.  |
| Marketing linkage developed                     | Local market selling  |
| Labour involved                                 | 1 no  |
| Cost of cultivation                             | 0.32/- lakh /annum  |
| Average net income after intervention per month | 1,20,500/-  |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has planned for another 40-50 nos of mushroom beds per day. |
| Horizontal/Vertical spread                      | 27.1%   |

|   |  |
|---|--|
| Name of farmer                                  | Mr Anil kumar Nayak  |
| Age   | 33   |
| Aadhaar No                                      | 967866959548   |
| Address   | C/o-Sudarshan Nayak, At-Nachhipur, GP- Nachhipur Block- Daspalla, Dist-Nayagarh,                             |
| Contact details (Phone, mobile, email)          | 7854970629   |
| Landholding (in ha.)                            | 3 acre   |
| Education                                       | +3   |
| Family member                                   | 4 nos.   |
| House hold income (before ARYA)                 | Rs.0.10 lakhs /annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 4,500/-  |
| Present Production                              | Rs.38,000/- to 55,000 per 25 days income from mushroom production.   |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 1 no   |
| Cost of cultivation                             | Rs34,250 lakh /annum   |
| Average net income after intervention per month | Rs.58,068/-  |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has planned for another 40-50 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 26.3%  |

|                |  |
|----------------|--|
| Name of farmer | Mrs. Laxmipriya Mahanty  |
| Age            | 32   |
| Aadhaar No     | 382732326140   |
| Address        | C/o-Raghunath Mahanty,At-Jamusahi, GP-Jamusahi, Bl-Ranapur Dist-Nayagarh |



|   |  |
|---|--|
| Contact details (Phone, mobile, email)          | 7978708307   |
| Landholding (in ha.)                            | 6 acre   |
| Education                                       | 9th  |
| Family member                                   | 2 nos.   |
| House hold income (before ARYA)                 | Rs.1.0lakhs /annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | Rs.6000/- per 20 days income from mushroom production.   |
| Marketing linkage developed                     | Local market selling   |
| Labour involved                                 | 2 nos.   |
| Cost of cultivation                             | Rs.0.45/- lakh   |
| Average net income after intervention per month | Rs.19,600/-  |
| Social and Environmental impact                 | Now she is maintaining a good social life and has planned for another 25-30 nos. of mushroom beds per day. |
| Horizontal/Vertical spread                      | 25.1%  |

|   |   |
|---|---|
| Name of farmer                                  | Mr Pravat Kumar Dakua   |
| Age   | 31  |
| Aadhaar No                                      | 311164752063  |
| Address   | At/Po-Jhadasahi, GP-Giridipalli, BI-Odogaon,ist-Nayagarh  |
| Contact details (Phone, mobile, email)          | 8249898158  |
| Landholding (in ha.)                            | 4 acre  |
| Education                                       | 10 <sup>th</sup>  |
| Family member                                   | 12 nos.   |
| House hold income (before ARYA)                 | Rs.0.07lakhs /annum   |
| Training received from KVK                      | Yes   |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-  |
| Present Production                              | 0.15/- per 20 days income from mushroom production.   |
| Marketing linkage developed                     | Local market selling  |
| Labour involved                                 | 2 nos.  |
| Cost of cultivation                             | Rs.0. 50/- lakh   |
| Average net income after intervention per month | Rs.68,000/-   |
| Social and Environmental impact                 | Now he is maintaining a good social life and he has planned for another 50-60 nos of mushroom beds per day. |
| Horizontal/Vertical spread                      | 29.2%   |



## Backyard Poultry Rearing

|   |  |
|---|--|
| Name of farmer                                  | Mr Ajit Kumar dalabehera   |
| Age   | 35yrs  |
| Aadhaar No                                      | 462381832788   |
| Address   | C/O-Sankarsana Dalabehera, At-Balugaon, GP-Balugaon, BI-Nayagarh, Dist-Nayagarh                                |
| Contact details (Phone, mobile, email Id)       | 797826508  |
| Landholding (in ha.)                            | 1.0ha  |
| Education                                       | Intermediate   |
| Family member                                   | 4  |
| House hold income (before ARYA)                 | 73000 /- per annum   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-   |
| Present Production                              | 1600bird/annum   |
| Marketing linkage developed                     | Locally sale   |
| Labour involved                                 | Family members are involved  |
| Cost of cultivation                             | 26733/- per month  |
| Average net income after intervention per month | 18867/- per month  |
| Social and Environmental impact                 | He is very happy in this enterprise. This year he planned to make a project of production 2000 birds per annum |
| Horizontal/Vertical spread                      | 24.1%  |

|   |  |
|---|--|
| Name of farmer                            | Mr Dibakar Sahoo   |
| Age                                       | 25yrs  |
| Aadhaar No                                | 398612408630   |
| Address                                   | C/o- Ratnakar Sahoo, At- Janisahi,GP- Dihagaon. Block- Daspalla, Dist.- Nayagarh |
| Contact details (Phone, mobile, email Id) | 6370406342   |
| Landholding (in ha.)                      | 2 ha   |
| Education                                 | +3   |
| Family member                             | 5  |
| House hold income (before ARYA)           | 1.25lakh   |
| Training received from KVK                | Yes  |
| ARYA interventions taken                  | Training, Exposure visit, Start-Up Incentive of Rs. 10,000/-                     |
| Present Production                        | 1600bird/annum   |
| Marketing linkage developed               | Locally sold   |
| Labour involved                           | One labour   |
| Cost of cultivation                       | 28466/- per month  |



|   |  |
|---|--|
| Average net income after intervention per month | 22700/- per month  |
| Social and Environmental impact                 | He is very happy in this enterprise. This year he planned to make a project of production 1600 birds per annum |
| Horizontal/Vertical spread                      | 23.2%  |

|   |  |
|---|--|
| Name of farmer                                  | Mr Samir kumar Kar   |
| Age   | 31   |
| Aadhaar No                                      | 363586498188   |
| Address   | At- Baliapata, GP- Badasahar, Block-Bhapur, Dist-Nayagarh  |
| Contact details (Phone, mobile, email)          | 977256795  |
| Landholding (in ha.)                            | 1.0acre  |
| Education                                       | +2   |
| Family member                                   | 5  |
| House hold income (before ARYA)                 | Rs. 1.07lakh   |
| Training received from KVK                      | Yes  |
| ARYA interventions taken                        | Training, Exposure visit, Start-Up Incentive of Rs.10,000/-  |
| Present Production                              | 1200birds/annum  |
| Marketing linkage developed                     | Locally sold   |
| Labour involved                                 | Family members are involved  |
| Cost of cultivation                             | Rs.29700/- per month   |
| Average net income after intervention per month | Rs.25,300/- per month  |
| Social and Environmental impact                 | He is very happy in this enterprise. This year he planned to make a project of production 150000 birds per annum |
| Horizontal/Vertical spread                      | 23.7%  |

**(C) Dignitaries visited ARYA villages:**

- Prof. L.M Garanayak, Dean Extension Education, OUAT, Bhubaneswar
- Dr. K.C Barik, Dean of Research, OUAT, Bhubaneswar
- Prof. P.J.Mishra, JDE,DEE, OUAT, Bhubaneswar
- Dr. M.P.Nayak, JDE Information, DEE, OUAT, Bhubaneswar

**(D) Newspaper coverage:** Yes.

**(I) Publications:**

- Angulika o Munda Janla Chasa
- Chhatu chasa
- Baripata abadhha padiare kukuda chasa

**(E) Migration status:** NIL



*Skill oriented interactive training on Stunted Fingerlings production*



*Exposure Visit to Progressive Farmer's Fishery unit*



*Skill oriented interactive training on Backyard Poultry Rearing*



*Skill oriented interactive training on Mushroom Production*



*Dignitaries visit to Mushroom production unit*



*Exposure Visit to Progressive Farmer's Mushroom unit production*

## 7. Achievements of Sambalpur KVK

### 7.1 Project Initiation

Sambalpur the fifth largest district of Odisha is coming under the West Central Table Land agroclimatic zone. The major crops of the district are Paddy, Sesamum, Greengram, Blackgram etc. Among fruit crops Cashewnut, Citrus, Litchy, Banana and Mango covers a predominant area. Total population of commercial poultry birds in

the district is 4,43,000 nos. Farmers of the district are being promoted to rear Aseel, Kadaknath etc. due to their demand in the locality. Through the ARYA programme, rural youths were provided various training on Poultry Production, Nursery Raising and Mushroom Production. These programmes not only raised their income source, but also they set an example for other rural mass who lost their livelihood during Covid pandemic.

Nursery Raising plays an important source of income in the district, as people mainly depends upon adjacent Bargarh & Bolangir (Vegetables & Flowers) in the district, rural youths were trained upon how to be self dependent in this enterprise so that round the year the seedlings will be made available. The farmers were provided with protray, polythene, sprayer, rose cane, jifi plug, vermicompost etc. so that the youths can easily set up a nursery in an area of one acre. Linkage with the line department officials was setup for persuing the loan and becoming self dependent.

To meet challenges like increasing population, depleting agricultural land, climate changes, water shortage, need for quality food products and provide food and nutritional security to our people, it is imperative to diversify the agricultural activities in areas

like horticulture i.e. mushroom cultivation. It is one such component that not only uses vertical space but also help in addressing the issues of quality food, health and environmental sustainability. There is need to promote both mushroom production as well as consumption for meeting the changing needs of food items.

At present, the total mushroom production of the state stands at 12,334 tonnes/ annum contributing to over 10 per cent of the country’s production. In Sambalpur mushroom farming today is being practiced in more than 500 villages and the production is increasing day by day. The cultivation has spread rampantly. The farmers of Sambalpur have demonstrated mushroom cultivation to convert the agricultural wastes directly into a highly acceptable, nutritious and delicious food for the people.

### KVK wise name of ARYA villages

**Table-1**

| Sl. No. | KVK name  | Name of ARYA village  | Established enterprise    |
|---------|-----------|---|---------------------------|
| 1       | Sambalpur | Haladibahal-Block-Jamankira, Kusuli- Block- Jamnkira, chipilima-Block- Dhanakauda, kardola Block- Dhanakauda, sahaspur- Block- Jujumora, Block- Jujumora bhatli-, jujumora, padibahal Block- Jujumora                           | Poultry farming           |
| 2       | Sambalpur | Saiberni- Block- Rairakhol<br>Ramachandranagar, Jangala, Block - Rengali<br>Sensuantal, Jayantpur, Block - Jujumora<br>Bargaon ,Amkuni, Block - Maneswar<br>Kusuli,Block - Jamankira<br>Kud-Amlipali, BarmundaBlock - Dhankauda | Mushroom production       |
| 3       | Sambalpur | Adhapada, Kusuli, Subarnapur, Chiplima  | Vegetable Nursery Raising |

## 7.2 District Profile

|                           |  |
|---------------------------|--|
| Geographical Area (in ha) | 666293   |
| Net sown Area (ha)        | 177000   |
| Gross Cropped Area (ha)   | 269000   |
| Cropping Intensity (%)    | 152  |
| Area under Forest (ha)    | 363000   |
| Cultivated Area (ha)      | 194000   |
| Area under Kharif (ha)    | 185220   |
| Area under Rabi (ha)      | 63890  |
| Irrigated Land (ha)       | 65512 ha (34%) (Kharif)<br>39233 ha (20%) (Rabi) |
| Agro Climatic Zone        | West Central Table Land Zone                     |
| Annual Rainfall (mm)      | 1495.7   |
| Temperature               | 46°C (Max) 10° C (Min)                           |
| No. of Villages           | 1322   |
| No. of GP                 | 136  |
| No. of Block              | 9  |
| No. of SubDivision        | 3  |
| Literacy %                | 76.91  |
| SC Population %           | 18.43  |
| ST Population %           | 34.12  |

## 7.3 Identification of youth

In the above backdrop, youths of any community of age group 18-35 years were identified for this project on the basis of having personal interest, preliminary knowledge on the enterprises and screening of qualification, age, and resources having less or no land holding for poultry and mushroom through: -

- Benchmark survey of the prevailing enterprise and villages
- Convergence with line departments

- Group meetings in different villages for discussion on the existing enterprises

## 7.4 Name of cooperating Institutions for technical support

- ICAR, ATARI, Kolkata
- OUAT, Bhubaneswar
- NABARD, Sambalpur
- Department of Agriculture, Sambalpur
- Department of Horticulture, Sambalpur

- Department of Animal Husbandry, Sambalpur
- Department of Forestry, Sambalpur
- OLM, Sambalpur

## 7.5 Enterprise details

### a) Poultry

#### Detailed description:

The major crops of the district are paddy, green gram, black gram etc. In addition to this there is a demand of poultry and mushroom to meet the requirement of protein need of the individual in the district. The role of youth is always appreciable in transforming the present agriculture scenario/status of India. The youth in age group (18 to 35) year has been included in ARYA programme. In order to make profitable agriculture, the role of skilled youth is very crucial. KVK, Sambalpur

has identified total fifteen numbers of youth for developing entrepreneurial units on poultry farming in the year 2020-21. The units were established at their location as per the demand of the market. This scheme was started in the year 2018-2019 and continued in 2020-2021, funded by ICAR, ATARI, and Kolkata. Trainings on three domains like Scientific poultry farming has been conducted to strengthen their knowledge to apply it in their own unit development.

#### Input /Support provided to youth groups

| Sl. No. | Inputs          | Quantity |
|---------|-----------------|----------|
| 1       | Poultry Feeder  | 30       |
| 2       | Poultry Drinker | 30       |
| 3       | Poultry chicks  | 750      |
| 4       | Medicine        | 3300/-   |

#### Progress made

**Table-2**

| Enterprise name    | No. of youth involved | Unit/No.                                       | Measurable indicators of output in suitable unit    |   | % increase | Economic of enterprise |                  |      |
|--------------------|-----------------------|--|---|---|------------|------------------------|------------------|------|
|                    |                       |  | Before adopting ARYA                                | After adopting ARYA                               |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Poultry Production | 15                    | 15 (4 units established and 9 units initiated) | Average net income<br>Rs.15500/yr                   | Average net income<br>Rs.77820/yr                 | 80.08      | 45600/yr               | 66750/yr         | 2.46 |
|                    |                       |  | Average production<br>45 kg/yr                      | Average production<br>520kg/yr                    | 91.34      |                        |                  |      |
|                    |                       |  | Mortality rate during brooding period<br>45 to 60 % | Mortality rate during brooding period<br>5 to 15% | 75 to 88   |                        |                  |      |

## Name of youths involved

**Table-3**

| Sl. No. | Name of the Youth   | Village Name | Name of adopting enterprise |
|---------|---------------------|--------------|-----------------------------|
| 1       | R Anktesh           | Chipilima    | Poultry Farming             |
| 2       | Sudam Khamari       | Haladibahal  | Poultry Farming             |
| 3       | Santosh Bag         | Chipilima    | Poultry Farming             |
| 4       | Om parkas sahu      | Sahaspur     | Poultry Farming             |
| 5       | Samit Kumar Panda   | Budharaja    | Poultry Farming             |
| 6       | Abani Kumar Pradhan | Kusuli       | Poultry Farming             |
| 7       | Dilip Mirdha        | Jujumora     | Poultry Farming             |
| 8       | Chaitanya Podh      | Babupali     | Poultry Farming             |
| 9       | Rohit Biswal        | Bhatli       | Poultry Farming             |
| 10      | Sunil Bhoi          | Bhatli       | Poultry Farming             |
| 11      | Monalisa Sahu       | Panduripali  | Poultry Farming             |
| 12      | Madhabendu Pal      | Kantapali    | Poultry Farming             |
| 13      | Banita Sahu         | Goudapali    | Poultry Farming             |
| 14      | Golapi Mirdha       | Padiabahal   | Poultry Farming             |
| 15      | Nilima Taria        | Kardola      | Poultry Farming             |

## Capital Generation

**Table-4**

| Particulars/ Equipment | Quantity (No.) |
|------------------------|----------------|
| Brooded chicks         | 1260 chicks    |

## Income level

**Table-5**

| Enterprise | Area (Acre)/ No. | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|------------|------------------|-----------------------------------|-----------------------|---------------------------|
| Poultry    | 200 numbers      | 45600/- per year                  | 123420/- per year     | 77820/- per year          |

**Impact:** ARYA programme created a sense of entrepreneurship in poultry farming especially among rural youth & Farmers too, as it is highly

lucrative and less risk involved after obtaining technical guidance. Net income increased upto Rs 77820/- per unit.

## (A) Capacity Building

**Table-6**

| Thematic Area                   | Topic of training          | No. of courses | No. of beneficiaries |        |       |
|---------------------------------|----------------------------|----------------|----------------------|--------|-------|
|                                 |                            |                | Male                 | Female | Total |
| Livestock Production Management | Scientific Poultry Rearing | one            | 11                   | 4      | 15    |

## (B) Mushroom production

### Detailed description

**Spread in Area / No. of Commercial growers-** 200 Nos.

**Production-**Paddy Straw Mushroom-3024 q/yr, Oyster Mushroom-248 q/yr

**Strength:** More no. of interested farmers, availability of surplus straw (being a major paddy growing area).

**Opportunities:** Major crop paddy, Main city of western Odisha, promotion of mushroom enterprises through Govt. Schemes.

**Entrepreneurial activities:** Mushroom Production, Spawn production, Postharvest management & marketing, Service provider, Value addition of mushroom.

### II. Input /Support provided to youth groups

| Sl. No. | Items (15 units)                   | Quantity |
|---------|------------------------------------|----------|
| 1       | 16 l capacity sprayer              | 15       |
| 2       | Paddy straw mushroom spawn bottles | 450      |
| 3       | Polythene                          | 100kg    |

### Progress made

**Table-2**

| Enterprise name | No. of youth involved | Unit/ No.                                 | Measurable indicators of output in suitable unit |                                       | % increase | Economic of enterprise          |                                |      |
|-----------------|-----------------------|---|--|---------------------------------------|------------|---------------------------------|--------------------------------|------|
|                 |                       |   | Before adopting ARYA                             | After adopting ARYA                   |            | Gross cost (Rs.)                | Net return (Rs.)               | BCR  |
| Mushroom        | 15                    | 3 Units Established<br>12 Units Initiated | Avg. No. of Beds /yr-450 Nos.                    | Avg. No. of Beds /yr-700Nos.          | 55         | Paddy straw mushroom -Rs. 32900 | Paddy straw mushroom -Rs 35700 | 2.08 |
|                 |                       |   | Avg. Annual Production 254.25kg                  | Avg. Annual Production 490kg          | 92.72      |                                 |                                |      |
|                 |                       |   | Avg. Production/ Bed-0.565kg                     | Avg. Production/ Bed-0.700kg          | 23.89      |                                 |                                |      |
|                 |                       |   | Avg. Employment Generation/ annum-108            | Avg. Employment Generation/ annum-132 | 22.22      |                                 |                                |      |



## Name of youths involved

Table-3

| Sl. No. | Name of the Youth   | Village Name              | Name of adopting enterprise |
|---------|---------------------|---------------------------|-----------------------------|
| 1       | Parbati Sethi       | Saiberni, Rarakhol        | Mushroom                    |
| 2       | Soumya Ranjan Meher | Ramachandranagar, Rengali | Mushroom                    |
| 3       | Rajat Thapa         | Sersuantal, Jujumura      | Mushroom                    |
| 4       | Rasmita Bag         | Bargaon, Maneswar         | Mushroom                    |
| 5       | Pratichi Sahu       | Bargaon, Maneswar         | Mushroom                    |
| 6       | Puspanjali Bhoi     | Bargaon, Maneswar         | Mushroom                    |
| 7       | Shyama Sundar Rana  | Kusuli, Jamankira         | Mushroom                    |
| 8       | Sanjaya Sahu        | Kusuli, Jamankira         | Mushroom                    |
| 9       | Ghanadeb Bhue       | KudAmlipalli, Dhankuda    | Mushroom                    |
| 10      | Dibyakashor Sarat   | Jangala, Rengali          | Mushroom                    |
| 11      | Anil Beriha         | Bargaon, Maneswar         | Mushroom                    |
| 12      | Anil Kumar Majhi    | Jayantpur, Jujumora       | Mushroom                    |
| 13      | Trupti Rani Sibil   | Baramunda, Dhankauda      | Mushroom                    |
| 14      | Sunuta Sibil        | Baramunda, Dhankauda      | Mushroom                    |
| 15      | Urmila Bhoi         | Amkuni, Maneswar          | Mushroom                    |

## Income level

Table-5

| Enterprise | Area (Acre)/<br>No. | Cost of production<br>(Rs. Per unit) | Return<br>(Rs. Per unit) | Net Income<br>(Rs. Per unit) |
|------------|---------------------|--------------------------------------|--------------------------|------------------------------|
| Mushroom   | 700 Beds            | 32900                                | 68600                    | 35700                        |

## Impact

- Sambalpur district is major paddy grown area (54% of total cultivable land), after harvest the stubbles are burnt that causes environmental pollution. This programme could give extra income to the farmers out of substarte.
- School dropout and landless farmers could take up successfully.
- Breakeven point is only 15 to 20 days, attracting the rural youth to go for this entrepreneurship.
- The neighbor villagers were well attracted looking into the profitable margin.

## Capacity Building

**Table-6**

| Thematic Area       | Topic of training  | No. of courses | No. of beneficiaries |        |       |
|---------------------|--|----------------|----------------------|--------|-------|
|                     |  |                | Male                 | Female | Total |
| Mushroom production | Mushroom cultivation as self employment activity for rural youth | 1              | 8                    | 7      | 15    |

### (C) Vegetable Nursery

#### Detailed description

The major vegetable crops of the district are onion, chilli, coriander, garlic, brinjal, tomato, potato etc covering an area of around 9000 ha. Hence there is a huge scope for production and demand of vegetable seedlings in the District. KVK Sambalpur has been playing very pivotal role in supplying quality planting materials along with capacity building training on Vegetable seedling raising to the vegetable growers of the district. 2 days training programme on vegetable nursery raising was conducted at KVK, Sambalpur emphasizing

on practical demonstration and interaction with successful vegetable nursery farmers. During off season, nursey of vegetable crops like cucurbits were also raised under poly tunnel to provide protection from adverse climatic condition.

#### Input /Support provided to youth groups

| Sl. No. | Inputs                  | Quantity |
|---------|-------------------------|----------|
| 1       | 16 ltr capacity sprayer | 10       |
| 2       | Pro-tray                | 50       |
| 3       | Rose cane               | 10       |
| 4       | Vermi-compost           | 596 kg   |
| 5       | Black polythene         | 10 g     |

#### Progress made

**Table-2**

| Enterprise name   | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                     | % increase | Economic of enterprise |                  |      |
|-------------------|-----------------------|-----------|--|---------------------|------------|------------------------|------------------|------|
|                   |                       |           | Before adopting ARYA                             | After adopting ARYA |            | Gross cost (Rs.)       | Net return (Rs.) | BCR  |
| Vegetable nursery | 10                    | 10        | NI: 39000  | 50000               | 28         | 13600                  | 43500            | 4.19 |

## Name of youths involved

Table-3

| Sl. No. | Name of the Youth    | Village Name | Name of adopting enterprise |
|---------|----------------------|--------------|-----------------------------|
| 1       | Pradeep Kumar Bhoi   | Adhapada     | Vegetable Nursery           |
| 2       | Lingaraj Kalet       | Adhapada     | Vegetable Nursery           |
| 3       | Rohit Kalet          | Adhapada     | Vegetable Nursery           |
| 4       | Sushil Bhoi          | Adhapada     | Vegetable Nursery           |
| 5       | Nirakara Bhoi        | Adhapada     | Vegetable Nursery           |
| 6       | Prasanta Kumar Majhi | Adhapada     | Vegetable Nursery           |
| 7       | Bindu Kumbhar        | Chiplima     | Vegetable Nursery           |
| 8       | Prahallad Bhoi       | Adhapada     | Vegetable Nursery           |
| 9       | Rajib Naik           | Subarnapur   | Vegetable Nursery           |
| 10      | Anta Bagh            | Kusuli       | Vegetable Nursery           |

## Capital Generation

Table-4

| Particulars/ Equipment | Quantity (No.) |
|------------------------|----------------|
| seedlings              | 25000 nos.     |
| Vermi-compost          | 597 kilos      |

## Income level

Table-5

| Enterprise        | Area (Acre)/ No. | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|-------------------|------------------|-----------------------------------|-----------------------|---------------------------|
| Vegetable nursery | 20/40 m2         | 13,600                            | 57,100                | 43,500                    |

**Impact:** After obtaining training, the youths were aware about the profit made out of nursery business. The seedlings could be sold in a higher profit due to quality maintenance.

## (A) Capacity Building

Table-6

| Thematic Area      | Topic of training               | No. of courses | No. of beneficiaries |        |       |
|--------------------|---------------------------------|----------------|----------------------|--------|-------|
|                    |                                 |                | Male                 | Female | Total |
| Nursery management | Management of vegetable nursery | 1              | 9                    | 1      | 10    |

## Success Story of ARYA Youth

### Success Story on Mushroom



- 1. Name of the Enterprise:** Mushroom production
- 2. Name of Beneficiary:** Mr. Anil Majhi
- 3. Address:** Vill- Jayantpur, GP-Jayantpur, Block-Jujumora

The lifeline of Sambalpur district is paddy cultivation. The total cultivated area of the district 193674 hectre, out of which 104317 hectare (54%) is paddy area. Mr. Anil kumar Majhi is an under matriculate farmer of village Jayantpur of maneswar block having of 2 acres land. He was growing paddy and vegetables in traditional method. He was facing lot of difficulties in maintaining his family within limited income. He was also cultivating mushroom since last 2yrs in unscientific manner with very less production. He came in contact with Scientist of KVK and discussed his problems. KVK Sambalpur identified his need and motivated him to take up the mushroom cultivation with an objective of higher production of mushroom for additional income. He was included in ARYA project and got trained on both scientific cultivation and

post harvest management of mushroom. Now he is successful in his farming and able to establish a model mushroom farm to attract the youths to adopt the new technology nearby his area.

Now he is preparing 250 paddy straw mushroom beds per month in a semi structured shed-net house .His average Production is 0.8 kg/bed. He is producing 1200kg mushroom in 6months.He is selling mushroom @ Rs.140/ kg. Scientific management, increased the production and his income to an extent of Rs.1,56,000/ per annum. The main problem faced by him is non availability of good quality paddy straw and quality mushroom spawn .Other women SHGs and youths of his own and nearby villages got motivated to adopt this technology.

### Back yard poultry rearing

- Name: Hemanta Kumar Dehury
- Father Name: Hari Dehury
- Educational qualification: +2 Pass
- Village: Khairidihi
- Block: Jamankira
- Phone number: 9668824075



The role of youth is always appreciable in transforming the present agriculture scenario/status of India. The youth in age group (18 to 35) year has been included in ARYA programme. Backyard poultry farming is providing a good source of income to the rural youth as it is easy to manage, less risky and good opportunity in choice of selection of variety of birds. It has the potential to lessen rural poverty, eradicate malnutrition. Mr. Hemanta Kumar Dehury is having qualification of +2 Pass of village Khairidihi of Jamnakira block having of 2 acres land. He was growing paddy in traditional method. He was facing a lot of difficulties in maintaining his family within limited income. He was rearing indigenous poultry birds from last year but he was facing problems like mortality of birds due to less knowledge in scientific rearing practices like brooding, vaccination and feeding management in practical ways. So he was unable to fetch more remuneration from his self made poultry unit. During beneficiary selection under ARYA he was nominated through the ARD official of Block- Jamankira as an interested and enthusiastic participant to be enrolled under ARYA. He got training on scientific poultry farming from 18.02.2020 to 21.02.2020 under ARYA in KVK, Sambalpur. After that he was provided with 100 numbers of kadaknath poultry birds which was of free of cost from KVK, Sambalpur and other inputs such as feeder, drinker for rearing and he purchased 250 numbers of birds @ 35/- per bird from local market from his own resource. Locally available bamboo, woods and asbestos were used for constructing temporary shed and boundary and paddy husk as litter material. He reared the birds in backyard and gave medication as and when

needed with the guidance of KVK, Scientist (Animal Science) and Adl.VAS, Jamankira, ARD. During the first few weeks he used to give commercial poultry feed and after that along with commercial poultry feed, he gave other alternative foods like termites, vegetables and azolla etc. to manage the feed cost. He got a good profit by selling the birds on live weight basis and also sold good numbers of eggs in the local market. He purchased more numbers of birds from the profit earned and continuing the unit in a sustainable way at present.

Now he is rearing average 200 poultry birds per batch (which is almost 3 batches per year). He is being bestowed with all the scientific as well as technical guidance from time to time from Scientist (Animal Science). KVK, Sambalpur and ARD of Jamankira block. Besides this he was linked with ARD department under backyard poultry birds scheme and this year he was linked in 500 broiler birds rearing under sate plan scheme. He sells his birds in local market and neighboring villages @ Rs.220/- per bird in local market. The gross total income is Rs.158400/- and the expenditure incurred is Rs.33600/- including chicks cost, feed, transport, etc. At present the family labor was utilized for day-to-day activities in the farm. Thereby, he earned a net benefit of Rs. 124800/- per year. The scientific knowledge learned from KVK, Sambalpur, the experience gained from his own farm during the farming, and realizing the benefit, he is interested to continue it and wanted to extend the poultry unit for maintaining a stock of 1000 birds in future and also expressed his interest to start duckery unit in future.



*Training on Scientific poultry farming*



*Interaction of ARYA youth with resource person*



*Input distribution*



*Poultry unit*



*ARYA youth provided with chicks*



*Brooding*



*Feeding of chicks in unit*



*Scavenging of poultry chicks*



*Scientist Visit of poultry unit with ARD official*

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Name of the Youth  | Father's/ Husband's name | Address                                 | Age (Years) | Adhar No.    | Mobile Number | Educational qualification | Operational Land area | Name of adopting Enterprise |
|--------------------|--------------------------|---|-------------|--------------|---------------|---------------------------|-----------------------|-----------------------------|
| Pradeep Kumar Bhoi | Narayan Bhoi             | Vil- Adhapda GP- Chhamunda BI- JUjomura | 32          | 644848551896 | 9348588543    | Plus two                  | 20 acre               | vegetable nursery           |

| Name of the Youth    | Father's/ Husband's name | Address  | Age (Years) | Adhar No.    | Mobile Number | Educational qualification | Operational Land area | Name of adopting Enterprise |
|----------------------|--------------------------|--|-------------|--------------|---------------|---------------------------|-----------------------|-----------------------------|
| Lingaraj Kalet       | Madhia kalet             | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 35          | 793000522694 | 9937345228    | Plus two                  | 4 acre                | vegetable nursery           |
| Rohit Kalet          | Bighna Kalet             | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 19          | 266630524693 | 7848046209    | Matric                    | 3 acre                | vegetable nursery           |
| Sushil Bhoi          | Mohan Bhoi               | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 34          | 889982885970 | 8144324354    | Matric                    | 5 acre                | vegetable nursery           |
| Nirakara Bhoi        | Bidyadhar Bhoi           | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 35          | 250867639494 | 9777004255    | Matric                    | 3 acre                | vegetable nursery           |
| Prasanta Kumar Majhi | Giridhari Majhi          | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 33          | 656801209914 | 7894109294    | Matric                    | 5 acre                | vegetable nursery           |
| Bindu Kumbhar        | Mukta Kumbhar            | Vil- Chiplima GP- kardola BI- Dhankauda            | 29          | 949986914139 | 6371602177    | Matric                    | 1.5 acre              | vegetable nursery           |
| Prahalad Bhoi        | Janakram Bhoi            | Vil- Adhapda GP- Chhamunda BI- JUJomura            | 31          | 366018374495 | 7847038386    | Plus two                  | 3 acre                | vegetable nursery           |
| Rajib Naik           | Luku Naik                | Vil- Subarnapur GP- Dakara BI- Maneswar            | 19          | 932519144197 | 8280314419    | Plus two                  | 6 acre                | vegetable nursery           |
| Parbati Sethi        | Sarat Sethi              | Vill-Saiberni GP-Mochibahal Block-Rarakhol, 768105 | 24          | 277638879701 | 8018867099    | +2                        | 3acre                 | Mushroom                    |
| Puspanjali Bhoi      | Raghumani Bhoi           | Vill-BARGAON GP-BARGAON Block-MANESWAR, 768113     | 33          | 319695025310 | 7751907713    | F                         | 3acre                 | Mushroom                    |
| Anil kumar majhi     | Satya Narayan Majhi      | Vill-Jayantpur GP-Jayantpur Block-Jujomora, 768112 | 31          | 733313549077 | 9938109091    | M                         | 2acre                 | Mushroom                    |

| Name of the Youth    | Father's/ Husband's name | Address                          | Age (Years) | Adhar No.    | Mobile Number | Educational qualification | Operational Land area | Name of adopting Enterprise |
|----------------------|--------------------------|----------------------------------|-------------|--------------|---------------|---------------------------|-----------------------|-----------------------------|
| Hemanta Kumar Dehury | Hari Dehury              | Vill- Khairidihi Block-Jamnakira | 25          | 621422184950 | 966882475     | +2                        | 2 acre                | Poultry production          |
| Sudam Khamari        | Uddhaba Khamari          | Vill-Haladibahal Block-Jamankira | 35          | 667273181504 | 917805340     | 10th                      | 2 acre                | Poultry production          |
| Om Prakas Sahu       | Jayaram Saahu            | Vill- Sahaspur Block-Maneswar    | 22          | 365826049703 | 7681834618    | +2                        | 2 acre                | Poultry production          |
| Samit Kumar panda    | Balaram panda            | Vill-Budharaja Block-Dhanakauda  | 32          | 330345391325 | 9438679143    | +3                        | 2 acre                | Poultry production          |

**(D) Dignitaries visited ARYA villages- Nil**

**(E) Newspaper coverage**

**मुर्गी पालन के लिए दिया गया प्रशिक्षण**



संबलपुर, आर्या प्रोजेक्ट के तहत संबलपुर स्थित कृषि विज्ञान केन्द्र में जिला के विभिन्न ब्लॉक से आये किसानों को लेकर मुर्गी पालन पर प्रशिक्षण शिविर लगाया गया. कार्यक्रम में कृषि विज्ञान केन्द्र के वरिष्ठ वैज्ञानिक एवं मुख्या डॉ. साश्वती पटनायक ने प्रशिक्षण शिविर आयोजन के उद्देश्य पर प्रकाश डाला. सेवानिवृत्त जिला मुख्या पशु चिकित्सा अधिकारी डॉ. नवीन कुमार मिश्र मुख्य अतिथि के तौर पर उपस्थित थे. वैज्ञानिक (पशु वैज्ञानिक) डॉ. ज्योतिप्रभा मिश्र ने कार्यक्रम का संचालन किया.

**(F) Publications**

**दूध दिनीया तालिम शिबिर उदघाटित**



ସମ୍ବଲପୁର, ୧୮/୩(ବୁଧବେଳା)-ଟିପଲିନା ପୁର କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ରରେ ଆୟୋଜିତ କାର୍ଯ୍ୟକ୍ରମ 'ଆରିୟା'ଉଦଘାଟିତ ହୋଇଛି। ପରିପରିଣ ନର୍ସରୀ ପରିଚାଳନାକୁ ନେଇ ୨ ଦିନିଆ ତାଲିମ ଶିବିର ଆୟୋଜିତ ହୋଇଥିଲା। ପରିପରିଣ ନର୍ସରୀ ପାଇଁ ସରକାରୀକ ପକ୍ଷରୁ ଯୋଗାଇ ଦିଆଯାଇଥିବା ବିଭିନ୍ନ ବ୍ୟବସ୍ଥା ଏବଂ ଉଚ୍ଚ ଅନୁସାରେ ପରିପରିଣ ଚୟନ ଉପରେ ଆଲୋଚନା ହୋଇଥିଲା। ଚଷମାକୁ ପ୍ରୋତ୍ସାହିତ କରିବା ଉଦ୍ଦେଶ୍ୟ ଅନୁଷ୍ଠିତ ଏହି ତାଲିମ ଶିବିର କରାଯାଇଥିଲା। ଏଥିରେ କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ରର ବରିଷ୍ଠ ଦୈନିକିକ ଡ. ଶାଶ୍ୱତୀ ପଟ୍ଟନାୟକ ଅଧ୍ୟକ୍ଷତା କରିଥିବା ବେଳେ ଉମା ପ୍ରଧାନ ଏହାକୁ ପରିଚାଳନା କରିଥିଲେ। ଏହାସହ ଜିଲ୍ଲା ଉଦ୍ୟାନ ବିଭାଗ ମୁଖ୍ୟ ରଞ୍ଜନ ଦାସମହାପାତ୍ର, ଟିପଲିନା ଉଦ୍ୟାନ କୃଷି ମହାବିଦ୍ୟାଳୟ ଅଧ୍ୟକ୍ଷା ଦାପିକା ସାହୁ, ଧନକରଡ଼ା ବୁକର ସହକାରୀ ଉଦ୍ୟାନ କୃଷି ଅଧିକାରୀ ରଞ୍ଜନ ମହାପାତ୍ର ଏବଂ ସାଂପ୍ରତିକର ଜଗେ ସପନ ଚଷମା ସୁଜିତ ମିଶ୍ର ପ୍ରମୁଖ ଏଥିରେ ଉପସ୍ଥିତ ଥିଲେ।





**(G) Migration status: NIL**

**Action Photographs**

**Poultry**



*Input Distribution*



*Visit of ARD officials*



*Visit of ARD officials*



*Functional Poultry unit of ARYA youth*



*Kadaknath poultry birds reared in backyard*



*Kadaknath poultry birds reared in backyard*



*Kadaknath poultry birds reared in backyard*



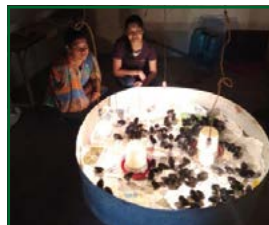
*Functional unit of ARYA youth*



*Input Distribution*



*Input Distribution*



*Brooding*



*Feeding of chicks by ARYA youth*



*Capacity building programme on poultry farming*



*Discussion with poultry entrepreneur during the training programme*



*Demonstration on feeding, vaccination management*



*Demonstration on feeding, vaccination management*

## Mushroom Cultivation



*Distribution of input*



*Training Programme at KVK campus*



*Mushroom unit of a farmer at Jayantpur Village*



*Mushroom unit of a farmer at Bargaon Village*

## Vegetable Nursery



*Distribution of input*



*Training Programme at KVK campus*



*Vegetable nursery by farmers*



## 8. Achievements of Ganjam-1 KVK

### 8.1 Project Initiation: 2018-19

#### Name of ARYA villages

Table-1

| Sl. No. | KVK name | Name of ARYA village  | Established enterprise |
|---------|----------|---|------------------------|
| 1       | Ganjam I | Jayantigada, Gobara ,Netenga, Netenga , Patharapalli, Gereda Barapalli, Patharapalli, Kirapalli, Benipalli, Betara, Rajkundu, Gamundi, Lambhei, Tulashipalli , Sindhi Nuagam Landajuali, Ekagharia, Alasuguma, Narendrapur, AmeitaSahi, Kumundi Bandhasahi  | Poultry Production     |
| 2       | Ganjam I | Kholakhali, Dakarabadi, Kanasuka, Lalsing, Mahaguda, Balatunu, Kaliaguda, Badakodanda, Alasuguma, Panchabhuti, Akhupadar, Sardula, Nidhiapalli, Goiribadi, Khandikoti, Kamasaragada, Raghunathpur, Bhanjanagar, Jadadhar, Mangalpur, Dadaralunda, Shodangai Mangalpur, Baragaon, Phulsarapalli, Nuasahi | Yearlings production   |
| 3       | Ganjam I | Dhimiripalli, Benakunda, Dihapadhal, Kaindi, Mangalpur, Turumu, Khandikhoti, Girisola, Jillundi, Nimapadar, Tokaganda, Gajendra, Kutunikumpa, Khamaredi, Tikarpada  | Mushroom Production    |

| Sl. No. | KVK name | Name of ARYA village  | Established enterprise |
|---------|----------|---|------------------------|
| 4       | Ganjam I | Jillundi, Tapaganda, Chitipalli, Gurabadi, Gudimba, Dihapadhala, Buduli, Kotibiradi, Bhanjanagar, Golapada, Asurabandha, Muliapalli, Padmpur, Badagada, Kamabakhara, B.Kotibadi, D.balapanik, Chadhiapalli, Ambapua, Bori, Sariapalli | Nursery raising        |

**8.2 District Profile:** Highest densely populated district in Odisha. 78.2% rural population. Age group 20- 40 years population is 11, 21, 141 (31.76% of total population). High migrant population (3,00,000/ annually). Migrants family income nearly Rs. 9000 per month. Areas where agriculture and its allied activities provide reasonable income, food security and manage other non-food requirements, people usually do not migrate. A small proportion of population from this area migrate to earn supplementary incomes during the agricultural off-season.

**8.3 Identification of youth:** Youth (18-35 years) were selected. Youth vulnerable to migration and having minor experience in concerned sector were selected. Counseling of the youth was done to adapt agriculture and allied activities for their primary income source.

**8.4 Name of cooperating Institutions for technical support:** ICAR-CARI, OUAT, Veterinary Dept., Odisha, ICAR-CIFA, College of Fisheries, Rangailunda, Fishery Dept, Odisha, ICAR-CHES, Horticulture Dept., Odisha, NABARD

### 8.5 Enterprise details

#### Yearlings Production

**Detailed description:** 30 nos. of youth (M:23+F:7) were selected from 27 villages of 5 block namely Jagannathprasad, Belaguntha, Buguda, Bhanjanagar and Aska. Out of 30 youths selected under yearlings production 23 nos. are male and 7 nos. are female.

**Input /Support provided to youth groups:** Happa, Fry drag net, water quality kit, plankton net

### Progress made

**Table-2**

| Enterprise name      | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                     | % increase | Economic of enterprise |                  |     |
|----------------------|-----------------------|-----------|--|---------------------|------------|------------------------|------------------|-----|
|                      |                       |           | Before adopting ARYA                             | After adopting ARYA |            | Gross cost (Rs.)       | Net return (Rs.) | BCR |
| Yearlings production | 30                    | 4         | 20000 yerlings                                   | 40000 yearlings     | 100        | 40000                  | 100000           | 3.5 |

| Enterprise name     | No. of youth involved | Unit/ No. | Measurable indicators of output in suitable unit |                                      | % increase | Economic of enterprise |                  |     |
|---------------------|-----------------------|-----------|--|--------------------------------------|------------|------------------------|------------------|-----|
|                     |                       |           | Before adopting ARYA                             | After adopting ARYA                  |            | Gross cost (Rs.)       | Net return (Rs.) | BCR |
| Poultry Production  | 40                    | 10        | Adult body wt 0.8kg<br>Mortality 30%             | Adult body wt 1.5kg<br>Mortality 12% | 50         | 42000                  | 96000            | 3.2 |
| Mushroom production | 40                    | 19        | Avg yield 0.9kg                                  | Avg yield 1.5kg                      | 66         | 42000                  | 84000            | 3.0 |
| Nursery raising     | 30                    | 12        | 1lakh seedlings/ yr                              | 3lakh seedlings / yr                 | 200        | 131520                 | 156480           | 2.2 |

**Table-3**

| Enterprise           | Area (Acre)/ No. | Cost of production (Rs. Per unit) | Return (Rs. Per unit) | Net Income (Rs. Per unit) |
|----------------------|------------------|-----------------------------------|-----------------------|---------------------------|
| Poultry Production   | 100              | 42000                             | 138000                | 96000                     |
| Mushroom production  | 100              | 42000                             | 126000                | 84000                     |
| Yearlings production | 12Ac             | 40000                             | 140000                | 100000                    |
| Nursery raising      | 6Ac              | 131520                            | 288000                | 156480                    |

## Impact

### (A) Capacity Building

**Table-4**

| Thematic Area        | Topic of training   | No. of courses | No. of beneficiaries |        |       |
|----------------------|---|----------------|----------------------|--------|-------|
|                      |   |                | Male                 | Female | Total |
| Fish Seed Production | Yearling Production<br>Entrepreneurship development and bankable project        | 2              | 23                   | 7      | 30    |
| Poultry Production   | Brooding management<br>Entrepreneurship development and bankable project        | 2              | 29                   | 11     | 40    |
| Mushroom production  | Mushroom Spawn production<br>Entrepreneurship development and bankable project  | 2              | 23                   | 17     | 40    |
| Nursery raising      | Scientific nursery raising<br>Entrepreneurship development and bankable project | 2              | 25                   | 5      | 30    |

## Success Story of ARYA Youth

### Poultry production enterprise

**Name:** Jitu Nahak, **Vill** – Sindhinuagaon, Aska, Ganjam

**Enterprise:** Backyard poultry unit, Brooded chick production unit, Hatchery

**Brand created:** MK Poultry & Hatchery, (<https://www.youtube.com/c/MKPoultry>)

**Annual income:** Rs. 12,00,000/ year

**Employment Generation:** 2 persons engaged round the year

A large chunk of farmers of the district belongs to marginal and poor category having less land at their disposal. This hastens the profitable cash crop practices leading to higher dependence on livestock and poultry. On an average more than 3 lakh backyard poultry birds are reared in the region constituting 25% of the total population. With the induction of improved backyard poultry breeds and enhanced rearing skill of farmers, the sector has undergone a paradigm shift from livelihood to entrepreneurship. Taking this age old farming practice ARYA programme was framed to produce entrepreneurs. For developing entrepreneurship, 40 (number) youth were trained with up to date knowledge and skills related to poultry production. Further the youths were trained on chick rearing for catering the need of the district on brooded chicks.

One of the youth Ganesh Nahak of sindhinuagaon, Aska adapted the brooded chick supply in a large scale and now has established MK Poultry & Hatchery unit in the region. Annual productions of more than 20,000 chicks along with adult breeding birds are being done by the youth. He has now established a chain of chick supply network involving farmers within and outside the district. From mere 200 poultry bird rearing before ARYA now he has gone a paradigm shift from farmer to entrepreneur. With the production of brooded chicks of different elite varieties like kadaknath, aseel, chabro, vanaraja, krouiler, sonali etc he is now established as a premier supplier of chicks. Previously stress marketing of birds and eggs now changed to timely supply of chicks, birds and breeding stock to farmers.

With the help of ARYA and KVK he is going to establish one hatching unit of 2000 capacity this year.



### Nursery raising: A profitable enterprise

In Ganjam district vegetables are cultivated in around 73000 ha. Use of quality seedling and planting material play a major role in vegetable cultivation which can increase production by 15 %. There is huge demand of quality seedling among vegetable growers in Ganjam district. Besides, in urban and semiurban area people also need seedling for developing roof top garden and kitchen garden. Apart from using seedling for vegetable cultivation, the vegetables growers have opportunity to sale seedling to other farmers and customers. On other hand nursery business can be a better vocation for unemployed rural youth. Few of these points explains the importance of nursery in development of entrepreneurship among rural youth. In operational area of KVK Ganjam-I many of youth were engaged in raising seedling in traditional way to meet their own requirement in vegetable cultivation. In the year 2019-20, KVK Ganjam-I has taken up ARYA project in different components like nursery raising for entrepreneurship development among rural youth. Thirty youth from different villages of Bhanjanagar, Belguntha and Suroda were selected for nursery raising. All the youth were trained on raising vegetable seedling using coco peat and portray. After completion of training 12 nos. of youth were provided with portray, coco peat, seed treating chemicals,

rose cane hand sprayer, garden pipe, trench hoe, garden trowel etc. a start up incentives.

Satyjit Kar a progressive farmer of village Gudiamba, GP- Jilundi, Block- Bhanjanagar, Dist- Ganjam (Odisha) has passed ITI in fitter trade in the year 2011. He was in search of some job in public or private sector but could not get the same. He has 4 acre of land where he has started fruit and vegetable cultivation. He planted cashew and mango each in 1 acre land. He cultivated vegetables like brinjal, bitter gourd, Ivy gourd and pointed gourd in rest 2 acre area. Due to seasonal glut of vegetables in market the income gained by him was insufficient to meet his livelihood. He was in search of some alternate vocation which will be profitable for him. In 2019, he was selected as beneficiaries in nursery raising enterprise under ARYA programme.

After training on nursery raising, he started producing seedling and planting material of horticultural crops in small scale in last year. This year he has produced vegetable seedling of brinjal, tomato, cole crops etc. in portray using coco peat. Besides, he has produced sapling of papaya, drumstick, gootee of kagzi lime, cinnamon, guava etc in poly bag. The details of planting material produced and income generated in last year is given in following table with cost and benefit analysis.

| Sl. No | Name of seedling/gootte | No. produced | Cost of production(Rs.) | Gross income(Rs.) | Net income (Rs.) | BCR  |
|--------|-------------------------|--------------|-------------------------|-------------------|------------------|------|
| 1      | Papaya                  | 3,000        | 27,000                  | 60,000            | 33,000           | 2.2  |
| 2      | Drumstick               | 3,000        | 15,000                  | 45,000            | 30,000           | 3.0  |
| 3      | Cinnamon                | 1,000        | 18,000                  | 40,000            | 22,000           | 2.22 |
| 4      | Lime                    | 1,200        | 21,600                  | 48,000            | 26,400           | 2.21 |
| 5      | Guava                   | 500          | 9,000                   | 20,000            | 11,000           | 2.22 |

| Sl. No | Name of seedling/gootte | No. produced | Cost of production(Rs.) | Gross income(Rs.) | Net income (Rs.) | BCR  |
|--------|-------------------------|--------------|-------------------------|-------------------|------------------|------|
| 6      | Arecanut                | 1,000        | 22,000                  | 40,000            | 18,000           | 1.81 |
| 7      | Pointed gourd           | 500          | 4,000                   | 1,000             | 6,000            | 2.5  |
| 8      | Ivy gourd               | 500          | 4,000                   | 1,000             | 6,000            | 2.5  |
| 9      | Vegetable seedling      | 50,000       | 35,000                  | 75,000            | 40,000           | 2.14 |
|        | Total                   | 60,700       | 1,55,600                | 3,30,000          | 1,92,400         |      |

He is getting a profit of Rs.2 lacs from nursery business and his annual income was increased by two fold along with vegetable cultivation. He has created employment opportunities not only for him but also for others two person working in his farm. He has created assets like power tiller, power weeder, power sprayer out of the income generated from nursery business. His social standard of living has been increased. Farmers of his village and adjoining villages

are seeking technological support from him. He has become a source of inspiration for other migrating unemployed youth in his locality.

Nursery raising can be a profitable enterprise for unemployed rural youth. It can be a livelihood option for the migrating youth. Further attracting youth to such business will be possible by linking them to financial and technological institution.



*Raising cole crops seedling in nursery*



*Production of gootee of cinnamon in nursery*



*Drumstick seedling production*



*Production of papaya*





Seedling production in Pro tray



Training on nursery raising at KVK

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Enterprise           | More than Rs. 10000  | More than Rs. 50000 |
|----------------------|--|---------------------|
| <b>Poultry</b>       | Jitu Nahak, Basanta Sahu, Ranjan Ku. Bisoyi, Subhasis Patra, Dwiti Krushna Pradhan   |                     |
| <b>Mushroom</b>      | Shyam Sundar Pradhan, Minati Gouda, Gobinda Behera, Santoshi Bisoyi, Laxmi Sahu  |                     |
| <b>Nursery</b>       | Sudam Pattanaik, Subrat Pradhan, Narayan Gouda, Krutibash Mallick, Balakrushna Pradhan, Satyajeet Kar, Manoj Rout, Jalandhar Pradhan |                     |
| <b>Fish yearling</b> | Rajalaxmi Dalabehera, Sumanta Pradhan, Rashmita Behera, Sanjay Kumar Panigrahi   |                     |

**(C) Dignitaries visited ARYA villages- Nil**

**(D) Newspaper coverage: 1**

**(E) Publications : 1**

**(F) Migration status:** 150 youths are engaged in different enterprises and their seasonal migration is checked.

**Poultry production units**



**Mushroom production**



**Nursery raising**



**Yearling production**



**9. Achievements of Puri KVK**

Puri, the abode of ‘Lord Jagannath’ and enriched cultural heritage with sculpture of excellence and the black Pagoda ‘Konark’ makes the state of Odisha famous in the world. Krishi Vigyan Kendra Puri was established in August, 2006. It comes under the East and South East Coastal Plain zone of Odisha. KVK Puri has been extending technical support to the farming community by conducting need based location specific trials, demonstrations trainings and other extension activities. The major focus is for doubling farmers’ income by decreasing production cost, popularizing resource conservation practices and

promotion of entrepreneurship in different enterprises.

**9.1 Project Initiation:**

In the recent scenario there is serious concern regarding unemployment of rural youths directly influencing their migration from rural areas. The promotion of agri-enterprises will not only generate employment opportunity but also at the same time would provide support to the livelihood of the farmers. The ARYA Project is an attempt to arrest the migration and develop entrepreneurs of different enterprises. The project was initiated in Puri district of Odisha during the year 2018-19.

## Name of ARYA villages

Table-1

| Sl. No. | KVK name | Name of ARYA village   | Established enterprise                |
|---------|----------|--|---------------------------------------|
| 1       | PURI     | Sanabhimadapura, Talapatana Kanhupur, Jipur Singhakuda, Bastapada, Itatali, Chandrabrahma pur, Bhutpada, Bhagalpur Biswanathapur, Mathasahi, <b>Block-Satyabadi</b><br>Suhagpur, Mahari pokhari <b>Block-Pipili</b><br>Tulashichura, Gopinathpur <b>Block-Puri Sadar</b><br>Resinga <b>Block-Nimapada</b><br>Gobindapur, <b>Block-Deleanga</b><br>Raula patana- <b>Block-Gop</b><br>Madhupur- <b>Block-Astaranga</b> | <b>Mushroom</b>                       |
| 2       | PURI     | Billipada, Singhbrahmapur, Janakideipur, Dalabhanapur, Akhupada, Sundara, Charishra, Paikarapur, Bijayaramchandrapur, Balipada, Biranarasinghpur, Kanalpada, Samakula, Basantapur<br><b>Blocks-</b> Satyabadi, Puri Sadar, Delanga, Gop, Nimapada  | <b>Fish production with fish seed</b> |
| 3       | PURI     | Dubduba, Panchukera, Jayapur, Nuasahi, Panakera, Nahala, Padmapur, Madhipur, Balikud, Muninda, Badakanjia, <b>Block-Satyabadi</b><br>Dalabhanapur, Gadatoriha <b>Block-Nimapada</b><br>Gobind pur, <b>Block-Delanga</b><br>Ankia, Bira narasinghpur, Randio <b>Block-Puri Sadar</b><br>Abalapur, Barundi, Podagun, Uttarbada <b>Block-Pipili</b><br>Dahikia, <b>Block-Kakatpur</b>                                   | <b>Apiary</b>                         |
| 4       | PURI     | Taraboيسان, sanabhimdaspur, Gadachandapur, Talapada, jayapur, bharatipur, Raisha, Bangurusha, Hasanpur, Katunia, Gadatotihan, Gadabadaput, Resinga, Samakula, , Talajanag, Kumbharpada, Bhagabansundara, Pattnaikia, Narasinghpur, Gadasanaput, Gadapadanpur, Arola<br><b>Blocks –Nimapada ,Puri Sadar, Gop, Satyabadi &amp; Kanasa</b>  | <b>Poultry</b>                        |

## 9.2 District Profile:

Puri is a coastal district of Odisha coming under East and South East Coastal Plain Agro-climatic Zone. The geographical area of the district is 348102 ha and the cultivated area is 188745 ha. The major crop paddy covers about 142000 ha and 19100 ha is under non-paddy crop. The cropping intensity is 191

%. About 82 % of farmers in the state are small and marginal with average holding size of < 0.8 ha. The existing cropping systems challenged with degradation of natural resources, yield stagnation, increase in cost of cultivation and erratic rain fall due to climate change.

### Demographic status (2011 Senses)

|                             |                            |
|-----------------------------|----------------------------|
| <b>Total populatin</b>      | 1697983                    |
| <b>Male</b>                 | 865209(50.96%)             |
| <b>Female</b>               | 832774(49.04%)             |
| <b>Sex ratio</b>            | 963 (Female per, 000 male) |
| <b>Population density</b>   | 488                        |
| <b>Literacy rate (%)</b>    | 84.67                      |
| <b>Male Literacy (%)</b>    | 90.85                      |
| <b>Female Literacy (%)</b>  | 78.28                      |
| <b>No. of farm families</b> | 148935                     |
| <b>Small farmer</b>         | 40487                      |
| <b>Marginal farmer</b>      | 97439                      |
| <b>Big farmer</b>           | 2073                       |

### Basic agricultural information

|   |  |
|---|--|
| <b>Agro-climatic Zone</b>                                 | Agro ecological situation  |
| <b>East and South Eastern Coastal Plain Zone</b>          | 1. Coastal Alluvial Command<br>2. Coastal Alluvial Non-command<br>3. Coastal Alluvial Saline<br>4. Rainfed Laterite<br>5. Rainfed Red and Laterite |
| <b>Annual Av. Rainfall (mm)</b>                           | 1408.8mm.  |
| <b>Soil type</b>  | Red, laterite, brown forest, alluvial and saline   |
| <b>Total Geographical area</b>                            | 348102 ha  |
| <b>Farming situation</b>                                  | Rainfed and irrigated  |
| <b>Cropping system</b>                                    | Rice-Rice, Rice- Pulse, Rice- Oilseed, Rice-Vegetables, Fallow-Rice  |
| <b>Major Crop/ enterprise</b>                             | Rice, Blackgram, Greengram, Groundnut, Betel vine, Coconut, Vegetables, Fish, Mushroom, Dairy, Poultry   |
| <b>Irrigation potential Kharif ('000ha) Rabi ('000ha)</b> | 116.08 (61.5%)<br>(40.64%)   |

### 9.3 Identification of youth

- ❖ Identification of villages was made through diagnostic field visits and contact with key farmers, entrepreneurs, krushak sathi, input dealers, mushroom federation, fish growers association, ARD & other line departments.
- ❖ Bench mark survey of the prevailing enterprises was undertaken of the district to know the scope of various enterprises.
- ❖ Assessed the existing market supply chain in the district and finally four enterprises namely Mushroom, Fishery, Apiary and Poultry were selected.
- ❖ Rigorous Field Visits were made to different villages in the district.
- ❖ Focus Group Discussion with farmers & more specifically rural youths of the enterprises selected under the project in their village.
- ❖ Collection of Basic Information of youths using interview schedule was done.
- ❖ Selected Youths having preliminary knowledge on Mushroom, Fishery, Apiary and Poultry farming activities.
- ❖ Preliminary screening of youths on the basis of personal information, qualification, age and resources *etc.* was done.
- ❖ Organized consultative workshop of various stakeholders to sensitize the youths.
- ❖ Successful entrepreneurs were invited to share their experiences in the Inception workshop.
- ❖ Discussed about scope, opportunity and challenges of each enterprise in the Inception workshop by doing some group exercises.

## 9.4 Name of cooperating Institutions for technical support

- ICAR, ATARI ,KOLKATA
- ICAR, IIWM, Bhubaneswar
- CIWA,ICAR, Bhubaneswar
- CIFA,ICAR, Bhubaneswar
- CTMRT,OUAT, Bhubaneswar
- CPDO,IPDP, Bhubaneswar
- AICRP, Honey Bee, OUAT, Bhubaneswar
- NABARD, Puri
- Animal Husbandry Department, Puri
- District Agriculture Office, Puri
- Horticulture Department, Puri
- Fishery Department, Puri

## 9.5 Enterprise details

### a) Mushroom

- Spread in Area / No. Commercial growers- 400 Nos.
- **Production-** Paddy Straw Mushroom- 29242 q/yr

Oyster Mushroom-14648 q/yr

Total Production-43890 q/yr

- **Strength:** Large no. of mushroom growers,54 nos. of spawn units, Availability of bundle straw, Congenial climatic condition, Existence of KVK in the district.
- **Opportunities:** Coconut orchard (9990 ha), Nearer to Capital of Odisha, promotion of mushroom enterprises through Govt. Schemes, Easy access to CTMRT, OUAT, Bhubaneswar.
- **Entrepreneurial activities:** Mushroom Production, Spawn production, Postharvest

management & marketing, Service provider, Value addition of mushroom.

### b) Poultry production

- Spread in No. - 975430
- **Production-**0.45TMT
- **Strength:** SHG, KVK, Landless/Marginal farmers ,Functional Hatchery unit-1
- **Opportunities:** CPDO, IPDP Bhubaneswar
- **Entrepreneurial activities:** Hatchery, Input services, Poultry production, service provider (Paravet), Marketing of birds.

### c) Apiary

- Spread in No. -30 Entrepreneurs
- Production-22q
- **Strength:** AICRP honey bee, CDB,KVK, existence of Flora & Fauna
- **Opportunities:** Govt. schemes to promote bee cultivation in the district, high market demand,
- **Entrepreneurial activities:** Input, Technology, Production, Processing and marketing

### d) Fish production with fish seed

- Spread in Area - 5323 ha
- **Production-** 20583.5 MT
- **Strength:** lowland 70%, CIFA, annual rainfall, more no of perennial ponds, existence of KVK, Co-ordination with stakeholders
- **Opportunities:** nearer to capital, govt schemes, high market demand,
- **Entrepreneurial activities:** Spawn production, Input supplier, Yearling Production, Marketing, Service provider

**Input /Support provided to youth groups (2020-21)**

| Year    | Poultry Production     |          |             |
|---------|------------------------|----------|-------------|
|         | Items/ Heads (25Units) | Quantity | Amount(Rs.) |
| 2020-21 | Chicks (nos.)          | 2000     | 63960       |
|         | Eggs for Hatching      |          | 3400        |
|         |                        | Total    | 67360       |

**Start-up Input Distribution (poultry)**



Progress made

Table-2

| Enterprise name | No. of youth involved | Unit/No.             | Measurable indicators of output in suitable unit           |   | % increase      | Economic of enterprise                         |   |      |
|-----------------|-----------------------|----------------------|--|---|-----------------|--|---|------|
|                 |                       |                      | Before adopting ARYA                                       | After Adopting ARYA   |                 | Gross Cost (Rs.)                               | Net Return (Rs.)                              | BCR  |
| Mushroom        | 30                    | 15 Units Established | Avg. No. of Beds /yr- 1505 Nos.                            | Avg. No. of PSM Beds /yr-2380 +Avg. No. of Oyster Bags/ yr-90 | 58.13           | Paddy straw mushroom for 8 months- Rs.2,92,320 | Paddy straw mushroom for 8 months- Rs.149,520 | 2.05 |
|                 |                       |                      | Avg. Annual Production- 1063.98kg                          | Avg. Annual Production- 1948.8kg                              |                 | Oyster Mushroom for 2 months- Rs.6,090         |   |      |
|                 |                       |                      | Avg. Production/ Bed- 0.708kg                              | Avg. Production/ Bed- 0.82kg                                  | 15.81           |  |   |      |
|                 |                       |                      | Avg. Employment Generation/ annum- 160                     | Avg. Employment Generation/ annum- 202                        | 26              |  |   |      |
|                 |                       |                      | Avg. Gross Income per annum- Rs.1,38,317                   | Avg. Gross Income per annum- Rs.2,98,410                      | 115             |  |   |      |
| Poultry         | 40                    | 25Units Established  | Avg. body weight Banaraja- 1.9Kg                           | Avg. body weight Banaraja- 2.1Kg                              | Banaraja- 10.5% | Banaraja- 53690                                | Banaraja- 23690                               | 1.78 |
|                 |                       |                      | Avg. body weight Kadaknath- 1.45Kg                         | Avg. body weight Kadaknath- 1.7 Kg                            | Kadaknath- 17%  | Kadaknath- 100725                              | Kadaknath- 59725                              | 2.39 |
|                 |                       |                      | Mortality rate - 12%                                       | Mortality rate - 10%  | -               | -  | -   | -    |
|                 |                       |                      | Avg. Gross Income per annum- Banaraj-53040 Kadaknath-65625 | Avg. Gross Income per annum- Banaraj- 161070 Kadaknath-201450 |                 |  |   |      |

| Enterprise name                | No. of youth involved | Unit/No.             | Measurable indicators of output in suitable unit |   | % increase | Economic of enterprise |   |      |
|--------------------------------|-----------------------|----------------------|--|---|------------|------------------------|---|------|
|                                |                       |                      | Before adopting ARYA                             | After Adopting ARYA                                       |            | Gross Cost (Rs.)       | Net Return (Rs.)  | BCR  |
| Apiary                         | 30                    | 10 Units Established | Additional Employment Generation/yr-12           | Additional Employment Generation/yr-27                    | <b>125</b> | Rs.14,100              | Rs.4,460  | 1.46 |
|                                |                       |                      | Avg. Honey Production/Box-3 kg                   | Avg. Honey Production/Box-4.5 kg<br>Bee Colony-2 Nos./Box | <b>50</b>  | Avg. Boxes/Unit-3 Nos. | Avg. Boxes/Unit-3 Nos. (Support from Project -Rs.6940 & own investment Rs.2700) |      |
|                                |                       |                      | Additional Gross Income-Rs.1800/Box              | Additional Gross Income-Rs.4700/box                       | <b>161</b> |                        |   |      |
| Fish production with fish seed | 30                    | 15 Units Established | Avg. body weight of fish (kg) – 0.520            | Avg. body weight of fish (kg) – 0.830                     | 59.61      | Rs 1,97,600/ha/ year   | Rs 2,58,900/ha/year   | 2.31 |
|                                |                       |                      | Avg. fish production (qtl/ha/year) – 28.75       | Avg. fish production (qtl/ha/year) – 41.50                | 44.34      |                        |   |      |
|                                |                       |                      | Avg. Gross Return (Rs/ha/year) – 2,87,500        | Avg. Gross Return (Rs/ha/year) – 4,56,500                 | 58.78      |                        |   |      |
|                                |                       |                      | Avg. employment per annum – 97                   | Avg. employment per annum – 123                           | 26.80      |                        |   |      |



**Enterprise wise Achievement under ARYA Project during 2020**

| Output  |        | Mushroom Production                                    | Backyard Poultry   | Apiary                             | Fish production with fish seed       |
|---|--------|--|--|------------------------------------|--------------------------------------|
| Trainings Conducted (No.)   |        | 2  | 2  | 2                                  | 2                                    |
| Rural youth trained (No.)   | Male   | 37   | 20   | 36                                 | 33                                   |
|   | Female | 3  | 5  | 4                                  | 7                                    |
| Groups formed under ARYA (No.)  |        | 2  | 2  | 2                                  | 2                                    |
| Youths associated with each group (No.)   |        | 20   | 15   | 10                                 | 20                                   |
| Entrepreneurial units established under ARYA (No.)  |        | 0  | 10   | 0                                  | 0                                    |
| After success of this entrepreneurial unit, other units established in the village/ nearby villages (No.) |        | 16   | 12   | 11                                 | 21                                   |
| Other youth visited the entrepreneurial units (No.)   |        | 34   | 26   | 14                                 | 45                                   |
| Products produced (Kg)  |        | Paddy straw mushroom 11656 kg, Oyster Mushroom 1460 kg | Kadaknath- 1351kg (Avg. size-1.7kg), vanaraja- 2499kg(Avg. size-2.1kg) | Honey 79.5 kg , Bee colony 23 Nos. | Average fish production (38.75 q/ha) |
| Value of products produced (Rs.)  |        | Rs.15,95,160   | Rs.7,53,270  | Rs.73,500                          | Rs. 4,56,600/ha                      |
| Products branded (No.)  |        | 1  | 0  | 1                                  | 0                                    |
| Publications (No.)  |        | 0  | 0  | 0                                  | 0                                    |
| Awareness created by the Group i.e. Press release/TV or Radio talk, etc. (No.)                            |        | 5  | 3  | 4                                  | 6                                    |
| WhatsApp Group Created (No.)  |        | 1  | 1  | 1                                  | 1                                    |

**ARYA UNITS OF KVK, PURI**



*Scientists visit to Mushroom Unit-  
Rajkishore Sethy*



*Interaction with Youth-  
Oyster Mushroom Unit*



*Renubala Dash-Selling  
mushroom Pickle*



*Marketing of mushroom  
by preparing Oyster  
Mushroom Pakoda*



*Scientists visit &  
supervision of Unit*



*Ranging and egg  
collection by youth*



*Brooding of chicks by  
youths*



*Azolla unit by an ARYA  
youth*



*Interaction with Youth*



*Scientists visit &  
supervision of Unit*



*Single Window Bee  
Solution Point for Input  
Supply*



*Honey produced by  
youth for sale*



*Conditioning and selling  
of fingerlings*



*Fish harvesting by ARYA  
farmer*



*Observation of plankton  
at ARYA farmers pond*



*AQUASHOP created by  
one ARYA entrepreneur*

**Name of youths involved**
**Table-3**

| Sl. No. | Name of the Youth       | Village Name                         | Name of adopting enterprise |                    |
|---------|-------------------------|--------------------------------------|-----------------------------|--------------------|
| 1       | Manoj kumar Behera      | At-Sanabhimadapura, Block-Satyabadi  | Mushroom (2019-20)          |                    |
| 2       | Ranjan Behera           |                                      |                             |                    |
| 3       | Sadashib Behera         |                                      |                             |                    |
| 4       | Satyabrat Sahoo         |                                      |                             |                    |
| 5       | Purna chandra Behera    |                                      |                             |                    |
| 6       | Kamalini Rout           | At-Bhut pada,Block-Satyabadi         |                             |                    |
| 7       | Sujata Swain            |                                      |                             |                    |
| 8       | Renubala Das            | At-Tulashichura,Block-Puri Sadra     |                             |                    |
| 9       | Binapani Behera         | At-Jipur,Block-Satyabadi             |                             |                    |
| 10      | Karttik Behera          |                                      |                             |                    |
| 11      | Satyabhama Bastia       | At-Suhagpur,Block-Pipili             |                             |                    |
| 12      | Rasmita Patra           | At-Resinga,Block-Nimapada            |                             |                    |
| 13      | Radheya Bhoi            | At-Chandrabrahma pur,Block-Satyabadi |                             |                    |
| 14      | Rajkishor Sethi         |                                      |                             |                    |
| 15      | Mana ranjan Barik       |                                      |                             |                    |
| 16      | Priya krushna Das       | At-Itatali,Block-Satyabadi           |                             |                    |
| 17      | Kurshan chandra Pradhan | At- Kanhupur,Block-Satyabadi         |                             |                    |
| 18      | Tapas kumar Behera      |                                      |                             |                    |
| 19      | Sardhanjali Gil         |                                      |                             |                    |
| 20      | Damburu dhar Behera     |                                      |                             |                    |
| 21      | Pratap Behera           |                                      |                             |                    |
| 22      | Niranjana Majhi         | At-Talapatana,Block-Satyabadi        |                             |                    |
| 23      | Sudarsan Das            | At-Gobindapur,Block-Deleanga         |                             |                    |
| 24      | Aswini Baral            | At-Balikuda,Block-Satyabadi          |                             |                    |
| 25      | Debendra Jena           | At-Gopinathpur,Block- Puri Sadar     |                             |                    |
| 26      | Pimku Pradhan           |                                      |                             |                    |
| 27      | Pradeep Biswal          | At-Singhakuda,Block-Satyabadi        |                             |                    |
| 28      | Suryakanta Patra        | At-Bastapada,Block-Satyabadi         |                             |                    |
| 29      | Chhabi Bhoi             | At-Biswanathapur,Block-Satyabadi     |                             |                    |
| 30      | Narandra Behera         | At-Mahari pokhari,Block-Pipili       |                             |                    |
| 31      | Gyanaranjan Das         | Raulapatna,Konark                    |                             | Mushroom (2020-21) |
| 32      | Renubala pattnaik       | Sanabhimdaspur, Satyabadi            |                             |                    |

| Sl. No. | Name of the Youth     | Village Name                      | Name of adopting enterprise |                  |
|---------|-----------------------|-----------------------------------|-----------------------------|------------------|
| 33      | Pravanjan Nayak       | Madhupur, Astaranga               |                             |                  |
| 34      | Biswajit Ghadei       | Subarnapur, othaka                |                             |                  |
| 35      | Anil sethy            | Chandrabrahmapur, Satyabadi       |                             |                  |
| 36      | Annapurna Pradhan     | Mulaalasa, Satyabadi              |                             |                  |
| 37      | Pravasini Dei         | Nanpur, teisipur                  |                             |                  |
| 38      | Pratap kumar Parida   | Mathasahi, sriramchandrapur       |                             |                  |
| 39      | Sukanta swain         | Bagalpur, Satyabadi               |                             |                  |
| 40      | Mahabir Swain         | Bagalpur, Satyabadi               |                             |                  |
| 41      | Prashant kumar sethy  | Bhutupada, Satyabadi              |                             |                  |
| 42      | Tapan kumar Behera    | At-Gadapadan pur Block-Nimapada   |                             | Poultry(2019-20) |
| 43      | Golap manjari Behera  |                                   |                             |                  |
| 44      | Prashanta kumar patra |                                   |                             |                  |
| 45      | Rudra narayan patra   |                                   |                             |                  |
| 46      | Dipti ranjan chhatoi  |                                   |                             |                  |
| 47      | Sudiptarani Patra     |                                   |                             |                  |
| 48      | Rupali patra          |                                   |                             |                  |
| 49      | Santosh kumar patra   |                                   |                             |                  |
| 50      | Suchitra Patra        |                                   |                             |                  |
| 51      | Rajat behera          |                                   |                             |                  |
| 52      | Sagrika Mohanty       |                                   |                             |                  |
| 53      | Rajalaxmi mohanty     | At-Kantunia Block-Nimapada        |                             |                  |
| 54      | Sangram kesari patra  | At-Resinga Block-Nimapada         |                             |                  |
| 55      | Pradipta kumar Ray    | At-Kumbharpada Block-Nimapada     |                             |                  |
| 56      | Dali patra            |                                   |                             |                  |
| 57      | Monali patra          | At-Bhagabansundara Block-Nimapada |                             |                  |
| 58      | Pravati Pradhan       | At-Arol Block- Puri Sadar         |                             |                  |
| 59      | Mitali Pradhan        |                                   |                             |                  |
| 60      | Rina Pradhan          |                                   |                             |                  |
| 61      | Gitanjali Pradhan     |                                   |                             |                  |
| 62      | Digambar Pradhan      |                                   |                             |                  |
| 63      | Prasanta Rout         |                                   |                             |                  |
| 64      | Salima pradhan        |                                   |                             |                  |
| 65      | Puspanjali nayak      | At-Talajanga Block- Puri Sadar    |                             |                  |
| 66      | Partha sarathi Behera | At-Samakula Block- Gop            |                             |                  |
| 67      | Subhransu behera      |                                   |                             |                  |

| Sl. No. | Name of the Youth      | Village Name                          | Name of adopting enterprise |
|---------|------------------------|---------------------------------------|-----------------------------|
| 68      | Subhransu sekhar Nayak |                                       |                             |
| 69      | Ranjita Nayak          | At-Pattnaikia Block-Satyabadi         |                             |
| 70      | Lokanath sahuo         | At-Gadasanaput Block- Kanas           |                             |
| 71      | Anjana Ray             | At-Narasinghpursasan Block- Kanas     |                             |
| 72      | Akash kumar Biswal     | At-Taraboisan Block- Nimapada         |                             |
| 73      | Sanatan Behera         | At-sanabhimdaspur Block-satyabadi     |                             |
| 74      | Biswajit Jena          | At-Gadachandapur Block-Nimapada       |                             |
| 75      | Shibaprasad Bhoi       | At -Jayapur Block- Satyabadi          |                             |
| 76      | Sujit kumar Nanda      | At - Bharatipur Block- Pipili         |                             |
| 77      | Sachikanta Swain       | At-Saderia Block- Nimapada            | Poultry (2020-21)           |
| 78      | Biswaranjan Bhoi       | At-Bangurusa Block- Satyabadi         |                             |
| 79      | Jyoti Ranjan Biswal    | At - Raisha Block- Kakatpur           |                             |
| 80      | Chandan Pradhan        | At - Hasanpur Block-Pipili            |                             |
| 81      | Kamalakanta Swain      | At -Madhipur, Block-Pipili            |                             |
| 82      | Manisha Biswal         | At-Dubduba,Block-Satyabadi            |                             |
| 83      | Rajesh Biswal          |                                       |                             |
| 84      | Sujata Biswal          |                                       |                             |
| 85      | Rinalata Behera        | At-Dalabhanapur,Block-Nimapada        |                             |
| 86      | Santosh kumar Pradhan  |                                       |                             |
| 87      | Dharanidhara Bhoi      |                                       |                             |
| 88      | Gagan Bihari Barik     |                                       |                             |
| 89      | Basanti Biswal         | At-Nuasahi,Block-Satyabadi            |                             |
| 90      | Kailash Mohanty        | At-Jayapur,Block-Sakhigopal           |                             |
| 91      | Santosh kumar Behera   | At-Gobind pur,Block-Delanga           |                             |
| 92      | Dibakar Maharana       |                                       |                             |
| 93      | Sarbeswar Maharana     |                                       |                             |
| 94      | Trilochan Martha       | At-Ankia,Block-Puri                   |                             |
| 95      | Somyaranjan Mahapatra  | At-Bira narasinghpur,Block-Purisdadar |                             |
| 96      | Trilochan Sethi        | At-Panakera,Block-Satyabadi           |                             |
| 97      | Susanta Das            | At-Nahala,Block-Satyabadi             |                             |
| 98      | Biswanath Behera       |                                       |                             |
| 99      | Sukanta kumar Parida   | At-Barundi,Block-Pipili               |                             |
| 100     | Prasanna kumar Pradhan | At-Podagun,Block-Pipili               |                             |
| 101     | Sanjay Bhanja          | At-Badakanjia,Block-Satyabadi         |                             |
| 102     | Dama Maharana          | At-Harishankarpur,Block-Satyabadi     |                             |
| 103     | Babuli Muduli          | At-Muninda,Block-Satyabadi            |                             |

| Sl. No. | Name of the Youth          | Village Name                               | Name of adopting enterprise |
|---------|----------------------------|--|-----------------------------|
| 104     | Anirudha Baral             | At-Balikud,Block-Satyabadi                 |                             |
| 105     | Sita kanta Das             |  |                             |
| 106     | Bikram Pradhan             |  |                             |
| 107     | Mamata Jena                | At-Madhipur,Block-Satyabadi                |                             |
| 108     | Sahadeb Pradhan            | At-Padmapur,Block-Satyabadi                |                             |
| 109     | Satyabhama Baral           | At-Panchukera,Block-Satyabadi              |                             |
| 110     | Tilottama Parida           |  |                             |
| 111     | Gouripriya Mohapatra       | At-Nuasahi,Block-Nimapada                  |                             |
| 112     | Sima Mishra                | At-Rendio,Block-purisadar                  |                             |
| 113     | Abinash chhatoi            | Beraboi , Delanga                          |                             |
| 114     | Biranchi Narayan Mahapatra | Sanabhimdaspur, Satyabadi                  |                             |
| 115     | Abinash pattnayak          | Jayarampur, Satyabadi                      |                             |
| 116     | Anu maharana               | Kotakhusanga, Nimapada                     |                             |
| 117     | Kanchanbala choudhry       | Gadatorihan, Nimapada                      |                             |
| 118     | Biswaranjan sahuo          | Panibhandar, Satyabadi                     |                             |
| 119     | Tathagata Mishra           | Pratappurushottampur, Purisadar            |                             |
| 120     | Rabindra kumar Swain       | At- Basantapur, Block - Delanga            | Fish production (2019-20)   |
| 121     | Srittam Pradhan            |  |                             |
| 122     | Trilochan Pradhan          | At- Singhbrahmapur, Block - Delanga        |                             |
| 123     | Srihari Mohapatra          |  |                             |
| 124     | Ramakrushna Pradhan        |  |                             |
| 125     | Ms Smitanjali Swain        | At- Akhupada, Block - Puri Sadar           |                             |
| 126     | Prakash Chandra Parida     | At- Sundar, Block - Puri Sadar             |                             |
| 127     | Prafulla Behera            | At- Pratappurusottampur, Block-Puri sadar  |                             |
| 128     | Swapna Ranjan Mishra       | At- Bijayramchandrapur, Block - Puri sadar |                             |
| 129     | Baban Das                  | At- Janakideipur, Block - Puri Sadar       |                             |
| 130     | Ms Subhashree Swain        | At- Moradpada, Block - Puri Sadar          |                             |
| 131     | Ms Shradhanjali Choudhry   | At- Paikarapur, Block - Puri Sadar         |                             |
| 132     | Santosh Kumar Das          | At- Janakideipur, Block - Puri Sadar       |                             |
| 133     | Bichitra kumar Pradhan     | At- Arala, Block - Puri Sadar              |                             |
| 134     | Bahana Biswal              |  |                             |
| 135     | Suresh Das                 | At- Janakideipur, Block - Puri Sadar       |                             |
| 136     | Gyanaranjan Behera         | At- Gabakunda, Block - Puri Sadar          |                             |
| 137     | Sadashiba Sahoo            | At- Samankula, Block - Gop                 |                             |
| 138     | Sidharth sankar Behera     |  |                             |

| Sl. No. | Name of the Youth     | Village Name                       | Name of adopting enterprise |                  |
|---------|-----------------------|------------------------------------|-----------------------------|------------------|
| 139     | Lipun Behera          |                                    |                             |                  |
| 140     | Chinmaya Sankar Patra | At- Gabadiha, Block - Gop          |                             |                  |
| 141     | Rasmi Ranjan Routaray | At- Kanalpada, Block - Satyabadi   |                             |                  |
| 142     | Kapilash Baral        | At- Billipada, Block - Satyabadi   |                             |                  |
| 143     | Laxmikanta Baral      |                                    |                             |                  |
| 144     | Deepak kumar Pradhan  |                                    |                             |                  |
| 145     | Bibhu Prasad Baral    |                                    |                             |                  |
| 146     | Suryakant Baral       |                                    |                             |                  |
| 147     | Ms Geeta Patra        | At- Balanga, Block - Satyabadi     |                             |                  |
| 148     | Jyoti Prakash Nanda   | At- Bharatipur, Block - Pipili     |                             |                  |
| 149     | Manoj Kumar Pradhan   | At- Dalabhanapur, Block - Nimapada |                             |                  |
| 150     | Gyana Ranjan Sahoo    | Kalapanchan, Nimapada              |                             | Fishery(2020-21) |
| 151     | Manas Ranjan Mishra   | Rendua, Purisadar                  |                             |                  |
| 152     | Tapas Kumar Swain     | Badadiandi, Brahmagiri             |                             |                  |
| 153     | Abhijit Sahoo         | Alasankha, Puri                    |                             |                  |
| 154     | Chandrakanta Sahoo    | Mulaalasa, Satyabadi               |                             |                  |
| 155     | Kishore Kumar Sahoo   | Kalapanchana, Nimapada             |                             |                  |
| 156     | Debi Prasad Swain     | Kapileswarpur, Puri                |                             |                  |
| 157     | Sitamani Das          | Charishree, Purisadar              |                             |                  |
| 158     | Biswajit Khuntia      | Manikarnika, Puri                  |                             |                  |
| 159     | Akshay Sahoo          | Sundar, Puri                       |                             |                  |
| 160     | Charan Kumar Sahu     | Sundar, Puri                       |                             |                  |
| 161     | Abinash Jagadev       | Gadarodanga, Brahmagiri            |                             |                  |
| 162     | Prasanta Kumar Nayak  | Matalpur                           |                             |                  |

### Income level

**Table-5**

| Enterprise | Area (Acre)/ No.   | Cost of production (Rs. per unit/yr) | Sale value of the produce in the market (Rs./Kg)           | Return (Rs. per unit/yr) | Net Income (Rs. per unit/ yr) |
|------------|--|--------------------------------------|--|--------------------------|-------------------------------|
| Mushroom   | Paddy Straw Mushroom(450 Beds)<br>-21 days/cycle-for<br>8 months Oyster mushroom (200 Bags)-2 months/cycle | 2,22,000                             | Rs.150/kg Paddy Straw Mushroom<br>Rs.40/Kg Oyster Mushroom | 5,02,000/-               | 2,80,000/-                    |

| Enterprise                     | Area (Acre)/ No.   | Cost of production (Rs. per unit/yr) | Sale value of the produce in the market (Rs./Kg)                | Return (Rs. per unit/yr) | Net Income (Rs. per unit/ yr)                      |
|--------------------------------|--|--------------------------------------|---|--------------------------|--|
| Poultry Production             | 100 chicks /unit (Banaraja) 100 chicks /unit (Kadaknath) | 81,000                               | Rs.150/kg Banarajan (Live Bird) Rs.280/kg Kadaknath (Live bird) | 3,02,184/-               | 2,21,184/-   |
| Apiary                         | 4 Boxes/Unit   | 8000 own investment                  | Rs.600/kg-Honey, Rs.1000/Bee colony                             | 18,000 /-                | Rs.10,000 in 2 <sup>nd</sup> Year of establishment |
| Fish production with fish seed | 1 ha (pond water area)                                   | 1,97,600                             | Rs.115/kg   | 3,84,100/-               | 1,86,500   |

### Impact

- It has increased the outreach of centre tremendously in the district especially due to association of rural youths with the KVK.
- KVK has drawn attention of various stakeholders for technological backstopping and their expectations and reliance have increased for development of entrepreneurship in the district.
- The 162 beneficiaries have been recognized and included in various other agricultural & allied schemes in convergence with the line departments which will further boost their all round development as an entrepreneur.
- The most important ingredient in the process of entrepreneurship development i.e. credit flow has been ensured for the ARYA beneficiaries as the lead bank in the district has assured for providing credit facility to the eligible youths.
- Seeing the successful youths in the village many SHGs and farmers group are interested to take up the enterprise. This group approach will solve the marketing problem in future and enhance the sustainability of the enterprise and project as a whole.
- The project ARYA has paved the way to honour out of box innovative ideas of different enterprises.
- Four dedicated enterprise wise whatsapp groups for 162 beneficiaries have been formed for sharing of ideas for adoption.



| Impact  |        | Mushroom Production | Backyard Poultry | Apiary | Fish production with fish seed |
|---|--------|---------------------|------------------|--------|--------------------------------|
| No. of Youths established entrepreneurial units (No.)                                 | Male   | 10                  | 20               | 12     | 13                             |
|   | Female | 5                   | 5                | 3      | 2                              |
| Youths/groups who are running the entrepreneurial units in a sustainable manner (No.) |        | 15                  | 25               | 15     | 15                             |
| No. of youths employed in entrepreneurial units (Man days/year)                       |        | 2(80)               | 1(38)            | 1(12)  | 1(65)                          |
| No. of days in a year the youths employed in entrepreneurial units (No.)              |        | 220                 | 130              | 45     | 123                            |
| Farmers in the village started this Enterprise (No.)                                  |        | 8                   | 6                | 4      | 5                              |
| No. of neighboring villages in which the enterprise has spread (No.)                  |        | 6                   | 4                | 3      | 11                             |
| No. of migrants benefitted (No.)  | Male   | 2                   | 2                | 1      | 2                              |
|   | Female | 0                   | 0                | 0      | 0                              |

## (A) Capacity Building

**Table-6**

| Thematic Area                  | Topic of training  | No. of courses | No. of beneficiaries |        |       |
|--------------------------------|--|----------------|----------------------|--------|-------|
|                                |  |                | Male                 | Female | Total |
| Mushroom Production            | Scientific Mushroom cultivation & post harvest management                    | 1(3 days)      | 22                   | 8      | 30    |
|                                | Vermicomposting from spent mushroom substrate                                | 1(1 days)      | 8                    | 2      | 10    |
| Poultry Production             | Rearing of backyard poultry  | 1(3days)       | 19                   | 6      | 25    |
|                                | Azolla cultivation for dietary supplementation in backyard poultry           | 1(1day)        | 9                    | 6      | 15    |
| Beekeeping                     | Honey bee rearing  | 1(2 days)      | 16                   | 4      | 20    |
|                                | Training on Bee Management & By-products preparation                         | 1(2 days)      | 14                   | 6      | 20    |
| Fish production with fish seed | Training on package of practices for fry, fingerling and Yearling production | 1(3days)       | 14                   | 1      | 15    |
|                                | Training on Farm made fish feed preparation methods                          | 1(3 days)      | 18                   | 2      | 20    |

Photographs of Capacity Building Programme



*Skill Training on Scientific Mushroom cultivation & post harvest management*



*Skill Training on Vermicomposting from spent mushroom substrate*



*Skill Training on Poultry Production*



*Skill Training on Apicary*



*Skill Training on Fish production with fish seed*

## Success stories of ARYA youths

### Success Story-1 (Poultry)



**Name of farmer:** Mrs. Rajalaxmi Mohanty

**Address:** village-kantunia, Block-Nimapada

**Mobile Number:** 9861313681

**Age:** 41

**Education:** B.A

**Size of land holding (in acre):** 2



| Component Description |           | Benchmark (Before ARYA) |                      |                    |                  |
|-----------------------|-----------|-------------------------|----------------------|--------------------|------------------|
| Components            | Names     | Area (Acre)/Number      | Production (Q/L/No.) | Gross Income (Rs.) | Net Income (Rs.) |
| Field Crop 1          | Paddy     | 2                       | 36                   | 50400              | 20400            |
| Field Crop 2          | Blackgram | 2                       | 4                    | 20000              | 10000            |
| Total                 |           |                         |                      |                    | 30400            |

### Present status

| Component Description |                   | Period 2020-21  |                      |                    |                  | % increase over base year |        |
|-----------------------|-------------------|-----------------|----------------------|--------------------|------------------|---------------------------|--------|
| Components            | Names             | Area (Acre)/No. | Production (Q/L/No.) | Gross Income (Rs.) | Net Income (Rs.) | Production                | Income |
| Field Crop 1          | Paddy             | 2               | 40                   | 60 000             | 26000            | 11.11                     | 27.45  |
| Field Crop 2          | Bottlegourd       | 1               | 140                  | 70000              | 35000            | 100                       | 100    |
| Livestock 1           | Kadaknath poultry | 1000            | 16.86                | 472080             | 252080           | 100                       | 100    |
| Total                 |                   |                 |                      |                    | 313080           |                           |        |

### Conclusion:

Mrs. Mohanty has influenced many others for taking up backyard poultry as an enterprise and acknowledge efforts of KVK for her success. She has proved that marketing of poultry and eggs

at higher price depends upon one's attitude to do things differently. She says interest and determination can remove many obstacles in life. She is the epitome of women empowerment.

## Success Story-2 (Apiary)



**Name of farmer:** Mr. Dama Maharana  
**Address:** Village- Harishankarpur, Block-Satyabadi  
**Mobile Number:** 9776152456  
**Age:** 42 year  
**Education:** 7th  
**Size of land holding (in acre):** 0.8



| Component Description      |         | Benchmark (Before ARYA) |                        |                    |                  |
|----------------------------|---------|-------------------------|------------------------|--------------------|------------------|
| Components                 | Names   | Area (Acre)/ Number     | Production             | Gross Income (Rs.) | Net Income (Rs.) |
| Field Crop 1               | Paddy   | 0.6                     | 7.2q                   | 9432               | 4944             |
| Hort. Crop 1               | Potato  | 0.1                     | 10q                    | 6000               | 2328             |
| Hort. Crop 2               | Pumpkin | 0.1                     | 10q                    | 6000               | 3744             |
| Other enterprise (Specify) | Apiary  | 20 Boxes                | 20kg (50 Bee colonies) | 42000              | 12000            |
| Total                      |         |                         |                        | 63432              | 23016            |

| Present status             |                     |                 |                                  |                    |                  |                           |        |
|----------------------------|---------------------|-----------------|----------------------------------|--------------------|------------------|---------------------------|--------|
| Component Description      |                     | Period 2020-21  |                                  |                    |                  | % increase over base year |        |
| Components                 | Names               | Area (Acre)/ No | Production                       | Gross Income (Rs.) | Net Income (Rs.) | Production                | Income |
| Field Crop 1               | Paddy               | 0.6             | 12q                              | 21720              | 13056            | 66.66                     | 164    |
| Field Crop 2               | Sesamum             | 0.1             | 0.4q                             | 1600               | 712              | -                         | -      |
| Hort. Crop 1               | Vegetable           | 0.2             | 9.6q                             | 11520              | 6260             | -                         | -      |
| Other enterprise (Specify) | Apiary              | 50 Boxes        | 40kg 60 Bee Colonies             | 92000              | 32000            | -                         | -      |
|                            | Apiary Input Supply | -               | 70 Bee Boxes<br>20 Nucleus Boxes | 170000             | 80000            | -                         | -      |
| Total                      |                     |                 |                                  | 296840             | 132028           | -                         | 473    |

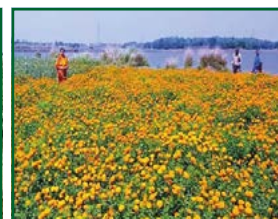
### Conclusion

Mr. Maharana has dramatically changed his way of living through the sale of honey and honeybee colonies. Beside involvement in production of honey, he has played a very important role in disseminating this

technology to the other unemployed rural youth and motivating them to get involved in remunerative bee keeping through KVK. He has occupied a special niche as a bee keeping input supplier in the district.

**Success story-3 (Mushroom)**


**Name of farmer:** Mrs. Renubala Dash  
**Address:** Tulasi Chaura, Block-Pri Sadar, Puri  
**Mobile Number:** 7978661280  
**Age:** 42  
**Education:** Graduation  
**Size of land holding (in acre):** 1Acre



| Component Description         |                      | Benchmark (Before ARYA) |             |                       |                     |
|-------------------------------|----------------------|-------------------------|-------------|-----------------------|---------------------|
| Components                    | Names                | Area (Acre)/<br>Number  | Production  | Gross Income<br>(Rs.) | Net Income<br>(Rs.) |
| Field Crop 1                  | Paddy (Kharif)       | 0.5                     | 9.75q       | 13,650                | 6150                |
| Hort. Crop 1                  | Banana               | 0.4                     | 816 Bunches | 1,63,200              | 71,357              |
| Other enterprise<br>(Specify) | Paddy Straw Mushroom | 8000 Beds               | 64q         | 5,12,000              | 1,92,000            |
|                               | Oyster Mushroom      | 800 Bags                | 16q         | 48,000                | 32,000              |
| Total                         |                      |                         |             | 7,36,850              | 3,01,507            |

| Present status                   |   |                       |                      |                       |                     |                           |        |
|----------------------------------|---|-----------------------|----------------------|-----------------------|---------------------|---------------------------|--------|
| Component Description            |   | Period 2020-21        |                      |                       |                     | % increase over base year |        |
| Components                       | Names                                     | Area<br>(Acre)/<br>No | Production           | Gross<br>Income (Rs.) | Net Income<br>(Rs.) | Production                | Income |
| Field Crop 1                     | Paddy                                     | 0.5                   | 10                   | 18,800                | 12,800              | 2                         | 108    |
| Hort. Crop 1                     | Marigold                                  | 0.25                  | 15q                  | 22,500                | 8,570               | -                         | -      |
| Hort. Crop 2                     | Pumpkin                                   | 0.25                  | 25q                  | 18,000                | 11,520              | -                         | -      |
| Other<br>enterprise<br>(Specify) | Paddy Straw<br>Mushroom                   | 6000<br>Beds          | 60q                  | 7,80,000              | 4,50,000            | 25                        | 134    |
|                                  | Oyster Mushroom                           | 2000<br>Bags          | 50q                  | 2,00,000              | 1,50,000            | 25                        | 200    |
|                                  | Mushroom Spawn<br>Value added<br>Products |                       | 48,000 Bottles<br>1q | 5,28,000<br>50,000    | 96,000<br>12,000    | -<br>-                    |        |
| Total                            |   |                       |                      | 16,17,300             | 7,40,890            |                           | 145    |

**Conclusion:**

Smt. Dash's success is motivating other farm women of the village and presently 8 more women of the village are engaged in processing activities. Her positive attitude

has proven that there is a direct linkage between entrepreneurship & acceptance level, horizontal spread of innovation and number of farmer adopting a technology.

## Success story-4 (Fishery)



**Name of farmer:** Naresh Chandra Swain  
**Address:** At- Akhupada, Block – Puri Sadar  
**Mobile Number:** 8144811682  
**Age:** 45  
**Education:** Graduation  
**Size of land holding (in acre):** 8.0



| Component Description |           | Benchmark (Before ARYA) |                |                       |                     |
|-----------------------|-----------|-------------------------|----------------|-----------------------|---------------------|
| Components            | Names     | Area (Acre)/<br>Number  | Production     | Gross Income<br>(Rs.) | Net Income<br>(Rs.) |
| Field Crop 1          | Paddy     | 3.0                     | 48q            | 57600                 | 21600               |
| Field Crop 2          | Greengram | 2.0                     | 3.84q          | 19200                 | 7200                |
| Hort. Crop 1          | Coconut   | 250 nos.                | 2500 nos.      | 25000                 | 10000               |
| Livestock 1           | Dairy     | 2 nos.                  | 1920 l         | 48000                 | 15600               |
| Other enterprises     | Fishery   | 5.0                     | 80q            | 560000                | 310000              |
| <b>Total</b>          |           | <b>10.0 / 252 nos.</b>  | <b>131.84q</b> | <b>709800</b>         | <b>364400</b>       |

| Component Description |           | Period 2020-21        |                           |                       |                     | % increase over<br>base year |          |
|-----------------------|-----------|-----------------------|---------------------------|-----------------------|---------------------|------------------------------|----------|
| Components            | Names     | Area<br>(Acre)/No.    | Production                | Gross<br>Income (Rs.) | Net Income<br>(Rs.) | Production                   | Income   |
| Field Crop 1          | Paddy     | 3.0                   | 55.2 q                    | 88320                 | 40580               | 15                           | 53.34    |
| Field Crop 2          | Greengram | 2.0                   | 4.5 q                     | 23400                 | 10550               | 17.18                        | 21.87    |
| Hort. Crop 1          | Papaya    | 200 nos               | 50 q                      | 50000                 | 26000               | -                            | -        |
| Hort. Crop 2          | Coconut   | 200 nos               | 2600 nos.                 | 39000                 | 13000               | -                            | -        |
| Livestock 1           | Dairy     | 2 nos                 | 2880 l                    | 100800                | 40800               | 50                           | 110      |
| Other enterprises     | Fishery   | 2.0                   | 100q                      | 1000000               | 600000              | 25                           | 78.57    |
| <b>Total</b>          |           | <b>15.2 / 603 nos</b> | <b>386.2q / 6300liter</b> | <b>1301520</b>        | <b>730930</b>       | <b>-</b>                     | <b>-</b> |

### Conclusion:

Mr Swain's enterprising nature has not only generated employment in the village but has set an example for others. Being a successful farmer, he could be able to get financial

assistance from NFDB to culture improved fish varieties i.e. Jayanti Rohu and Amur carp with the technical guidance of KVK Scientist. Now he is one of the leading farmers of the district.

**(B) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000**

| Name of the Youth       | Father's / Husband's Name | Address                            | Age | Aadhar No.   | Mobile No. | Educational Qualification | Status Year | Income/ Month | Name of adopting Enterprise |
|-------------------------|---------------------------|------------------------------------|-----|--------------|------------|---------------------------|-------------|---------------|-----------------------------|
| Sadashib Behera         | Gouranga Behera           | Sanabhimadapur Block-Satyabadi     | 36  | 470549840860 | 9937325522 | 10th                      | 3           | 10600         | Mushroom                    |
| Kurshan chandra Pradhan | Sankar Pradhan            | Kanhupur, Block-Satyabadi          | 39  | 483416142704 | 8018128530 | 8th                       | 4           | 14562         | Mushroom                    |
| Karttik Behera          | Trilochan Behera          | Jipur,Block-Satyabadi              | 27  | 425208743133 | 6371285818 | 10th                      | 3           | 13500         | Mushroom                    |
| Kamalini Rout           | Bishwanath Majhi          | Bhut pada,Block-Satyabadi          | 33  | 985857764041 | 7735853367 | 7th                       | 2           | 10650         | Mushroom                    |
| Sardhanjali Gil         | Lakshman Gill             | Kanhupur,Block-Satyabadi           | 32  | 896496269345 | 8658098875 | 10th                      | 2           | 14400         | Mushroom                    |
| Rajkishore Sethy        | Dhirendra Sethy           | Chandra Barhampur, Block-Satyabadi | 34  | 802900554714 | 6371006451 | Graduation                | 3           | 30000         | Mushroom                    |
| Manoj Behera            | Krushna Ch.Behera         | Sanabindas pur Satyabadi           | 32  | 401221031235 | 9937130988 | 10th                      | 3           | 22000         | Mushroom                    |
| Ranjan Behera           | Prafulla Behera           | Sanabindas pur Satyabadi           | 38  | 685753627405 | 9938867834 | Graduation                | 2           | 25000         | Mushroom                    |
| Renubala Dash           | Braja sundar Mahapatra    | Tulasichaura , Purisadar           | 39  | 746809442046 | 7978661280 | Graduation                | 4           | 28000         | Mushroom                    |
| Radheya Bhoi            | Guna Bhoi                 | Chandra Barhampur, Block-Satyabadi | 34  | 487936050749 | 7653056906 | 10 <sup>th</sup>          | 2           | 18000         | Mushroom                    |
| Jyoti ranjan Biswal     | Narayan biswal            | Raisa kakatpur                     | 36  | 326901563721 | 9337233961 | +2                        | 3           | 15045         | Poultry                     |
| Sujit kumar Nanda       | Pramod kumar Nanda        | Bharatipur pipili                  | 30  | 998995347554 | 9937619555 | Graduation                | 3           | 15000         | Poultry                     |
| Sachikanta swain        | Bichitra nanda swain      | Saderia Nimapada                   | 26  | 474814629613 | 6370694941 | 12 <sup>th</sup>          | 1           | 14000         | Poultry                     |

| Name of the Youth        | Father's / Husband's Name | Address                          | Age | Adhar No.    | Mobile No. | Educational Qualification | Status Year | Income/ Month | Name of adopting Enterprise    |
|--------------------------|---------------------------|----------------------------------|-----|--------------|------------|---------------------------|-------------|---------------|--------------------------------|
| Kamalakanta swain        | Bharat Chandra swain      | Madhipur, pipili                 | 35  | 787949031044 | 7992595795 | +2                        | 2           | 14800         | Poultry                        |
| Sanatan behera           | Prafulla Behera           | Sanabhimdasapur Satyabadi        | 41  | 379192965177 | 9861156720 | Matric                    | New         | 12805         | Poultry                        |
| Rajalaxmi Mohanty        | -                         | Kantunia, Nimapada               | 38  | -            | 9861313681 | Graduation                | 3           | 15000         | Poultry                        |
| Santosh Kumar Das        | Bina Das                  | At- Janakideipur, Bl- Puri Sadar | 34  | 396684244379 | 8249087691 | 8 th                      | 3           | 44,000        | Fish production with fish seed |
| Ramakrushna Pradhan      | Prasanta ku Pradhan       | At - Singbrahamapur, Bl- Delanga | 23  | 825356101303 | 9556873726 | 10 th                     | 3           | 37,000        | Fish production with fish seed |
| Ms Smitanjali Swain      | Naresh Ch Swain           | At - Akhupada, Bl- Puri Sadar    | 33  | 945948063999 | 8763938803 | 10+2                      | 3           | 38,000        | Fish production with fish seed |
| Kapilash Baral           | Kailash Baral             | At - Billipada, Bl - Satyabadi   | 35  | 335172542013 | 7681056859 | 9 th                      | 4           | 18,000        | Fish production with fish seed |
| Ms Sradhanjali Choudhary | Krushna Ch Das            | At- Paikarapur, Bl - Puri Sadar  | 36  | 702925286168 | 9658730682 | 10+2                      | 3           | 21,600        | Fish production with fish seed |
| Naresh Swain             | -                         | Akhupada, Block - Puri Sadar     | 39  | -            | 8144811682 | Graduation                | 5           | 32000         | Fish production with fish seed |
| Dama Maharana            | Satrughna Maharana        | Harisankarpur , Satyabadi        | 40  | 602324112906 | 9776152456 | 10th                      | 4           | 12000         | Apiary                         |
| Soumya Ranjan Mohapatra  | Mihir Ku. Mahapatra       | Biranarsinghpur Purisadar        | 24  | 285429055497 | 7978791425 | Graduation                | 3           | 4600          | Apiary                         |
| Rajesh Biswal            | Rabindra Biswal           | Kanjia , Satyabadi               | 26  | 373023034238 | 9308314116 | 12th                      | 4           | 8700          | Apiary                         |
| Sanjay Bhanja            | Sudhansu Mohan Bhanja     | Badakanja, Satyabadi             | 22  | 255141908662 | 9556804829 | 12th                      | 2           | 5200          | Apiary                         |



(C) Dignitaries visited ARYA villages- Nil

(D) Newspaper coverage- Nil

(E) Publication- Nil

(F) Migration status- Nil

### Unemployment Scenario among rural Youths

|                     | Male   | Female | Total   |
|---------------------|--------|--------|---------|
| Population          | 865380 | 833350 | 1698730 |
| <b>Unemployment</b> |        |        |         |
| Qualification       | Male   | Female | Total   |
| Below Matric        | 3300   | 315    | 3615    |
| Matric              | 6301   | 1722   | 8023    |
| +2                  | 12301  | 7612   | 19913   |
| +3                  | 6106   | 4711   | 10817   |
| ITI                 | 1325   | 2      | 1327    |
| Diploma             | 460    | 70     | 530     |
|                     | 29793  | 14432  | 44225   |

Source; District Employment Office, Puri, Odisha

### Migration Scenario of Puri District

| Total no. of household surveyed | Migrant Households | Percentage of Household Migration | Total Number of Rural Households* | Estimated Number of Migrant Households | Average Number of Migrants per Panchayat | Number of Panchayats** | Estimated Number of Migrants |
|---------------------------------|--------------------|-----------------------------------|-----------------------------------|--|--|------------------------|------------------------------|
| 7820                            | 2099               | 26.8                              | 312855                            | 83975                                  | 347.8                                    | 230                    | 79688.0                      |

As per census 2011 \*\* as per panchayat directory



*Exposure visit of ARYA beneficiaries*





**ICAR-Agricultural Technology Application Research Institute, Kolkata**  
Bhumi Vihar Complex, Block- GB, Sector-III,  
Salt Lake, Kolkata, West Bengal- 700097