

Technological gap in vegetable production in Kullu Valley

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ABSTRACT

The study was carried out on the technological gap in the recommended vegetable production system in Kullu and Manali blocks of Kullu district of Himachal Pradesh in 2004-09. A sample of 600 respondents was selected from villages. From each village 15 rich farmers and 15 poor farmers were selected on the basis of stratified random sampling technique and data were collected with the help of pre-tested interview schedule. The study revealed that majority of rich and poor resource farmers did not follow seed treatment in vegetable production. Higher gap was visible in case of seed treatment, weed management and sowing time for both farmers' categories. Regarding main field operations too, poor resource farmers perceived more technological gaps for operations like weed management, gap filling, plant protection, fertilizer application and irrigation. The gaps were observed for the rich resource farmers such as gap filling, fertilizer application, time of fertilizer application and plant protection but magnitude of gaps was less as compared to poor resource farmers

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INTRODUCTION

The vegetables are the most important to the human diet for better health, because they possess high nutritive value and are rich source of carbohydrates, proteins, vitamins and minerals. Technology is the prime mover of change and thus, technology fatigue and technology gap should be avoided. This will be a call for revitalization of research, education and extension system. The present study was thus carried out with the specific objectives to find out the technological gap in vegetable production.

METHODOLOGY

The present study was conducted in the Kullu and Manali blocks of Kullu district of Himachal Pradesh, selected purposively because of the dominance of vegetable production system in Kullu Valley. Thereafter, twenty villages, ten from each block were selected on random basis. From each village, 15 rich resource farmers (RRF) and 15 poor resource farmers (PRF) were selected on the basis of stratified random sampling. Thus, a sample of 600 respondents in total was selected for the final interview. The data were collected personally with the help of pretested schedule. The technological gap was computed on a three-point scale of full, partial and no gap.

RESULTS AND DISCUSSION

The findings obtained from the present

study are presented in Table 1 and 2.

Level of technological gap in vegetable cultivation:

The technological gap has been computed on a three point scale of full, partial and no gap. The data so gathered were analyzed and presented in Table 1 and 2. The findings (Table 1) clearly show that about 27 and 67 per cent of the rich resource and poor resource farmers, respectively did not follow seed treatment whereas, 25 and 27 per cent did not apply weed management in raising nursery, rather they used farm yard manures. However, for almost all the practices, significant number of both categories of farmers exhibited partial technological gaps. The gap was least in case of practices like-varieties, field preparation, seed rate and sowing time.

As far as vegetable production in main field, the findings also revealed that 33 and 42 per cent respondents did not apply plant protection measures whereas, 22 and 25 per cent and 17 and 13 per cent did not apply proper gap filling, weed management and transplanting spacing, respectively. However, for almost all the practices, significant number of farmers (rich resource and poor resource) reflected partial technological gap. The gap was the least in the practices *i.e.* – field preparation, fertilizer application, age of seedlings and harvesting.

The analysis presented in Table 2 exhibited more gap in case of poor resource

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Table 1: Level of technological gap in vegetable production (N=600)

| Sr. No. | Practices | Full gap | | Partial gap | | No gap | |
|---------------------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|------------|
| | | RRF | PRF | RRF | PRF | RRF | PRF |
| Nursery management | | | | | | | |
| 1. | Field preparation | 10 (1.67) | 12 (2.00) | 230(38.33) | 250 (41.67) | 58 (9.67) | 50 (8.33) |
| 2. | Varieties | 8 (1.33) | 15 (2.50) | 200(66.67) | 280 (46.67) | 80 (13.33) | 17 (2.83) |
| 3. | Seed rate | 15 (2.50) | 25 (4.17) | 150(25.00) | 120 (20.00) | 200 (33.33) | 90 (15.00) |
| 4. | Seed treatment | 160 (26.67) | 200(66.67) | 80 (13.33) | 40 (6.67) | 70 (11.67) | 50 (8.33) |
| 5. | Sowing time | 15 (2.50) | 10 (1.67) | 130(21.67) | 145(24.17) | 165(27.50) | 135(22.50) |
| 6. | Required seed bed | 120(20.00) | 80 (13.33) | 140(23.33) | 130(21.67) | 85 (14.17) | 45 (7.50) |
| 7. | Sowing of seed | 90 (15.00) | 120 (20.00) | 90 (15.00) | 185 (30.83) | 95 (15.83) | 20 (3.33) |
| 8. | Fertilizers quantity | 60 (10.00) | 80 (13.33) | 130(21.67) | 145(24.17) | 125(20.83) | 60 (10.00) |
| 9. | Irrigation | 50 (8.33) | 80 (13.33) | 140(23.33) | 175(29.17) | 145(24.17) | 10 (1.67) |
| 10. | Weed management | 150 (25.00) | 160 (26.67) | 110(18.33) | 125(20.83) | 30 (5.00) | 25 (4.17) |
| Main field | | | | | | | |
| 11. | Field preparation | 15 (2.50) | 20 (3.33) | 160(26.67) | 145(24.17) | 165 (27.50) | 95 (15.83) |
| 12. | Age of seedlings | 60 (10.00) | 60 (10.00) | 135(22.50) | 195(32.50) | 115 (19.17) | 35 (5.83) |
| 13. | Transplanting spacing | 100 (16.67) | 80 (13.33) | 125(20.83) | 155(25.83) | 105 (17.50) | 35 (5.83) |
| 14. | Gap filling | 130 (21.67) | 150 (25.00) | 115(19.17) | 135(22.50) | 95 (15.83) | 75 (12.50) |
| 15. | Fertilizer application | 50 (8.33) | 80 (13.33) | 155(25.83) | 165(27.50) | 115 (19.17) | 35 (5.83) |
| 16. | Time of fertilizers application | 110 (18.33) | 130 (21.67) | 95 (15.83) | 145(24.17) | 85 14.17) | 35 (5.83) |
| 17. | Irrigation | 80 (13.33) | 60 (10.00) | 165(27.50) | 155(25.83) | 115(19.17) | 25 (4.17) |
| 18. | Weed management | 130 (21.67) | 150 (25.00) | 115(19.17) | 145(24.17) | 45 (7.50) | 15 (2.50) |
| 19. | Plant protection | 200 (33.33) | 250 (41.67) | 65 (10.83) | 55 (9.17) | 20 (3.33) | 10 (1.67) |
| 20. | Harvesting | 60 (10.00) | 50 (8.33) | 155(25.83) | 155(25.83) | 115 (19.17) | 75 (12.50) |

*Figures in parenthesis are percentage

Table 2 : Level of technological gap in vegetable production (N=600)

| Sr. No. | Practices | Level of technological gap | |
|---------|---------------------------------|----------------------------|-------|
| | | RRF | PRF |
| 1. | Field preparation | 22.50 | 35.25 |
| 2. | Varieties | 20.25 | 28.50 |
| 3. | Seed rate | 10.50 | 17.67 |
| 4. | Seed treatment | 45.00 | 70.00 |
| 5. | Sowing time | 22.25 | 42.25 |
| 6. | Required seed bed | 16.67 | 16.67 |
| 7. | Sowing of seed | 14.33 | 35.00 |
| 8. | Fertilizers quantity | 15.33 | 28.25 |
| 9. | Irrigation | 15.67 | 26.67 |
| 10. | Weed management | 25.50 | 65.50 |
| 11. | Field preparation | 19.67 | 28.75 |
| 12. | Age of seedlings | 20.25 | 40.50 |
| 13. | Transplanting spacing | 16.67 | 25.00 |
| 14. | Gap filling | 64.50 | 69.75 |
| 15. | Fertilizer application | 36.50 | 45.00 |
| 16. | Time of fertilizers application | 35.00 | 42.50 |
| 17. | Irrigation | 17.33 | 48.00 |
| 18. | Weed management | 20.25 | 75.00 |
| 19. | Plant protection | 30.33 | 68.50 |
| 20. | Harvesting | 11.25 | 20.00 |
| 21. | Overall mean | 23.20 | 41.42 |

farmers for various nursery and main field practices of vegetable production. Higher gap was visible in case of seed treatment, weed management and sowing time for both of farmers' categories.

Regarding main field operations too, poor resource farmers perceived more technological gaps for operations like-weed management, gap filling, plant protection, fertilizer application and irrigation. The gaps were observed for the rich resource farmers such as gap filling, fertilizer application, time of fertilizer application and plant protection but magnitude of gaps was less as compared to poor resource farmers. Almost similar findings were obtained by Prakash *et al.* (2004).

Conclusion:

It may be concluded that technological gap existed in adoption of recommended vegetable production in the study area. Efforts should be made to bridge the gap. Intensive dissemination should be followed for better adoption.

REFERENCES

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