OFT – 2 (F.Y. 2023-24)

Discipline: Agronomy

| 1. | Title of On farm Trial (OFT) | Integration of fertilizer in different forms on yield of Moong. |
|-----|---|---|
| 2. | Problem diagnosed | Injudicious use of chemical fertilizer |
| 3. | Details of technologies selected for assessment/refinement (Mention either Assessed or Refined) | Control – Farmers' practice – Seed Treatment + RDF T.O. I – 50% of RDF +WS 18:18:18 @5 gm./ltr water (Single spray at pre flowering stage) |
| | | T.O. II – Seed treatment with PSB + Rhizobium, 50% of RDF + WS 18:18:18 (an IFFCO Product) @5 gm. /ltr water (Single spray at pre flowering stage) |
| 4. | Source of Technology (ICAR/ AICRP/SAU/other, please specify) | Sardar Patel University of Agriculture & Technology, Meeruth |
| 5. | Replication | 08 |
| 6. | Production system and thematic area | Small Production System, Medium Land, INM |
| 7. | Performance of the Technology with performance indicators | Plot size 500 m ² , Plant height, No. of pods/plant, No. of Primary branches/plant, 1000 grain wt., Grain Yield and Economics |
| 8. | Final recommendation for micro level situation | T.O. II |
| 9. | Constraints identified and feedback for research | This trial is to be repeated for convincing recommendation. |
| 10. | Process of farmers participation and their reaction | Participatory, higher yield benefited the farmers |

Result with table & Photographs:

| Thematic area | Technology options with detailed treatments | No. of farmers | Plant height (cm) | No. of pods/plant | No. of Primary branches/ plant | 1000 grain wt. (g) | Grain Yield (q/ha) | Cost of Cultivation (Rs./ha) | Gross Return (Rs./ha) | Net Return (Rs./ha) | BCR |
|------------------|---|-------------------|----------------------|----------------------|---|--------------------------|--------------------------|------------------------------------|-----------------------------|---------------------------|------|
| ICM | Control – Farmers' practice – Seed Treatment + RDF | 08 | 36.3 | 21.8 | 4.5 | 36.9 | 7.82 | 25520 | 67893 | 42373 | 2.66 |
| | T.O. I – 50% of RDF +WS 18:18:18 @5 gm./ltr water (Single spray at pre flowering stage) | | 36.0 | 21.8 | 4.5 | 37.1 | 7.64 | 24400 | 66330 | 41930 | 2.72 |
| | T.O. II – Seed treatment with PSB + Rhizobium, 50% of RDF + WS 18:18:18 (an IFFCO Product) @5 gm./ltr water (Single spray at pre flowering stage) | | 37.8 | 23.1 | 4.7 | 38.3 | 9.15 | 24990 | 79440 | 54450 | 3.18 |

The result revealed that integration of bio-fertilizers with inorganic fertilizers (50% of RDF +WS 18:18:18 @5 gm./ltr water Single spray at pre flowering stage (an IFFCO product)) had remarkably significant influence on all the growth and yield attributes of summer moong (var. Shikha) which led to marked and significant effect on grain yield of Moong over Control and T.O.I. The maximum yield (9.15q/ha) was obtained in T.O.II and it was significantly superior to farmers' practice and T.O.I. This ultimately resulted in the maximum gross return (Rs. 79440/-) and B:C Ratio (3.18) in T.O. II. Due to severe heat wave and maximum temparature remaining much above normal summer season during major part of the crop season of summer moong, there was adverse effect on crop growth, development and ultimately it was reflected in lower over all yield of Summer Moong.

OFT – 3 (F.Y. 2023-24)

Discipline: Agronomy

| 1. | Title of On farm Trial (OFT) | Diversification of rice-based cropping systems. |
|----|----------------------------------|---|
| 2. | Problem diagnosed | Low profitability of existing cropping system. |
| 3. | Details of technologies | Control – Farmers' practice – Rice – Wheat |
| | selected for | (prominent cropping system of district) |
| | assessment/refinement | T.O. I – Rice- Maize + Potato |
| | (Mention either Assessed or | T.O. II – Rice-Maize + Vegetable Pea |
| | Refined) | T.O. III - Rice-wheat – Green gram |
| 4. | Source of Technology (ICAR/ | OFT finalization workshop at BAU Sabour (1st to 3rd |
| | AICRP/SAU/other, please | Sep. 2022) |
| | specify) | |
| 5. | Production system and thematic | SPS, Crop diversification |
| | area | |
| 6. | Performance of the Technology | Plot size $(10x10 \text{ m2})$ / in each tech option line sowing, |
| | with performance indicators | soil data before and after (pH, EC, OC, NPK,), rice |
| | | equivalent yield qt/ha of all crops, sole crop and |
| | | intercropping, cost of cultivation. |
| 7. | Final recommendation for micro | |
| | level situation | |
| 8. | Constraints identified and | |
| | feedback for research | |
| 9. | Process of farmers participation | |
| | and their reaction | |
| | | |

Result: OFT Not conducted