

→ Cover - 11,
— Page - 12, 13

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Khejri grows luxuriantly under the extremely adverse agroclimate in hot arid regions and that too without much cultural care. This leguminous species is compatible to almost all companion crops grown under the traditional cropping systems. It is a major source of leaf fodder (loong) and its immature pods (sangri) are used as vegetable, and the produce is nutritious and high valued. From a mature tree (20 years age), 25-30 kg loong and 10-15 kg tender pods can be harvested annually. Khejri is a leguminous tree crop having multiple uses, viz. nutritious rich pods and fodder and valuable fuel, besides its favourable effects on ecology and soil fertility. It not only tolerates the extreme edapho-climatic conditions of Thar Desert but also have plentiful foliage, bears flowers and fruits and that too during the driest period. From wide genetic variability, some genotypes that produce high quality pods were collected for ex situ evaluation and conservation. From them, Thar Shobha is recommended to develop plantations for uniform sangri products. Tender pods (sangri) are sold at high cost both fresh and dehydrated (₹ 100-200 and 300-500/kg, respectively) and is a eye-catching vegetable.

KHEJRI (*Prosopis cineraria*) is a multipurpose tree and lifeline of the Thar desert. The technological advancement made in bud banking and dry storage of variety Thar Shobha at CIAR, Bikaner, has resulted into wide spread popularization of this variety. These technologies have been recommended for establishing plantations for uniform sangri production. Systematic production of standard product from such plantations would add value to the already existing lucrative trade in dehydrated pods (sangri) and provide assured, sustained income to the farmers and quality produce to the people.

Varietal Development

Being cross-pollinated, considerable genetic variability does exist in the widespread seedling population of *Khejri*. Wide range of variations are recorded in immature pod traits, such as taste (bitter, acrid, sweet), tenderness (hard, semi-hard, less tender, tender), shape (round, flat, flat round), surface (wrinkled), fibre content (fibrous, less fibrous, fibreless), colour (pale, light green, dark green) and length (1-20 cm) for horticultural exploitation. From the intensively studied seedlings showing variability, 11 genotypes were collected from 2002 for ex situ conservation. Thar Shobha was recommended in 2007 and popularized for orchard planting.

Thar Shobha

The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions.



Khejri seedling ready for nursery budding or plantation.

The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions. The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions. The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions. The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions.

PRODUCTION TECHNOLOGY

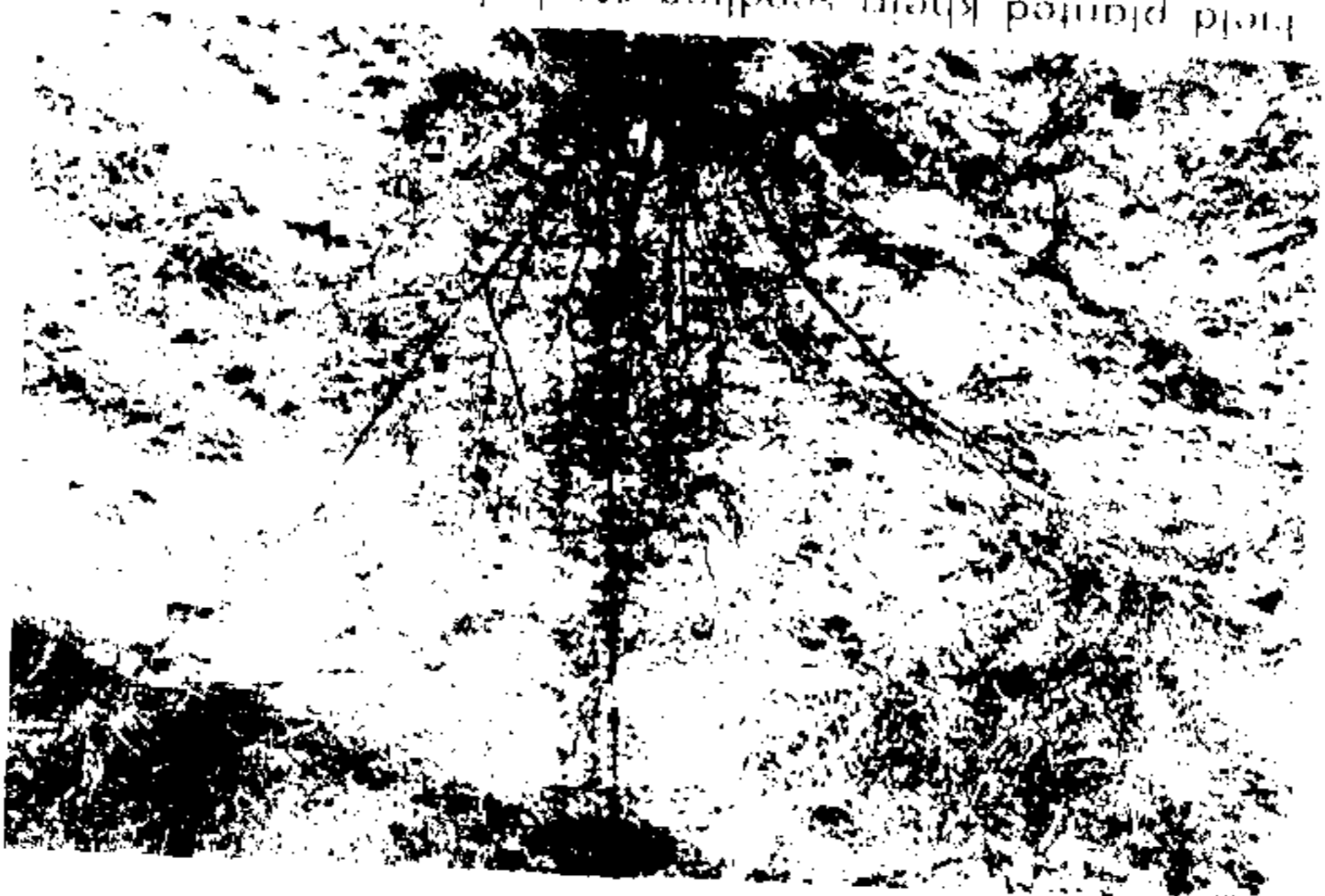
Orchard Establishment

The plant is a tree 10-15 m tall, with a natural life span of 100 years. It is a low growing tree with a wide spreading canopy, extremely drought tolerant and has potential to flourish in arid and semi-arid regions.

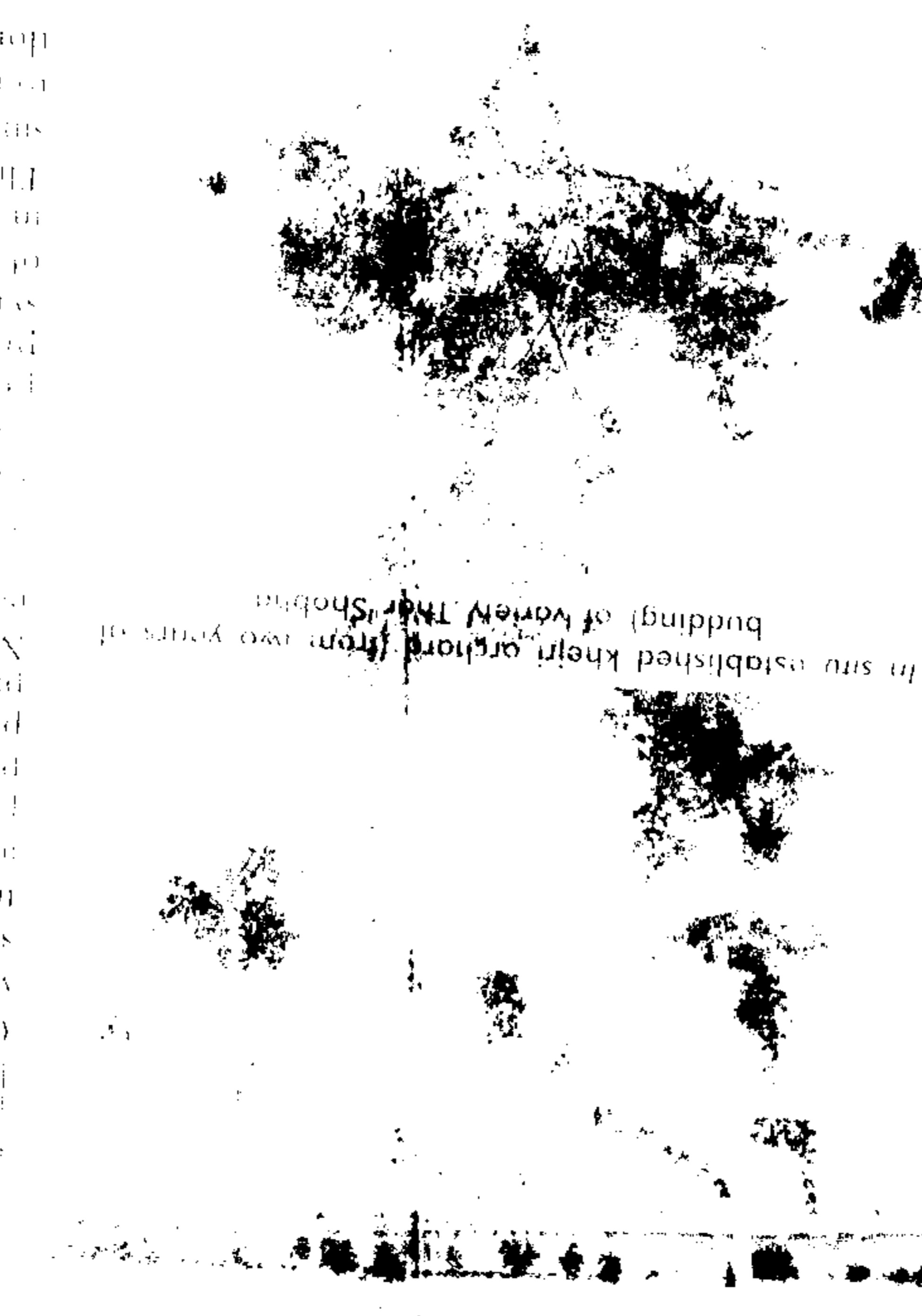
Growth Regulation for Production of *Saagri* and *Loong*

after age of five years for better control of crop production. Field growth of *Saagri* during the first two years of crop production...

Indian horticulturists have been successful in producing *Saagri* and *Loong* from seedlings raised in nurseries. The seedlings are raised in nurseries...



Field planted khejn seedling ready for in situ budding



In situ established khejn orchard (from two years of budding) of variety 'The Shobha'

Three years old in situ established khejn orchard of variety 'The Shobha' ready for young production...

Propagation technique is required, either budding on nursery raised rootstocks or *in situ* budding in field established rootstocks. The bud grafted plants are freeless, have vigorous growth, previous flowering and pod yield within 3-4 years of establishment. The...

Training and Pruning

Training and pruning are essential practices for plant structure, canopy management and harvest of crop produce in khejn. After successful make of scion buds on the rootstocks...



INDIAN HORTICULTURE

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Cover II
 Their Shobha - new khairi variety
 S. K. Samudra

1
 From the Editor

2
 Entrepreneurial start-up through bookkeeping
 A. K. Singh and Rudra P. Singh

6
 Exploring under-utilized rose apple
 Kundan Kishore, Deepa Samra and H. S. Singh

8
 Production of Chrysanthemum in eggs is temperature
 Gunjeet Kumar, Vanlalruah Ralte, Anand Kumar Singh

10
 Khairi onion production through bulbless propagation
 R. K. Singh and R. P. Gupta

14
 Managing seed spice berry
 Krishna Kant, G. Lal, B. K. Mishra and Siva Ram Meena

17
 Enjoying value-added products of apple pomace
 R. R. Sharma, Swati Sharma, Vicky K. Reddy, K. Ramu Krishna
 and K. Prasad

20
 Plastic flowers adding value to the craft industry
 Ritu Jais, Preeti Kumar, I. Janakiram, Rohit Pindar and
 Ramon Kumar

24
 Managing peel blemishes in Kinnow mandarin
 Krishna Kumar, P. K. Arora, Jaswinder Brar and Sandeep Rajeja

27
 Thar Madhur: a new mahua variety
 Sanjay Singh, A. K. Singh, V. V. Appadoo and R. Bhargava

30
 CIH-Garlic 1 - a new garlic variety
 S. R. Singh, N. Ahmad, I. K. Rajawat, D. B. Singh, H. M. and Nural Jan

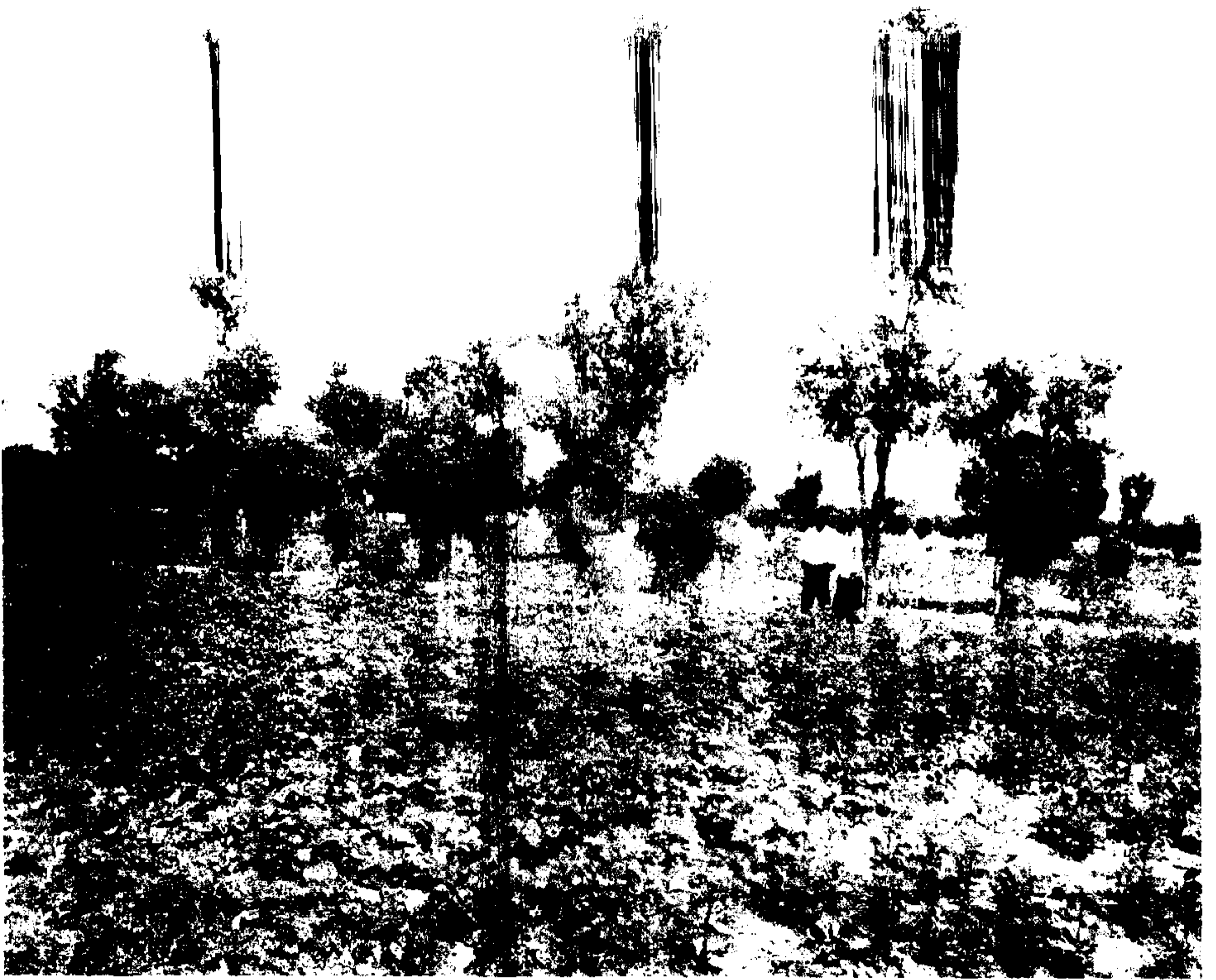
33
 Enriching oil palm genetic resource in India
 P. Murguesan, K. Sunil Kumar and R. K. Mathur

37
 Cultivation of gladiolus bring chives in coastal Tamil Nadu
 T. Raj Pravin and Manoj Nazki

38
 Exploring potential of grape in Malwa region
 Jyoti Karwar, I. S. Nanku, Sarwa, P. P. Singh and S. R. Anjanwar

Cover III
 Cassava at a glance
 I. Janakiram

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Intercropping of cluster bean in wider spaced khejri plantation model (48 x 1.5 x 4 m) under rainfed conditions

Development of Khejri Based Production Sites

The traditional arid farming systems have provided sustenance to the desert dwellers. In vast arid farm lands, cultivation of pearl millet, cluster bean, moth bean, sesame and cucurbits is done between the natural plantations of khejri as component crops, and in addition some native trees/shrubs grasses (barber, bordi, lasora, pili, ker, phog, sewan, etc.) are the part of

traditional agri-horti-silvi-pastoral system prevalent under rainfed situations in the hot arid region of India. This system of harvesting of agriculture produce can provide sound farm economy, improved nutrition and health standards of the livelihood and stability when there is a good monsoon rains during the kharif season. However, under the changed scenario, the focus has shifted from sustenance to remunerative farming. But mono cropping is much risky for the development of desert horticulture due to scanty, uneven and failure of monsoon rains. Therefore, the traditional farming systems of arid region pre-dominantly mixed cropping needs multi-dimensional exploitation through interventions between native crop species and modern biological advancements. Now this can potentially be exploited under the concept "Horticulture based Production Site Management Approach (HBCPSMA)".

Based on Sustainable Arid Desert Horticulture, some principles of HBCPSMA are recommended as follows:



Tender pods of khejri variety Thar Sivalba as vegetable use as tangra

concept (HBCPSMA) for its development and management of production sites. The production sites should be developed in accordance to the edaphology of land and climatic conditions. Fencing of production sites and development of multi-tier rows of seedling plantations of native species such as khejri, lasora, rohida and bordi with desert shrub flora all

around the block, fencing has been taken in to consideration for the creation of favourable micro-climate and protection of production site, and fallow fields from April to June or October-November for soil health development and security are the prime. Pre-monsoon field ploughing during June prior to rainy season crop sowing and post-monsoon field ploughing during November after harvesting, results in more *in situ* rain water harvesting, moisture conservation and weed free field in the production site. Besides, seed selection, sowing time and techniques, maintenance of plant population and crop protection measures are good management practices for inter-cropping crops.

For the development of production sites, the concept of "HBCPSMA" is recommended. The production sites should be developed in accordance to the edaphology of land and climatic conditions. Fencing of production sites and development of multi-tier rows of seedling plantations of native species such as khejri, lasora, rohida and bordi with desert shrub flora all

