

Extent of Adoption of Recommended Groundnut Production Technology among the Farmers of Sehore District of M.P. India

Versha Patel¹, Sandhya Choudhary², Dr. Abhay Wankhede³, Dr. V. K. Swarnakar⁴

^{1, 2}M.Sc. Students 2017, College of Agriculture, Indore

³Associate Professor, College of Agriculture, Indore

⁴Professor & Head of Extension Education, College of Agriculture, Indore

Abstract: *Oilseeds are the second most important and the largest agri-commodity of India after cereals. Oilseed crops play a very important role in the agricultural economy of India which has the distinction of having large area under oilseed crops. The diverse agro-ecological conditions in the country are favourable for growing nine annual oilseeds which include seven edible oilseeds viz. groundnut, rapeseed mustard, soybean, sunflower, sesame, safflower and niger and two non-edible oilseeds, castor and linseed. The present study was conducted in Ashta block of Sehore district of Madhya Pradesh during 2016-17. 10 villages were selected randomly and 160 farmers were selected by using proportionate allocation method. Present study indicated that a considerable percentage (61.88%) of respondents had medium level of adoption about recommended groundnut production technology, whereas 19.37 and 18.75 per cent of them had low and high level of adoption respectively.*

Keywords: Recommended groundnut practices- groundnut production technology, **Knowledge-** understandable information, **Adoption-** It was operationalized as the degree of the use of recommended practices

1. Introduction

Groundnut, 'the unpredictable legume' is also known as peanut, earthnut, monkey nut and manila nut. It is the 6th most important oilseed crop and 13th most important food crops of the world. The botanical name *Arachis hypogaea* L. has been derived from the Greek words, Arachis meaning a legume and hypogaea meaning below ground referring to geocarpic nature of pod formation. It is an important food, feed, and oilseed crop.

Groundnut is grown on nearly 23.95 million ha. world wide with the total production of 38.61 million metric tons and an average yield of 1.8 tons /ha (FAOSTAT 2011). The major groundnut-producing countries of the world are China, India, Nigeria, Senegal, Sudan, Myanmar and the USA. Out of the global groundnut acreage of 18.9 million hectares producing an annual harvest of 17.8 million tonnes, these countries account for 69 per cent of the area cultivated and 70 per cent of the yearly crop (Chennakrishnan 2012). India is the second largest producer of groundnut after China and has an area of over 5.31million hectare with production of 6.93 million tonnes and productivity 1305 kg /hectare.

Earlier research had shown that majority of the farmers are still lagging behind in the adoption of modern technology. It may be a serious concern for the planners, Policy makers, agricultural scientist and extension workers. Therefore it is necessary to assess the level of adoption, adoption and also to know the problems in adopting recommended groundnut production technologies. A research had therefore been planned to study

2. Objective

To determine the extent of adoption of recommended groundnut production technology by the farmers.

3. Review of Literature

Shinde et al.(2003) revealed that the major constraints expressed by the farmers in adoption of recommended technologies of groundnut cultivation were: lack of adoption about various recommended cultivation practices; non-availability of inputs in time and at reasonable prices; non-availability of improved implements; inadequacy of labourers; and high rates of wages.

Kumar and Jain (2011) concluded that the extent of adoption of winter summer groundnut production technology was lower for practices such as use of seed treatment with bio-fertilizers, use of optimum seed rate, soil test based fertilizer application, application of gypsum, micronutrients and chemical weed management in both districts (Kutch, Chittoor).

Chand and Meena (2011) found that majority of the respondents (57.00 percent) fell under medium adoption category followed by low (28.00 per cent) and high (15.00 per cent) level adoption of groundnut production technology. Jyothi and Anand (2013) revealed that majority of FLD farmers fully adopted recommended technologies in groundnut cultivation. Whereas, majority of non-FLD farmers adopted the practices like land preparation, seed rate, season and intercultural operations, while, majority of them not used rhizobium, PSB and gypsum.

Kasana and Kumar (2013) concluded that non-adoption of improved groundnut technologies by the small and resource-poor farmers is due to non-availability of quality seeds, poor adoption, inappropriateness of technologies, etc.

4. Material & Method

The present study was conducted in Ashta block of Sehore district of Madhya Pradesh during 2016-17. 10 villages were selected randomly and 160 farmers were selected by using proportionate allocation method. The study was conducted with objectives to measure the knowledge and extent of adoption of farmers about recommended groundnut production technology in adoption of production technology. One hundred and sixty farmers were selected as the sample for study. The data was collected by personal interview with the help of structured schedule.

Extent of Adoption of recommended groundnut production technology by the farmers

It is mental process through which an individual passes from hearing about an innovation to final adoption (Rogers, 1995). It was operationalized as the degree of the use of recommended practices. Adoption refers to the extent of use of recommended farming practices of groundnut cultivation by farmers. To measure the extent of adoption of recommended groundnut production technology an interview schedule was prepared with 16 questions.

5. Result & Discussion

Extent of adoption of groundnut growers about recommended groundnut production technology

In order to get an overall picture of adoption of recommended groundnut production technology by the respondents, the adoption score was calculated. For measuring the adoption level of groundnut growers, list of specific practices of groundnut growers was used

Table: Distribution of respondents according to extent of adoption regarding selected recommended practices of groundnut production technology

| Sr. No. | Practices | Extent of adoption | | | | | |
|---------|---------------------------|--------------------|-------|--------|-------|----------|-------|
| | | Partial | | Medium | | Complete | |
| | | f | % | f | % | f | % |
| 1. | Preparation of land | 21 | 13.12 | 122 | 76.25 | 17 | 10.62 |
| 2. | Time of sowing | 00 | 00.00 | 40 | 25.00 | 120 | 75.00 |
| 3. | Use of improved varieties | 76 | 47.50 | 39 | 24.37 | 45 | 28.12 |
| 4. | Seed treatment | 95 | 59.38 | 52 | 32.50 | 13 | 08.12 |
| 5. | Seed rate | 30 | 18.75 | 21 | 13.13 | 109 | 68.12 |
| 6. | Spacing | 32 | 20.00 | 100 | 62.50 | 28 | 17.50 |
| 7. | Intercropping | 100 | 62.50 | 48 | 30.00 | 12 | 07.50 |
| 8. | Use of manure | 54 | 33.75 | 81 | 50.63 | 25 | 15.62 |
| 9. | Fertilizer use | 44 | 27.50 | 99 | 61.88 | 17 | 10.62 |
| 10. | Water management | 57 | 35.63 | 48 | 30.00 | 55 | 34.37 |
| 11. | Weed management | 36 | 22.50 | 81 | 50.63 | 43 | 26.87 |
| 12. | Earthing up | 109 | 68.12 | 41 | 25.62 | 10 | 06.25 |
| 13. | Insect pest management | 57 | 35.63 | 75 | 46.87 | 28 | 17.50 |
| 14. | Diseases management | 48 | 30.00 | 76 | 47.50 | 36 | 22.50 |
| 15. | Harvesting practices | 08 | 05.00 | 46 | 28.75 | 106 | 66.25 |
| 16. | Storage | 23 | 14.38 | 98 | 61.25 | 39 | 24.37 |

*f = Frequency, %= Per cent

1) Adoption regarding preparation of land

The perusal of data presented in Table 4.15 showed that majority of the respondents 76.25 per cent pertained medium adoption followed by partial adoption 13.12 per cent and complete adoption 10.62 per cent regarding preparation of land.

2) Adoption regarding time of sowing

The perusal of data presented in Table 4.15 showed that majority of the respondents 75.00 per cent pertained complete adoption followed by medium adoption 25 per cent regarding time of sowing.

3) Adoption regarding use of improved varieties

The perusal of data presented in Table 4.15 showed that majority of the respondents 47.50 per cent pertained partial adoption followed by complete adoption 28.12 per cent and medium adoption 24.37 per cent regarding use of improved varieties.

4) Adoption regarding seed treatment

The perusal of data presented in Table 4.15 showed that majority of the respondents 59.38 per cent pertained partial adoption followed by medium adoption 32.50 per cent and complete adoption 08.12 per cent regarding seed treatment.

5) Adoption regarding seed rate

The perusal of data presented in Table 4.15 showed that majority of the respondents 68.12 per cent pertained complete adoption followed by partial adoption 18.75 per cent and medium adoption 13.13 per cent regarding seed rate.

6) Adoption regarding spacing

The perusal of data presented in Table 4.15 showed that majority of the respondents 62.50 per cent pertained medium adoption followed by partial adoption 20.00 per cent and complete adoption 17.50 per cent regarding spacing.

7) Adoption regarding intercropping

The perusal of data presented in Table 4.15 showed that majority of the respondents 62.50 per cent pertained partial adoption followed by medium adoption 30.00 per cent and complete adoption 07.50 per cent regarding intercropping.

8) Adoption regarding use of manure

The perusal of data presented in Table 4.15 showed that majority of the respondents 50.63 per cent pertained medium adoption followed by partial adoption 33.75 per cent and complete adoption 15.62 per cent regarding use of manure.

9) Adoption regarding fertiliser use

The perusal of data presented in Table 4.15 showed that majority of the respondents 61.88 per cent pertained medium adoption followed by partial adoption 27.50 per cent and complete adoption 10.62 per cent regarding fertiliser use.

10) Adoption regarding water management

The perusal of data presented in Table 4.15 showed that majority of the respondents 35.63 per cent pertained medium level of adoption followed by complete level of adoption 34.37 per cent and medium adoption 30.00 per cent regarding water management.

11) Adoption regarding weed management

The perusal of data presented in Table 4.15 showed that majority of the respondents 50.63 per cent pertained medium adoption followed by complete adoption 26.87 per cent and partial adoption 22.50 per cent regarding weed management.

12) Adoption regarding earthing up

The perusal of data presented in Table 4.15 showed that majority of the respondents 68.12 per cent pertained partial adoption followed by medium adoption 25.62 per cent and complete level of adoption 06.25 per cent regarding earthing up.

13) Adoption regarding insect pest management

The perusal of data presented in Table 4.15 showed that majority of the respondents 46.87 per cent pertained medium adoption followed by partial adoption 35.63 per cent and complete adoption 17.50 per cent regarding insect pest management.

14) Adoption regarding diseases management

The perusal of data presented in Table 4.15 showed that majority of the respondents 47.50 per cent pertained medium adoption followed by complete adoption 22.50 per cent and partial adoption 30.00 per cent regarding diseases management.

15) Adoption regarding harvesting practices

The perusal of data presented in Table 4.15 showed that majority of the respondents 66.25 per cent pertained complete adoption followed by medium adoption 28.75 per cent regarding harvesting practices and 05.00 per cent partial adoption regarding harvesting practices.

16) Adoption regarding storage

The perusal of data presented in Table 4.15 showed that majority of the respondents 61.25 per cent pertained partially adoption followed by complete adoption 24.37 per cent and partial adoption 14.38 per cent regarding storage.

Table: Distribution of respondents according to their extent of adoption regarding recommended groundnut production technology

| Sr. No. | Characteristics category | Frequency | Percentage |
|---------|--------------------------|-----------|------------|
| 1 | Low | 31 | 19.37 |
| 2 | Medium | 99 | 61.88 |
| 3 | High | 30 | 18.75 |
| | Total | 160 | 100 |

Over all extent of adoption is clearly indicated from the data presented in Table 4.16. Out of total respondents majority (61.88%) of them had medium level of adoption about recommended groundnut production technology, whereas 19.37 and 18.75 per cent of them had low and high level of adoption respectively. As regards levels of adoption the respondents were under medium category regarding recommended production technology.

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