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## *Full Length Research Article*

# A STUDY ON THE ADOPTION OF THE RECOMMENDED PACKAGE OF PRACTICES IN CHILLI BY THE FARMERS OF GUNTUR DISTRICT OF ANDHRA PRADESH

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**ABSTRACT**

A study was taken up with the main objective of identifying and analyzing the adoption of package of practices by the Chilli farmers as recommended by the scientists of ANGRAU. It was conducted in 2013 with a sample of Sixty (60) farmers in the Guntur district of Andhra Pradesh. Cent per cent of the respondents fell in the category of fully adopted with respect to time of harvest. 80.00 per cent of the respondents fully adopted recommended doses of fertilizers; while the remaining 20.00 per cent fell in the category of partially adopted. 78.33 per cent of the respondents fully adopted recommended dosage of pesticides, followed by partially adopted (21.67%). 76.67 per cent of the respondents fully adopted the recommended number of irrigations; while the remaining 23.33 per cent fell in the category of partially adopted. 68.33 per cent of the respondents fully adopted the recommended varieties in chilli, followed by partially adopted (31.67%). With respect to seed rate, 56.67 per cent of the respondents fell in the category of fully adopted, followed by partially adopted (43.33%). A little more than half of the farmers had medium adoption (53.33%) of recommended package of practices in chilli crop, followed by low (31.67%) and high (15.00%) adoption.



## INTRODUCTION

The output and productivity of any land could be increased by following recommended package of practices, and chilli is no exception. Chilli output could be increased if the farmers adopt the recommended package of practices. For increasing the level of adoption farmers need to be convinced about recent production technologies. The adoption of any technology depends on the individual development and acceptance of modern agricultural technology is the foremost important for increasing crop production. Agricultural technology is never completely accepted by the farmers in all respects, as such there always appears to be a gap between the recommended technology by the scientists and its modified form at the farmer's level. The technological gap is thus the major problem in the efforts of increasing agricultural production in the country.

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A need of the day is to reduce the technological gap between the agricultural technology recommended by the scientists and its acceptance by the farmers on their field. Hence a study was under taken to find out the adoption of recommended technologies by farmers in Chilli crop.

## MATERIALS AND METHODS

The present study was taken up with the main objective of identifying and analyzing the adoption of package of practices by the Chilli farmers as recommended by the scientists of ANGRAU. For the purpose of study, sixty (60) farmers growing Chilli were selected at random from Sattenapalli, Pedakurapadu and Veldurthy mandals of Guntur district of Andhra Pradesh. Data was collected during 2013 through structured interview schedule. The adoption schedule consisted of eleven (11) items related to package of practices in Chilli. The adoption of these items was measured on a three point continuum viz., fully adopted, partially adopted and not adopted. For the purpose of study adoption was

operationalized as the adoption behaviour exhibited by the farmers towards the recommended package of practices in chilli crop. Fully adopted was operationally defined as complete adoption of a practice as recommended by the scientists of ANGRAU without any distortion. Partially adopted was operationally defined as the adoption of a practice to certain extent or partly and not completely. Not adopted was operationally defined as complete non-adoption of a practice by the farmer in Chilli cultivation. The scoring pattern followed was 3 weights to fully adopted, 2 weights to partially adopted and 1 weight to not adopted. The maximum and minimum possible score of each respondent was 33 and 11, respectively. The total score of each respondent was also calculated by summing up the scores obtained for all the 11 items. The respondents were categorized into three categories of adoption namely., low, medium and high using mean and standard deviation. Frequency and percentage were calculated.

## RESULTS AND DISCUSSION

The results of the study are presented in Table 1 and Table 2. Content analysis of the adoption of recommended package of practices by the respondents in Chilli is presented in Table 1 and distribution of respondents based on adoption of package of practices is depicted in Table 2. Statement wise responses as shown in the table are discussed below.

**Table 1. Content analysis of adoption of package of practices in chilli cultivation (n=60)**

| S.No. | Recommended practice | EXTENT OF ADOPTION | | | | | |
|---|---|---|---|---|---|---|---|
| | | FA | | PA | | NA | |
| | | F | % | F | % | F | % |
| 1. | Soils: black soils, chalka soils, sandy loams and red soils | 60 | 100.00 | - | - | - | - |
| 2.*** | Seed rate: Nursery- 650gm/40 m^2<br>Direct sowing-6.25 kg/ha | 34 | 56.67 | 26 | 43.33 | - | - |
| 3. | Seed treatment : Imidacloprid @8g/kg seed followed by 3gm captan/kg seed (or) soil application of Fipronil granules @ 80 gm/40 sqm nursery followed by 3g captan/kg seed. | - | - | 12 | 20.00 | 48 | 80.00 |
| 4. | Spacing :Irrigated -56cm*56cm or 60cm*60cm – two seedlings/hill<br>Rainfed – 56cm*15cm – single seedling/hill | 29 | 48.33 | 21 | 35.00 | 10 | 16.67 |
| 5. | Varieties: G4, LCA-334, LCA-353, LCA 235 & LCA 305.<br>Hybrid-Indan5 | 41 | 68.33 | 19 | 31.67 | - | - |
| 6.*** | Fertilizers :<br>Rainfed : 80N + 40P2O5 + 50 K2O kg/ha<br>Irrigated : 300N + 60P2O5 + 120K2O | 48 | 80.00 | 12 | 20.00 | - | - |
| 7.*** | Irrigation : 3-4 irrigations | 46 | 76.67 | 14 | 23.33 | - | - |
| 8*** | Pest control :<br>-Pod borer – thiodicarb @ 1gm or spinosad @ 0.23ml or acephate @ 1.5gm or chloripyriphos @ 2.5ml/L of water.<br>- Thrips - acephate 1.5gm or fipronil 2ml or spinosad 0.25ml or chloripyriphos @ 2.5ml/L of water.<br>-Mites – dicophol 5ml or chloripyriphos 2.5ml/L of water.<br>-Midge – spray trizophos @ 1.25ml/L. After 1 week spray chloripyriphos @ 2.5ml/L of water. | 47 | 78.33 | 13 | 21.67 | - | - |
| 9*** | Disease control :<br>-Damping off: seed treatment with captan @ 2.5g/kg seed. Drench the seed bed with 1% Bordeaux mixture or copper oxychloride 0.3%, 2-3 times at weekly interval starting from 13th day of sowing.<br>-Fruit rot: seed treatment with captan @ 2.5g/kg seed. Spray captan 1.5g/L or –<br>-Mancozeb @ 2.5g/L or copper oxychloride @ 3.0g/L or propiconazole @1ml, copper hydroxide @ 2.5g/L of water 3-4 times.<br>-Choanephora blight: spraying 1g streptocyclin mixed with 30 g of copper oxychloride per 10 L of water twice at one week interval.<br>-Cercospora leaf spot: spray carbendazim @ 1g/L or mancozeb @ 3g/L of water 2-3 times at one week interval.<br>-Bacterial leaf spot: streptocyclin 0.1g + 3g copper oxychloride per litre of water 3-4 times. | 42 | 70.00 | 18 | 30.00 | - | - |
| 10. | Harvesting: harvest fully ripe fruits at periodical intervals. (3-4) | 60 | 100.00 | - | - | - | - |
| 11. | Drying & Storage: drying on cement floors or polythene bags or mechanical driers followed by preserving in clean gunny bags.<br>Safe storage moisture must be < 10%. | 21 | 35.00 | 11 | 18.33 | 28 | 46.67 |

FA-Fully adopted, PA-Partially adopted, NA-Not adopted
F-Frequency, %-Percentage

**Table 2. Distribution of respondents based on adoption of package of practices in Chilli (n=60)**

| S.No | Category | Farmers (n=60) | |
|---|---|---|---|
| | | F | % |
| 1 | Low | 19 | 31.67 |
| 2 | Medium | 32 | 53.33 |
| 3 | High | 9 | 15.00 |

**Soils**

Cent per cent of the farmers practiced chilli cultivation in the recommended soils i.e. black and red soils. The selected sample of the study hail from the villages with black and red soils.

**Seed rate**

More than half of the farmers fully adopted (56.67%) the recommended seed rate, followed by partially adopted (43.33%) and none of them were categorized under not adopted category. The probable reason might be to overcome the problem of less germination percentage and for gap filling.

**Seed treatment**

Majority of the farmers did not treat the seed (80.00%) and the remaining partially adopted (20.00%) seed treatment. None of them were categorized under not adopted categories. In most of the cases the farmers purchase the treated seed.

**Spacing**

A little less than half of the farmers fully adopted (48.33%) the recommended spacing, followed by partially adopted (35.00%) and not adopted (16.67%) recommended spacing. A few of the farmers adopted closer spacing than recommended thinking that more population stand would give more profits.

**Varieties**

More than half of the farmers fully adopted (68.33%) the recommended varieties in chilli, followed by partially adopted (31.67%) and none of them were categorized under not adopted categories. The partially adopted respondents went for the varieties sold by the commercial seed organisation.

**Fertilizers**

Majority of the farmers fully adopted (80.00%) the recommended dose of fertilizers, followed by partially adopted (20.00%) and none of them were categorized under not adopted category. Farmers applied over doses of fertilizers expecting in anticipation of more profits.

**Irrigation**

More than half of the farmers fully adopted (76.67%) the recommended number of irrigations, followed by partially adopted (23.33%) and none of them were categorized under not adopted categories. The selected areas of the study has good irrigation potential and more over water as a natural resource is available at free of cost hence used it luxuriously and more than required.

**Pest control**

More than half of the farmers fully adopted (73.33%) the recommended dosage of pesticides, followed by partially adopted (21.67%) and none of them were categorized under not adopted category. The selected sample area has many and more pesticide dealers and shops. As a result any new pesticide released is first seen in these areas of Guntur and as and when released in the market these farmers apply in their fields in excess in anticipation of higher profits.

**Disease control**

More than half of the farmers fully adopted (70.00%) the recommended dosage of chemicals against diseases, followed by partially adopted (30.00%) and none of them were categorized under not adopted category. The same as in case of fertilizers could be accounted for disease control also.

**Harvesting**

Cent per cent of the farmers harvest the produce at right maturity time.

**Drying & storage**

A little less than half of the farmers did not adopted (46.67%) the recommended drying and storage methods, followed by fully adopted (35.00%) and partially adopted (18.33%) drying and storage methods. Out of experience the farmers developed and practiced conventional methods of drying and storage of chilli produce. Hence a few of the respondents were observed in not recommended category. On further analysis as depicted in Table 2, that more than half of the farmers had medium adoption **(**53.33%) of recommended package of practices in chilli crop, followed by low (31.67%) and high (15.00%) adoption. The finding was in tune with that reported by Rath *et al.* (2007); Singh *et al*. (2010) and Ambedkar *et al.* (2013). The present study indicated that farmers had made an attempt to adopt the recommended package of practices in Chilli crop to certain extent. But how ever in some cases it was not completely adopted. So, it is now the time for the extension workers to intervene to educate and motivate the farmers of this area to adopt the technologies in Chilli crop as recommended by the scientists of ANGRAU so as to benefit the farmers.

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