

# VII

## STRATEGIES TO OVERCOME THE GAPS IN IPM/INM/SEED REPLACEMENT/MARKETING IN THE DISTRICT

Table- 7.01: Proposed Strategies for Integrated Nutrient Management (INM)

Crop - Paddy

| Sl. No | Particulars                                       | E.P    | R.P                             | G.A           | R.G     | P.S       |         |
|--------|---|--------|---------------------------------|---------------|---------|-----------|---------|
| 1      | Soil Testing/Soil Health                          | -      | Recommended                     | F             | 1,4     | 1,2       |         |
| 2      | <b>Use of Manures (mt./ha.)</b>                   |        |                                 |               |         |           |         |
|        | FYM/Compost                                       | Nil    | 10 tone/ha                      | F             | 2,3     | 5         |         |
|        | Vermicompost                                      | Nil    | 1 tone/ha                       | F             | 2,3     | 5         |         |
| 3      | <b>Cultivation of Legumes</b>                     |        |                                 |               |         |           |         |
|        | As rotational Crop                                | Nil    | Crop rotation of pulse crop     | F             | 2       | 2,3,5     |         |
|        | As inter Crop                                     | -      | -                               | F             | 2       | 2,3,5     |         |
|        | As Green manure                                   | Nil    | Sunhemp/ Dhaicha                | F             | 2       | 2,3,5     |         |
| 4      | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |        |                                 |               |         |           |         |
| a.     | <b>Basal</b>                                      | Local  | -                               | -             | -       | -         |         |
|        |   | H.Y.V. | 25:25:0                         | 40:20:20      | p       | 1,2,3     | 1,2,3,5 |
|        |   | Hybrid | 30:20:10                        | 40:50:30      | p       | 1,2,3     | 1,2,3,5 |
| b.     | <b>Top dressing (kg./ha)</b>                      |        |                                 |               |         |           |         |
|        | <b>N</b>  | Local  | -                               | -             | -       | -         |         |
|        |   | H.Y.V. | 25                              | 40            | p       | 1,2,3     | 1,2,3,5 |
|        |   | Hybrid | 30                              | N(30+30)+K 20 | p       | 1,2,3     | 1,2,3,5 |
| 5      | <b>Use of Bio fertilizer (kg/ha)</b>              |        |                                 |               |         |           |         |
|        | Azolla  | Nil    | 5 Kg/ha                         | F             | 1,2,3,4 | 1,2,3,4,5 |         |
| 6      | <b>Macro/Micronutrients</b>                       |        |                                 |               |         |           |         |
|        | Zink  | -      | 25 kg/haZink Sulphate           | F             | 1,2,3,4 | 1,2,3,4,5 |         |
|        | Sulphur   | -      | Use of Sulphur Containing Fert. | P             | 1,2,3,4 | 1,2,3,4,5 |         |

| Reasons for gap  | Proposed Strategy   | Gap in Adoption                    |
|--|---|------------------------------------|
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. | N – Nil<br>P – Partial<br>F - Full |

Table- 7.02: Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Stem Borer, Hispa, Leaf Folder & Diseases like blast, Blight, etc.)

Crop – Paddy

| Sl. No.  | Particulars                             | E.P   | R.P  | G.A | R.G                                | P.S   |
|--|---|---|--|-----|------------------------------------|-------|
| 1  | <b>Cultural Practices</b>               |   |  |     |                                    |       |
|  | Summer Ploughing                        | Practices by a few farmer   | Deep repeated Ploughing  | P   | 1,2,4                              | 1,2,3 |
|  | Timely sowing                           | 15 <sup>th</sup> June- 30 <sup>th</sup> June  | 15 <sup>th</sup> June- 30 <sup>th</sup> June                         | N   | -                                  | -     |
|  | Transplanting                           | 10 <sup>th</sup> July- 10 <sup>th</sup> Augst.  | 10 <sup>th</sup> July-30 <sup>th</sup> July                          | P   | 1,2,4                              | 1,2,3 |
|  | Clean Cultivation                       | Not in Practices  | Removal of rations   | F   | 1,2,4                              | 1,2,3 |
|  | Resistance Varieties                    | IR-36, 64, MTU-7029, Hybrid etc.  | IR-36, 64, MTU-7029, Hybrid etc.                                     | P   | 1,2,4                              | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |  |     |                                    |       |
|  | Pheromone Trap & Lures                  | Not in Practices  | For attracting Male Insect   | F   | 1,2,4                              | 1,2,3 |
|  | Light Trap                              | Not in Practices  | For attracting Insect  | F   | 1,2,4                              | 1,2,3 |
|  | Sweep net                               | Not in Practices  | For Collecting Insect  | F   | 1,2,4                              | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |  |     |                                    |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.                             | F   | 1,2,4                              | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking pest & borer   | F   | 1,2,4                              | 1,2,3 |
|  | Trichograma (Egg- parasite)             | Not in Practices  | For Control of borers  | F   | 1,2,4                              | 1,2,3 |
|  | Metarizium anisoply (Fungal Insect)     | Not in Practices  | For Control Brown hopper   | F   | 1,2,4                              | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | For control of fungal diseases                                       | F   | 1,2,4                              | 1,2,3 |
|  | Psuedomonas                             | Not in Practices  | For control of bacterial & Fungal diseases                           | F   | 1,2,4                              | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |  |     |                                    |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ captan/Thriam 2 gm/kg seed                              | P   | 1,2,4                              | 1,2,3 |
|  | Seedling treatment                      | Not as a common Practices   | Carbandzim 0.2 Solution<br>Carbofuran 3G<br>2.5kg/1000m <sup>2</sup> | P   | 1,2,4                              | 1,2,3 |
|  | Conservation of natural enemy (frog)    | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide                     | F   | 1,2,4                              | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |     | <b>Gap in Adoption</b>             |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |     | N – Nil<br>P – Partial<br>F - Full |       |

Table- 7.03: Proposed Strategies for Integrated Nutrient Management (INM)

Crop – Maize

| Sl. No.  | Particulars                                       | E.P   | R.P  | G.A      | R.G                                | P.S       |         |
|--|---|---|--|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommen-ded                                     | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |  |          |                                    |           |         |
|  | FYM/Compost                                       | Nil   | 10 tone/ha                                       | F        | 2,3                                | 5         |         |
|  | Vermicompost                                      | Nil   | 1 tone/ha  | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |  |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Crop rotation of pulse/Vegetables/Oil seeds crop | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | -   | Pigion Pea/Black gram/Green gram                 | F        | 2                                  | 2,3,5     |         |
|  | As Green manure                                   | -   | -  | -        | -                                  | -         |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |  |          |                                    |           |         |
| a.   | Basal   | Local   | -  | -        | -                                  | -         |         |
|  |   | Composite   | 30:30:10   | 50:60:40 | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | 30:30:10   | 50:60:40 | p                                  | 1,2,3     | 1,2,3,5 |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |  |          |                                    |           |         |
|  | N   | Local   | -  | -        | -                                  | -         |         |
|  |   | Composite   | 30   | 50       | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | 30   | 50       | p                                  | 1,2,3     | 1,2,3,5 |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |  |          |                                    |           |         |
|  | Azolla  | -   | -  | -        | -                                  | -         |         |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application                      | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Azatobactor                                       | Nil   | 5 Kg/ha as soil application                      | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application                      | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Rhizobium   | -   | -  | -        | -                                  | -         |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |  |          |                                    |           |         |
|  | Lime  | Nil   | 3-4 qut/ha if Furrow                             | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Zink  | -   | Application of Zink Coated Urea                  | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Sulphur   | -   | Use of Sulphur Containing Fert.                  | P        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |          | N – Nil<br>P – Partial<br>F - Full |           |         |

Table- 7.04: Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Termite, Shoot Borer, etc.)

Crop – Maize

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A                                | R.G   | P.S   |
|--|---|---|---|------------------------------------|-------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |                                    |       |       |
|  | Summer Plowing                          | Practices by a few farmer   | Deep repeated Plowing   | P                                  | 1,2,4 | 1,2,3 |
|  | Timely sowing                           | 15 <sup>th</sup> June- 30 <sup>th</sup> June  | 15 <sup>th</sup> June- 30 <sup>th</sup> June                                      | N                                  | -     | -     |
|  | Clean Cultivation                       | Not in Practices  | Removal of rations  | F                                  | 1,2,4 | 1,2,3 |
|  | Resistance Varieties                    | GS-5, Sown  | Birasa Maize – 1 & 2,<br>GS-5, Sown   | P                                  | 1,2,4 | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |                                    |       |       |
|  | Pheromone Trap & Lures                  | Not in Practices  | For attracting Male Insect<br>10-12 Trap/ha.                                      | F                                  | 1,2,4 | 1,2,3 |
|  | Light Trap                              | Not in Practices  | For attracting Insect   | F                                  | 1,2,4 | 1,2,3 |
|  | Sweep net                               | Not in Practices  | For Collecting Insect   | F                                  | 1,2,4 | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |                                    |       |       |
|  | Azadirachtin Products<br>1500/1000 PPM  | Not in Practices  | For control of sucking &<br>cutting Insect.                                       | F                                  | 1,2,4 | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking past & borer  | F                                  | 1,2,4 | 1,2,3 |
|  | Trichograma (Egg- parasite)             | Not in Practices  | For Control of borers<br>16 card/ha.  | F                                  | 1,2,4 | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | For control of fungal<br>diseases 5kg/ha as Soil<br>application                   | F                                  | 1,2,4 | 1,2,3 |
|  | Psuedomonus                             | Not in Practices  | For control of bacterial &<br>Fungal diseases 5kg/ha as<br>Soil application       | F                                  | 1,2,4 | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |   |                                    |       |       |
|  | Seed treatment                          | Not as a common<br>Practices  | Carbandzime/<br>captan/Thriam 2 gm/kg<br>seed                                     | P                                  | 1,2,4 | 1,2,3 |
|  | Soil treatment                          | Lendel  | Lendel/chlorepyriphos 25kg<br>dust against termite                                | P                                  | 1,2,4 | 1,2,3 |
|  | Crop treatment                          | Not as a common<br>Practices  | Carbandzime 0.2 Solution<br>Carbofuran 3G<br>25kg/ha/Chlorepyriphos1.5L<br>it/ha. | P                                  | 1,2,4 | 1,2,3 |
|  | Conservation of natural enemy<br>(frog) | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide                                  | F                                  | 1,2,4 | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   | <b>Gap in Adoption</b>             |       |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   | N – Nil<br>P – Partial<br>F - Full |       |       |

Table- 7.05: Proposed Strategies for Integrated Nutrient Management (INM)

Crop – Wheat

| Sl. No.  | Particulars                                       | E.P   | R.P  | G.A      | R.G                                | P.S       |         |
|--|---|---|--|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended                                    | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |  |          |                                    |           |         |
|  | FYM/Compost                                       | Nil   | 10 tone/ha                                     | F        | 2,3                                | 5         |         |
|  | Vermicompost                                      | Nil   | 1 tone/ha                                      | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |  |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Crop rotation of Rainy season pulse/Paddy crop | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | -   | Gram   | F        | 2                                  | 2,3,5     |         |
|  | As Green manure                                   | -   | Pervious                                       | F        | 2                                  | 2,3,5     |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |  |          |                                    |           |         |
| a.   | <b>Basal</b>                                      | Local   | -  | -        | -                                  | -         |         |
|  |   | H.Y.V.  | 30:30:10                                       | 50:50:25 | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | -  | -        | -                                  | -         | -       |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |  |          |                                    |           |         |
|  | <b>N</b>  | Local   | -  | -        | -                                  | -         |         |
|  |   | H.Y.V.  | 30   | 50       | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | -  | -        | -                                  | -         | -       |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |  |          |                                    |           |         |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application                    | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Azotobactor                                       | Nil   | 5 Kg/ha as soil application                    | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application                    | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |  |          |                                    |           |         |
|  | Zink  | -   | Application of Zink Coated Urea                | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Boran   | -   | 10 kg/ha                                       | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |          | N – Nil<br>P – Partial<br>F - Full |           |         |

Table- 7.06 : Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Termite, Rust, Alternaria blight, etc.)

Crop – Wheat

| Sl. No.  | Particulars                             | E.P   | R.P  | G.A | R.G                                | P.S   |
|--|---|---|--|-----|------------------------------------|-------|
| 1  | <b>Cultural Practices</b>               |   |  |     |                                    |       |
|  | Plowing                                 | Shallow repeated Plowing  | Deep repeated Plowing  | P   | 1,2,4                              | 1,2,3 |
|  | Timely sowing                           | 1 <sup>st</sup> week of Nov- Last week of Dec.  | 10 <sup>th</sup> Nov- 30 <sup>th</sup> Nov.                    | P   | 1,2,4                              | 1,2,3 |
|  | Clean Cultivation                       | Not in Practices  | Removal of rations   | F   | 1,2,4                              | 1,2,3 |
|  | Resistance Varieties                    | Sonali, PBW-343, HUW-334HD-2402,  | Sonali, PBW-343, HUW-334,HD-2402,HUW-468, NW-1012              | P   | 1,2,4                              | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |  |     |                                    |       |
|  | Pheromone Trap &Lures                   | Nil   | Nil  | Nil | Nil                                | Nil   |
|  | Light Trap                              | Nil   | Nil  | Nil | Nil                                | Nil   |
|  | Sweep net                               | Nil   | Nil  | Nil | Nil                                | Nil   |
| 3  | <b>Botanical/ Biological –Practices</b> |   |  |     |                                    |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.                       | F   | 1,2,4                              | 1,2,3 |
|  | Trichograma (Egg- parasite)             | Not in Practices  | For Control of borers 16 card/ha.                              | F   | 1,2,4                              | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | For control of fungal diseases 5gm/kg seed treatment           | F   | 1,2,4                              | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |  |     |                                    |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ captan/Thriam 2 gm/kg seed                        | P   | 1,2,4                              | 1,2,3 |
|  | Soil treatment                          | Lendel  | Lendel/chlorepyriphos 25kg dust against termite                | P   | 1,2,4                              | 1,2,3 |
|  | Crop treatment                          | Not as a common Practices   | Carbandzime 0.2 %Solution/ Mencozeb 0.3% Solution against rust | P   | 1,2,4                              | 1,2,3 |
|  | Conservation of natural enemy (Snakes)  | Not in Practices  | Use of bio-Pesticide Avoid Chemical pesticide                  | F   | 1,2,4                              | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |     | <b>Gap in Adoption</b>             |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |     | N – Nil<br>P – Partial<br>F - Full |       |

Table- 7.07: Proposed Strategies for Integrated Nutrient Management (INM)

Crop – Potato

| Sl. No.  | Particulars                                       | E.P   | R.P  | G.A      | R.G                                | P.S       |         |
|--|---|---|--|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended  | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |  |          |                                    |           |         |
|  | FYM/Compost                                       | Nil   | 10 tone/ha   | F        | 2,3                                | 5         |         |
|  | Karanj Cake                                       | Nil   | 6 qut./ha  | F        | 2,3                                | 5         |         |
|  | Vermicompost                                      | Nil   | 1 tone/ha  | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |  |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Crop rotation of pulse/(green gram, Black gram) crop | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | -   | Brasica, Radish                                      | F        | 2                                  | 2,3,5     |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |  |          |                                    |           |         |
| a.   | <b>Basal</b>                                      | Local   | -  | -        | -                                  | -         |         |
|  |   | Improved  | 40:40:20   | 60:60:40 | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | -  | -        | -                                  | -         | -       |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |  |          |                                    |           |         |
|  | <b>N</b>  | Local   | -  | -        | -                                  | -         |         |
|  |   | Improved  | 40   | 60       | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Hybrid  | -  | -        | -                                  | -         | -       |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |  |          |                                    |           |         |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application                          | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Azatobactor                                       | Nil   | 5 Kg/ha as soil application                          | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application                          | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |  |          |                                    |           |         |
|  | Lime  | Nil   | 3-4 qut/ha if Furrow                                 | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Zink  | -   | -  | -        | -                                  | -         |         |
|  | Sulphur   | -   | Use of Sulphur Containing Fert.                      | P        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |          | N – Nil<br>P – Partial<br>F - Full |           |         |

Table- 7.08: Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Cutworm, Let & early blight, Wilt, etc.)

Crop – Potato

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A                                | R.G   | P.S   |
|--|---|---|---|------------------------------------|-------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |                                    |       |       |
|  | Deep Plowing                            | Shallow Plowing   | Deep repeated Plowing   | P                                  | 1,2,4 | 1,2,3 |
|  | Timely sowing                           | 15 <sup>th</sup> Oct- 15 <sup>th</sup> Nov(Early Sowing)<br>15 <sup>th</sup> Nov- 30 <sup>th</sup> Dec.(Normal Sowing)  | 15 <sup>th</sup> Oct- 15 <sup>th</sup> Nov(Early Sowing)<br>15 <sup>th</sup> Nov- 30 <sup>th</sup> Nov.(Normal Sowing). | N                                  | -     | -     |
|  | Clean Cultivation                       | Not in Practices  | Removal of rations  | F                                  | 1,2,4 | 1,2,3 |
|  | Resistance Varieties                    | (1)K.Chandramuhi, ON-2236<br>(2) K.Sinduri, K. Jyoti  | (1)K.Chandramuhi, K. Kuber.<br>(2) K.Sinduri, K. Jyoti, K. Bhar, K.Jawahar  | P                                  | 1,2,4 | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |                                    |       |       |
|  | Pheromone Trap &Lures                   | Nil   | Nil   | Nil                                | Nil   | Nil   |
|  | Light Trap                              | Nil   | Nil   | Nil                                | Nil   | Nil   |
|  | Sweep net                               | Nil   | Nil   | Nil                                | Nil   | Nil   |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |                                    |       |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.ss  | F                                  | 1,2,4 | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking past & Catterpillar   | F                                  | 1,2,4 | 1,2,3 |
|  | BT                                      | -   | For Soil treatment 5 Kg/ha.   | F                                  | 1,2,4 | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | For control of fungal diseases 5kg/ha as Soil application   | F                                  | 1,2,4 | 1,2,3 |
|  | Psuedomonus                             | Not in Practices  | For control of bacterial & Fungal diseases 5kg/ha as Soil application   | F                                  | 1,2,4 | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |   |                                    |       |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ Mencogeb0.3% Solution  | P                                  | 1,2,4 | 1,2,3 |
|  | Crop treatment                          | Not as a common Practices   | Carbandzime 0.2 Solution<br>Carbofuran 3G<br>25kg/ha/Chlorepyriphos1.5Lit/ha.   | P                                  | 1,2,4 | 1,2,3 |
|  | Conservation of natural enemy (Snakes)  | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide  | F                                  | 1,2,4 | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   | <b>Gap in Adoption</b>             |       |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   | N – Nil<br>P – Partial<br>F - Full |       |       |



Table- 7.09: Proposed Strategies for Integrated Nutrient Management (INM)

Crop – Pea

| Sl. No.  | Particulars                                       | E.P   | R.P  | G.A      | R.G                                | P.S       |         |
|--|---|---|--|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended  | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |  |          |                                    |           |         |
|  | FYM/Compost                                       | Nil   | 10 tone/ha   | F        | 2,3                                | 5         |         |
|  | Karanj Cake                                       | Nil   | 6 qut./ha  | F        | 2,3                                | 5         |         |
|  | Vermicompost                                      | Nil   | 1 tone/ha  | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |  |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Crop rotation of Summer vegetable/Rainy Season maize | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | -   | Brasica, Linseed                                     | F        | 2                                  | 2,3,5     |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |  |          |                                    |           |         |
| a.   | <b>Basal</b>                                      | Improved  | 15:20:0  | 25:50:30 | p                                  | 1,2,3     | 1,2,3,5 |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |  |          |                                    |           |         |
|  | <b>N</b>  | Improved  | 20   | 25       | p                                  | 1,2,3     | 1,2,3,5 |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |  |          |                                    |           |         |
|  | Rhizobium   | Nil   | 2 Kg/ha as Seed treatment                            | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |  |          |                                    |           |         |
|  | Lime  | Nil   | 3-4 qut/ha if Furrow                                 | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |  |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |  |          | N – Nil<br>P – Partial<br>F - Full |           |         |

Table- 7.10: Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Powdery mildew, Pod borer, Termite, Leaf Miner, Aphides, Damping off, Yellow Rust etc.)

Crop – Pea

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A | R.G                                | P.S   |
|--|---|---|---|-----|------------------------------------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |     |                                    |       |
|  | Deep Plowing                            | Shallow Plowing   | Deep repeated Plowing   | P   | 1,2,4                              | 1,2,3 |
|  | Timely sowing                           | 15 <sup>th</sup> Oct- 15 <sup>th</sup> Nov(Early Sowing)<br>15 <sup>th</sup> Nov- 30 <sup>th</sup> Dec.(Normal Sowing)  | 15 <sup>th</sup> Oct- 15 <sup>th</sup> Nov(Early Sowing)<br>15 <sup>th</sup> Nov- 30 <sup>th</sup> Nov.(Normal Sowing).             | N   | -                                  | -     |
|  | Clean Cultivation                       | Not in Practices  | Removal of rations  | F   | 1,2,4                              | 1,2,3 |
|  | Resistance Varieties                    | Arkel, Boneviae   | Arkel, Boneviae, Swarn Amar, Swarn Mukti  | P   | 1,2,4                              | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |     |                                    |       |
|  | Pheromone Trap &Lures                   | Not in Practices  | For attracting Male Insect<br>10-12 Trap/ha.  | F   | 1,2,4                              | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |     |                                    |       |
|  | Azadirachtin Products<br>1500/1000 PPM  | Not in Practices  | For control of sucking & cutting Insect.  | F   | 1,2,4                              | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking past & Catterpillar   | F   | 1,2,4                              | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | For control of fungal diseases 0.5 Solution.  | F   | 1,2,4                              | 1,2,3 |
|  | Psuedomonus                             | Not in Practices  | For control of bacterial & Fungal diseases 0.5 Solution   | F   | 1,2,4                              | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |   |     |                                    |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/<br>Captan/Thiram 2gm/kg seed   | P   | 1,2,4                              | 1,2,3 |
|  | Crop treatment                          | Not as a common Practices   | Karathen 0.1% Sol. Sulphex 0.2%/Carbendazim 0.1%, against powdery mildew , Blue Copper/Copper Oxichloride 0.2% Solution damping off | P   | 1,2,4                              | 1,2,3 |
|  | Conservation of natural enemy (Snakes)  | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide  | F   | 1,2,4                              | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   |     | <b>Gap in Adoption</b>             |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   |     | N – Nil<br>P – Partial<br>F - Full |       |

Table- 7.11: Proposed Strategies for Integrated Nutrient Management (INM)

**Horticultural****Crop – Cauliflower & Cabbage**

| Sl. No.  | Particulars                                       | E.P   | R.P                                | G.A      | R.G                                | P.S       |
|--|---|---|------------------------------------|----------|------------------------------------|-----------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended                        | F        | 1,4                                | 1,2       |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |                                    |          |                                    |           |
|  | FYM/Compost                                       | 10 tone/ha  | 20 tone/ha                         | P        | 1,2,3                              | 1,2,3,5   |
|  | Vermicompost                                      | Nil   | 2 tone/ha                          | F        | 2,3                                | 5         |
| 3  | <b>Cultivation of Legumes</b>                     |   |                                    |          |                                    |           |
|  | As rotational Crop                                | Nil   | Black gram/<br>Green gram          | F        | 2                                  | 2,3,5     |
|  | As inter Crop                                     | Nil   | Tomato 8:2                         | F        | 2                                  | 2,3,5     |
|  | As Green manure                                   | Nil   | Sunhemp/ Dhaicha                   | F        | 2                                  | 2,3,5     |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |                                    |          |                                    |           |
| a.   | Basal   | Improved  | 40:50:30                           | 80:75:50 | p                                  | 1,2,3     |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |                                    |          |                                    |           |
|  | N   | Improved  | 35                                 | 80       | p                                  | 1,2,3     |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |                                    |          |                                    |           |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |
|  | Agatobactor                                       | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |
| 6  | <b>Macro/Micronutrients</b>                       |   |                                    |          |                                    |           |
|  | Boran   | -   | 10 kg/ ha Time of<br>transplanting | F        | 1,2,3,4                            | 1,2,3,4,5 |
|  | Molibdanum  | -   | 5 kg/ha Time of<br>transplanting   | F        | 1,2,3,4                            | 1,2,3,4,5 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |                                    |          | <b>Gap in Adoption</b>             |           |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |                                    |          | N – Nil<br>P – Partial<br>F - Full |           |

Table- 7.12: Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Dimoend back moth, Borer, Semi Looper, Termite, Aphides, Damping off, Black Rott, Downy mildew, etc.)

**Horticultural /Crop – Cauliflower & Cabbage**

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A                                | R.G   | P.S   |
|--|---|---|---|------------------------------------|-------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |                                    |       |       |
|  | Ploughing                               | Practices by a few farmer   | Deep repeated Ploughing   | P                                  | 1,2,4 | 1,2,3 |
|  | Timely sowing                           | May – June<br>July – August   | May – June<br>July – August   | N                                  | -     | -     |
|  | Transplanting                           | July – August<br>August- September  | July – August<br>August- September                                    | N                                  | -     | -     |
|  | Clean Cultivation                       | Removal of rations on previous crops  | Removal of rations on previous crops, Solarisation of seed bed        | N                                  | -     | -     |
|  | Resistance Varieties                    | Kaitki, Snow ball, , HazipuExtra Early  | Early Kuvari, Pusa Depali,Pant Shubhra, Pusa Early Cinthetic.         | P                                  | 1,2,4 | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |                                    |       |       |
|  | Pheromone Trap & Lures                  | Not in Practices  | For attracting Male Insect  | F                                  | 1,2,4 | 1,2,3 |
|  | Yellow board                            | Not in Practices  | Against sucking Insect  | F                                  | 1,2,4 | 1,2,3 |
|  | Light trap                              | Not in Practices  | 10/ha   | F                                  | 1,2,4 | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |                                    |       |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.                              | F                                  | 1,2,4 | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking past & borer  | F                                  | 1,2,4 | 1,2,3 |
|  | BT                                      | Not in Practices  | Against D.B.M.  | F                                  | 1,2,4 | 1,2,3 |
|  | Trichograma (Egg- parasite)             | -   | -   | -                                  | -     | -     |
|  | Metarizium anisoply (Fungal Insect)     | Not in Practices  | For Control Brown hopper  | F                                  | 1,2,4 | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | Seed treatment For control of fungal diseases 4gm/kg seed             | F                                  | 1,2,4 | 1,2,3 |
|  | Psuedomonus                             | Not in Practices  | For control of bacterial & Fungal diseases                            | F                                  | 1,2,4 | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |   |                                    |       |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ captan/Thriam 2 gm/kg seed                               | P                                  | 1,2,4 | 1,2,3 |
|  | Seedling treatment                      | Not as a common Practices   | Carbandzime 0.2 Solution<br>Carbofuran 3G<br>2.5kg/1000m <sup>2</sup> | P                                  | 1,2,4 | 1,2,3 |
|  | Conservation of natural enemy (frog)    | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide                      | F                                  | 1,2,4 | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   | <b>Gap in Adoption</b>             |       |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   | N – Nil<br>P – Partial<br>F - Full |       |       |

Table- 7.13 : Proposed Strategies for Integrated Nutrient Management (INM)

**Horticultural/Crop – Horticultural /Crop – Tomato & Brinjal**

| Sl. No.  | Particulars                                       | E.P   | R.P                             | G.A      | R.G                                | P.S       |         |
|--|---|---|---------------------------------|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended                     | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |                                 |          |                                    |           |         |
|  | FYM/Compost                                       | 10 tone/ha  | 20 tone/ha                      | P        | 1,2,3                              | 1,2,3,5   |         |
|  | Vermicompost                                      | Nil   | 2 tone/ha                       | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |                                 |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Black gram/<br>Green gram       | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | Nil   | Tomato 8:2                      | F        | 2                                  | 2,3,5     |         |
|  | As Green manure                                   | Nil   | Sunhemp/ Dhaicha                | F        | 2                                  | 2,3,5     |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |                                 |          |                                    |           |         |
| a.   | <b>Basal</b>                                      | Tomato  | 40:40:20                        | 60:60:60 | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Brinjal   | 40:40:20                        | 60:60:60 | p                                  | 1,2,3     | 1,2,3,5 |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |                                 |          |                                    |           |         |
|  | <b>N</b>  | Tomato  | 40                              | 60       | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Brinjal   | 40                              | 60       | p                                  | 1,2,3     | 1,2,3,5 |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |                                 |          |                                    |           |         |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application     | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Agatobactor                                       | Nil   | 5 Kg/ha as soil application     | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application     | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |                                 |          |                                    |           |         |
|  | Boran   | -   | 10 kg/ ha Time of transplanting | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Molibdanum  | -   | 5 kg/ha Time of transplanting   | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |                                 |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |                                 |          | N – Nil<br>P – Partial<br>F - Full |           |         |

**Table-7.14 : Proposed Strategies for Integrated Pest Management (IPM)**  
(Pest – Dimoend back moth, Borer, Semi Looper, Termite, Aphides, Damping off, Black Rott, Downy mildew, etc.)

**Horticultural /Crop – Tomato & Brinjal**

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A  | R.G   | P.S   |
|--|---|---|---|--|-------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |  |       |       |
|  | Ploughing                               | Practices by a few farmer   | Deep repeated Ploughing   | P  | 1,2,4 | 1,2,3 |
|  | Timely sowing                           | May – June<br>July – August   | May – June<br>July – August   | N  | -     | -     |
|  | Transplanting                           | July – August<br>August- September  | July – August<br>August- September                                    | N  | -     | -     |
|  | Clean Cultivation                       | Removal of rations on previous crops  | Removal of rations on previous crops, Solarisation of seed bed        | N  | -     | -     |
|  | Resistance Varieties                    | Tomato  | Pusa Rubi, Pant Bahar, Pusa Shda Bahar, Indo - American hybrid        | Pusa Rubi, Pant Bahar, Pusa Shda Bahar, Indo - American hybrid | P     | 1,2,4 |
| Brinjal  |   | Pusa Pearple Long, Pusa Pearple Round, Banaras Jaint, Panjab Barshti  | Pusa Pearple Long, Pusa Pearple Round, Swarn Pratibha, Swarn Shyamali | P  | 1,2,4 | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |  |       |       |
|  | Pheromone Trap & Lures                  | Not in Practices  | For attracting Male Insect  | F  | 1,2,4 | 1,2,3 |
|  | Yellow board                            | Not in Practices  | Against sucking Insect  | F  | 1,2,4 | 1,2,3 |
|  | Light trap                              | Not in Practices  | 10/ha   | F  | 1,2,4 | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |  |       |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.                              | F  | 1,2,4 | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking past & borer  | F  | 1,2,4 | 1,2,3 |
|  | BT                                      | Not in Practices  | Against D.B.M.  | F  | 1,2,4 | 1,2,3 |
|  | Metarizium anisoply (Fungal Insect)     | Not in Practices  | For Control Brown hopper  | F  | 1,2,4 | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | Seed treatment For control of fungal diseases 4gm/kg seed             | F  | 1,2,4 | 1,2,3 |
| Pseudomonus  | Not in Practices                        | For control of bacterial & Fungal diseases  | F   | 1,2,4  | 1,2,3 |       |
| 4  | <b>Chemical Practices</b>               |   |   |  |       |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ captan/Thriam 2 gm/kg seed                               | P  | 1,2,4 | 1,2,3 |
|  | Seedling treatment                      | Not as a common Practices   | Carbandzime 0.2 Solution<br>Carbofuran 3G<br>2.5kg/1000m <sup>2</sup> | P  | 1,2,4 | 1,2,3 |
|  | Conservation of natural enemy (frog)    | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide                      | F  | 1,2,4 | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   | <b>Gap in Adoption</b>   |       |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   | N – Nil<br>P – Partial<br>F - Full                             |       |       |

Table- 7.15: Proposed Strategies for Integrated Nutrient Management (INM)

## Horticultural/Crop – Horticultural /Crop – Chili &amp; Capsicum

| Sl. No.  | Particulars                                       | E.P   | R.P                                | G.A      | R.G                                | P.S       |         |
|--|---|---|------------------------------------|----------|------------------------------------|-----------|---------|
| 1  | Soil Testing/<br>Soil Health                      | -   | Recommended                        | F        | 1,4                                | 1,2       |         |
| 2  | <b>Use of Manures (mt./ha.)</b>                   |   |                                    |          |                                    |           |         |
|  | FYM/Compost                                       | 10 tone/ha  | 20 tone/ha                         | P        | 1,2,3                              | 1,2,3,5   |         |
|  | Vermicompost                                      | Nil   | 2 tone/ha                          | F        | 2,3                                | 5         |         |
| 3  | <b>Cultivation of Legumes</b>                     |   |                                    |          |                                    |           |         |
|  | As rotational Crop                                | Nil   | Black gram/<br>Green gram          | F        | 2                                  | 2,3,5     |         |
|  | As inter Crop                                     | Nil   | Tomato 8:2                         | F        | 2                                  | 2,3,5     |         |
|  | As Green manure                                   | Nil   | Sunhemp/ Dhaicha                   | F        | 2                                  | 2,3,5     |         |
| 4  | <b>Use of major Fertilizer. N + P + K Kg./ha.</b> |   |                                    |          |                                    |           |         |
| a.   | <b>Basal</b>                                      | Chili   | 25:30:30                           | 40:60:50 | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Capsicum  | 25:30:30                           | 40:60:50 | p                                  | 1,2,3     | 1,2,3,5 |
| b.   | <b>Top dressing (kg./ha)</b>                      |   |                                    |          |                                    |           |         |
|  | <b>N</b>  | Chili   | 25                                 | 35       | p                                  | 1,2,3     | 1,2,3,5 |
|  |   | Capsicum  | 25                                 | 35       | p                                  | 1,2,3     | 1,2,3,5 |
| 5  | <b>Use of Bio fertilizer (kg/ha)</b>              |   |                                    |          |                                    |           |         |
|  | Azospirillum                                      | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Azotobactor                                       | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | P.S.B.  | Nil   | 5 Kg/ha as soil application        | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| 6  | <b>Macro/Micronutrients</b>                       |   |                                    |          |                                    |           |         |
|  | Boran   | -   | 10 kg/ ha Time of<br>transplanting | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
|  | Molibdanum  | -   | 5 kg/ha Time of<br>transplanting   | F        | 1,2,3,4                            | 1,2,3,4,5 |         |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |                                    |          | <b>Gap in Adoption</b>             |           |         |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |                                    |          | N – Nil<br>P – Partial<br>F - Full |           |         |

Table-7.16 : Proposed Strategies for Integrated Pest Management (IPM)  
(Pest – Chili/Capsicum - Leaf Hooper, Aphides, Termite, Damping off, Anthracnose, Leaf Sport, Bacterial Blight, etc.)

**Horticultural /Crop – Chili & Capsicum**

| Sl. No.  | Particulars                             | E.P   | R.P   | G.A   | R.G   | P.S   |
|--|---|---|---|---|-------|-------|
| 1  | <b>Cultural Practices</b>               |   |   |   |       |       |
|  | Ploughing                               | Practices by a few farmer   | Deep repeated Ploughing   | P   | 1,2,4 | 1,2,3 |
|  | Timely sowing                           | May – June<br>July – August   | May – June<br>July – August   | N   | -     | -     |
|  | Transplanting                           | July – August<br>August- September  | July – August<br>August- September                                    | N   | -     | -     |
|  | Clean Cultivation                       | Removal of rations on previous crops  | Removal of rations on previous crops, Solarisation of seed bed        | N   | -     | -     |
|  | Resistance Varieties                    | Chili   | Kalyanpur red, RCH-236, Arka Lohit,                                   | Kalyanpur red, RCH-236, Arka Lohit, Pusa Jwala. | P     | 1,2,4 |
| Capsicum   |   | Arka Basant, California wonder.   | Arka Basant, California wonder.                                       | P   | 1,2,4 | 1,2,3 |
| 2  | <b>Mechanical Practices</b>             |   |   |   |       |       |
|  | Pheromone Trap & Lures                  | Not in Practices  | For attracting Male Insect  | F   | 1,2,4 | 1,2,3 |
|  | Yellow board                            | Not in Practices  | Against sucking Insect  | F   | 1,2,4 | 1,2,3 |
|  | Light trap                              | Not in Practices  | 10/ha   | F   | 1,2,4 | 1,2,3 |
| 3  | <b>Botanical/ Biological –Practices</b> |   |   |   |       |       |
|  | Azadirachtin Products 1500/1000 PPM     | Not in Practices  | For control of sucking & cutting Insect.                              | F   | 1,2,4 | 1,2,3 |
|  | Beavaria bassiana                       | Not in Practices  | Sucking pest & borer  | F   | 1,2,4 | 1,2,3 |
|  | BT                                      | Not in Practices  | Against D.B.M.  | F   | 1,2,4 | 1,2,3 |
|  | Metarizium anisoply (Fungal Insect)     | Not in Practices  | For Control Brown hopper  | F   | 1,2,4 | 1,2,3 |
|  | Trichoderma- Vridi                      | Not in Practices  | Seed treatment For control of fungal diseases 4gm/kg seed             | F   | 1,2,4 | 1,2,3 |
|  | Psuedomonus                             | Not in Practices  | For control of bacterial & Fungal diseases                            | F   | 1,2,4 | 1,2,3 |
| 4  | <b>Chemical Practices</b>               |   |   |   |       |       |
|  | Seed treatment                          | Not as a common Practices   | Carbandzime/ captan/Thriam 2 gm/kg seed                               | P   | 1,2,4 | 1,2,3 |
|  | Seedling treatment                      | Not as a common Practices   | Carbandzime 0.2 Solution<br>Carbofuran 3G<br>2.5kg/1000m <sup>2</sup> | P   | 1,2,4 | 1,2,3 |
|  | Conservation of natural enemy (frog)    | Not in Practices  | Use of bio-Pesticide<br>Avoid Chemical pesticide                      | F   | 1,2,4 | 1,2,3 |
| <b>Reasons for gap</b>   |   | <b>Proposed Strategy</b>  |   | <b>Gap in Adoption</b>                          |       |       |
| 1. Lack of awareness & Knowledge.<br>2. Lack resources.<br>3. Lack capital.<br>4. Improper management. |   | 1. Training & awareness Campaign.<br>2. Demonstration & On farm trail/ORF.<br>3. Exposer visit.<br>4. Soil testing based fertilizer use needed to be strengthened.<br>5. Financial Support. |   | N – Nil<br>P – Partial<br>F - Full              |       |       |