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Impact of pest and disease management in groundnut: A training conducted by district agricultural advisory and transfer of technology centre, Chittoor, Andhra Pradesh

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Abstract

The present study was conducted by District Agricultural Advisory and Transfer of Technology Centre, Chittoor in Kalikiri and B. Kothakota mandals of the district. Total of 90 farmers from two mandals were imparted training in pest and disease management in groundnut. The questionnaire comprised of questions regarding different components of pest and diseases infecting groundnut for knowledge assessment. Hence, deviation or gain in knowledge was calculated from the difference of scores obtained in pre and post knowledge test of the trainees. It revealed that regarding types of pests and diseases management practices the respondents scored 70.00 percentage gain in knowledge followed by identification of pests and diseases with 63.33 per cent. About 61.11 per cent of respondents had the knowledge increase pertaining to estimation of B:C ratio. It may therefore be concluded that respondents succeeded in acquiring knowledge after exposure to training on pest and disease management in groundnut.

Keywords: Training, knowledge, DAATT centre

Introduction

Agriculture is one of the primary sectors in Indian Economy. India's geographical location has made it ideal for agricultural activities. As a result, the Indians have relied on agriculture as their primary source of income for a long time. Among the Agricultural crops Groundnut is a major oilseed crop of India and also an important agricultural export commodity. Despite the fact that groundnut is grown in one or more seasons, the *kharif* (June-October) crop accounts for roughly 80 per cent of yearly acreage and production. During cropping season the groundnut farmers are facing problems of yield loss due to wide variety of factors include pest, disease and climatic factors such as prolonged drought. Major pest includes tobacco caterpillar (*Spodoptera litura*), red hairy caterpillar (*Amsacta albistriga*) leaf miner (*Aproaerema modicella*), thrips (*Scirtothrips dorsalis*) and aphids (*Aphis craccivora*) (Amin *et al.*, 1985, Herselman *et al.*, 2004; Ekvised *et al.*, 2006) ^[1, 5, 3]. Economically important diseases infecting groundnut crop include collar rot (*Aspergillus niger*), stem rot (*Sclerotium rolfsii*) and dry root rot (*Macrophomina phaseolina*). Foliar disease infecting the crop include early leaf spot (*Cercospora arachidicola*) and late leaf spot (*Phaeoisariopsis personata*) both are commonly called as tikka diseases (Chohan, 1974; Ghewande, 1985, Subrahmaniyam *et al.*, 1990) ^[2, 4, 7]. Groundnut bud necrosis, peanut mottle, Indian peanut cluster, and stem necrosis are economically significant viral diseases. Groundnut bud necrosis is a disease caused by the tospovirus and is widespread with a wide host range and is transmitted by *Thrips palmi* (Kendre *et al.*, 2000) ^[6]. Groundnut crop is one of the major crop in Chittoor district of Andhra Pradesh having an area of 1, 11, 517 ha. in *kharif* and 12,808 ha. in *rabi* (November to March). District Agricultural Advisory and Transfer of Technology Centre (DAATTC) had conducted training programmes on pest and disease management in groundnut to the farmers of Kalikiri and B. Kothakota mandals of the district. The present paper is to reveal the impact of the training programme conducted by DAATT centre, Chittoor.

Material and Methods

The present study was conducted in Kalikiri and B. Kothakota mandals of the district. Total of

90 members from two villages namely Balakuntapalli of Kalikiri mandal and B. Kothakota of B. Kothakota mandal were imparted training in pest and disease management in groundnut. Data collection was done through semi structured interview method. The questionnaire comprised of questions regarding different components of pest and diseases infecting groundnut for knowledge assessment. Hence, deviation or

gain in knowledge was calculated from the difference of scores obtained in pre and post knowledge test of the trainees.

$$\text{Gain in Knowledge} = \frac{\text{Post evaluation score} - \text{Pre evaluation score}}{\text{Total number of respondents}} \times 100$$

Results and Discussion

Table 1: Gain in knowledge after training with respect to different components.

| SL. No. | Components | Pre training score out of 100 & (%) | | Post training score out of 100 & (%) | | Change in Knowledge | |
|---------|--|-------------------------------------|-------|--------------------------------------|-------|---------------------|-------|
| | | Total score | % | Total score | % | Knowledge gain | |
| | | | | | | Knowledge gain | % |
| 1. | Adverse climatic conditions | 59 | 65.56 | 84 | 93.33 | +25 | 27.78 |
| 2. | Identification of pests and diseases | 22 | 24.44 | 79 | 87.78 | +57 | 63.33 |
| 3. | Types of Pests and diseases management practices | 17 | 18.89 | 80 | 88.89 | +63 | 70.00 |
| 4. | Seed treatment chemicals and doses | 31 | 34.44 | 75 | 83.33 | +44 | 48.89 |
| 5. | Seed treatment methods | 30 | 33.33 | 77 | 85.56 | +47 | 52.22 |
| 6. | Spray and application techniques | 42 | 46.67 | 80 | 88.89 | +38 | 42.22 |
| 7. | Preparation of spraying chemicals and doses | 40 | 44.44 | 78 | 86.67 | +38 | 42.22 |
| 8. | Identification of natural enemies and their management | 12 | 13.33 | 65 | 72.22 | +53 | 58.89 |
| 9. | Time of application | 45 | 50.00 | 81 | 90.00 | +36 | 40.00 |
| 10. | Estimation of B:C ratio | 23 | 25.56 | 78 | 86.67 | +55 | 61.11 |
| 11. | Forecasting pest and disease incidence | 25 | 27.78 | 69 | 76.67 | +44 | 48.89 |
| 12. | Government subsidies | 34 | 37.78 | 75 | 83.33 | +41 | 45.56 |
| 13. | Insurance policies | 32 | 35.56 | 69 | 76.67 | +37 | 41.11 |

(n=90)

Conducting the training programmes to farmers increased the knowledge on pest and disease management in groundnut with the following results (Table-1). Regarding types of pest and disease management practices the respondents scored 70.00 percentage gain in knowledge followed by identification of pests and diseases with 63.33 per cent. About 61.11 per cent of respondents had the knowledge increase pertaining to estimation of B:C ratio. More than fifty (58.89%) percentage of respondents acquired knowledge regarding identification of natural enemies and their management. Almost 52.22 per cent respondents improved their knowledge regarding seed treatment methods. Nearly 48.89 percentage of respondents gained knowledge on forecasting pest and disease incidence followed by 45.56 per cent of respondents able to achieve knowledge on government subsidies. Almost 42.22 per cent of respondents benefited with knowledge imparted regarding preparation of spraying chemicals and doses and spray and application techniques. The table also revealed the different percentage of knowledge gained by the respondents on remaining components as follows; insurance policies (41.11%), time of application (40.00%) and adverse climatic conditions (27.78%).

Conclusion

The present study concluded that the training programme on pest and disease management in groundnut had significantly increased the knowledge level of the trainees on different aspects related to groundnut crop protection which subsequently helps them in successful adaptation of the new technologies thereby enhancing their socio economic status.

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