

Annual Action Plan (April 2017 - March 2018)

Krishi Vigyan Kendra Manpur, Gaya



Directorate of Extension Education



**Bihar Agricultural University, Sabour
Bhagalpur**

1. Name of the KVK: **KRISHI VIGYAN KENDRA, MANPUR, GAYA**
2. Name of the host organization: **BAU, SABOUR, BHAGALPUR, BIHAR**
3. **Training Programme to be organized (April 2017 - March 2018)**

(a) Practising farmer /Farm women

| Thematic Area | Title | Duration | No. of participants | | | |
|-------------------------------|--|-----------|---------------------|----|------------|------------|
| | | | SC | ST | Others | Total |
| Crop Production | | | | | | |
| Integrated Crop Management | Nutrient & weed management in summer moong/Urdbean | 1 | 4 | - | 21 | 25 |
| Resource conservation | Importance of green manure crops for sustainable production | 1 | 4 | - | 21 | 25 |
| Resource management | Packages of practices for direct seeded rice | 1 | 5 | - | 20 | 25 |
| Nursery management | Techniques of MAT – type nursery raising for transplanting through machine | 1 | 5 | - | 20 | 25 |
| INM | INM in paddy | 1 | 3 | - | 22 | 25 |
| Crop Diversification | Contingent crop plan to mitigate adverse weather conditions | 1 | 2 | - | 23 | 25 |
| Integrated Crop Management | Irrigation and fertilizer management in kharif maize | 1 | 4 | - | 21 | 25 |
| Low cost input management | Use of bio-fertilizers for sustainable crop production | 1 | 3 | - | 22 | 25 |
| Weed management | Integrated weed management in Rabi pulses | 1 | 2 | - | 23 | 25 |
| Productivity Enhancement | Production techniques for late sown wheat | 1 | 4 | - | 21 | 25 |
| Integrated Crop Management | Fertilizer and irrigation management in wheat | 1 | 2 | - | 23 | 25 |
| Resource conservation | Micro-irrigation and its benefit in crop production | 1 | 5 | - | 20 | 25 |
| Integrated farming | IFS models for profitable farming | 1 | 3 | - | 22 | 25 |
| | Total | 13 | 46 | | 279 | 325 |
| Plant protection | | | | | | |
| Integrated pest management | Safe storage of grains | 1 | 1 | - | 25 | 25 |
| Integrated pest management | IPM in kharif okra | 1 | 3 | - | 22 | 25 |
| Integrated disease management | Management of sheath blight and false smut in paddy | 1 | 5 | - | 20 | 25 |
| Integrated disease management | Management of root rot and wilt complex in lentil. | 1 | 1 | - | 24 | 25 |
| Integrated disease management | Seed treatment in wheat | 1 | 4 | - | 21 | 25 |
| Integrated disease management | Management of late blight of potato | 1 | 3 | - | 22 | 25 |
| Integrated pest management | I P M in oilseed crops | 1 | 4 | - | 21 | 25 |
| Integrated pest management | Pest management in moong | 1 | 4 | - | 21 | 25 |
| | Total | 8 | 25 | | 176 | 200 |

| Home Science | | | | | | |
|--|--|-----------|-----------|---|------------|------------|
| Storage loss minimization | Home scale method of Safe grain storage | 1 | 4 | - | 21 | 25 |
| Women & Child care | Supplementary nutrition – when, why and how | 1 | 4 | - | 21 | 25 |
| Income generation | Different avenues of farm women enterprises | 1 | 4 | - | 21 | 25 |
| Household food security by kitchen gardening and nutrition gardening | Kitchen Gardening and Human health | 1 | 5 | - | 20 | 25 |
| Minimization of nutrients loss in processing | Prevention of nutrition loss during cooking process | 1 | 4 | - | 21 | 25 |
| Gender main streaming through SHGs | Women SHG Formation and Function | 1 | 3 | - | 22 | 25 |
| Design and development of low/minimum cost diet | Low cost nutritive food available in rural areas | 1 | 5 | - | 20 | 25 |
| Income generation activities for empowerment of rural Women | Mushroom Production | 1 | 1 | - | 24 | 25 |
| Value addition | Value addition of potato | 1 | 5 | - | 20 | 25 |
| Value addition | Different preparation from Aonla | 1 | 4 | - | 21 | 25 |
| Value addition | Processing of seasonal fruits and vegetables | 1 | 4 | - | 21 | 25 |
| Value addition | Value addition of tomato | 1 | 3 | - | 22 | 25 |
| Women and child care | Importance of nutrients and their deficiency symptom | 1 | 3 | - | 22 | 25 |
| Women and child care | Adulteration in common food materials | 1 | 1 | - | 24 | 25 |
| | Total | 14 | 50 | | 300 | 350 |
| Veterinary Science | | | | | | |
| Poultry production | Income generation through backyard poultry production | 1 | 3 | - | 22 | 25 |
| Goat farming | Small scale goat farming | 1 | 1 | - | 24 | 25 |
| Disease Management | Management and prevention of HS & BQ in dairy animals | 1 | 3 | - | 22 | 25 |
| Fodder Management | Fodder production round the year | 1 | 5 | - | 20 | 25 |
| Feed Management | Treatment of straw with urea | 1 | 4 | - | 21 | 25 |
| Disease Management | Vaccination in Poultry and dairy animals | 1 | 1 | - | 24 | 25 |
| Dairy Management | Scientific management for improvement of milk production | 1 | 4 | - | 21 | 25 |
| Dairy Management | Clean milk production | 1 | 5 | - | 20 | 25 |
| Disease management | Management of common disease in dairy animals | 1 | 5 | - | 20 | 25 |
| Dairy Management | Management of cattle in different season | 1 | 5 | - | 20 | 25 |
| Feed Management | Feeding of dairy animals in different stage of life | 1 | 1 | - | 24 | 25 |
| Disease Management | Regular deworming and its importance in milk production | 1 | 5 | - | 20 | 25 |
| Dairy Management | Technique of productive enhancement of dairy animals | 1 | 5 | - | 20 | 25 |
| Disease Management | Management of common disease in goats | 1 | 5 | - | 20 | 25 |
| | Total | 14 | 52 | | 298 | 350 |

| Extension Education | | | | | | |
|----------------------------------|---|-----------|-----------|---|------------|------------|
| Group dynamics | Importance and need of farmers field school | 1 | 2 | - | 18 | 20 |
| | Utility and need of farmers group for socio- economic upliftment | 1 | 2 | - | 18 | 20 |
| | Importance of Kisan Club for income generation in agriculture | 1 | 2 | - | 18 | 20 |
| Mobilization of social resources | Best utilization of available resources among farmers | 1 | 2 | - | 18 | 20 |
| | Exploitation of available resources for income generation | 1 | 2 | - | 18 | 20 |
| Capacity building | Capacity building among farmers for seed production | 1 | 2 | - | 18 | 20 |
| Formation and management of SHGs | Need & importance of SHG for income generation | 1 | 2 | - | 18 | 20 |
| | SHGs as the means for self employment to the farmers & farm women | 1 | 2 | - | 18 | 20 |
| Gender mainstreaming | Gender mainstreaming through SHGs | 1 | 2 | - | 18 | 20 |
| Information networking | Awareness of farmers for availability of agricultural markets | 1 | 2 | - | 18 | 20 |
| | Awareness among farmers for daily updates | 1 | 2 | - | 18 | 20 |
| Entrepreneurial development | Development of entrepreneurial skill among farmers in vermicomposting | 1 | 2 | - | 18 | 20 |
| | Total | 12 | 24 | | 216 | 240 |

(b) Rural Youth

| Thematic Area | Title | Duration | No. of participants | | | |
|----------------------------|---|-----------|---------------------|----|-----------|-----------|
| | | | SC | ST | Others | Total |
| Crop Production | | | | | | |
| Seed production | Seed production techniques of paddy/ wheat | 6 | 4 | - | 21 | 25 |
| Seed production | Seed production techniques of lentil | 6 | 4 | - | 21 | 25 |
| | Total | 12 | 8 | | 42 | 50 |
| Extension Education | | | | | | |
| Vermi composting | Entrepreneurship development through Vermi composting | 6 | 2 | - | 18 | 20 |
| Beekeeping | Beekeeping as the means of self employment | 6 | 2 | - | 18 | 20 |
| | Total | 12 | 4 | - | 36 | 40 |
| Home Science | | | | | | |
| Rural Craft | Hand embroidery | 6 | 5 | - | 15 | 20 |
| Mushroom Production | Mushroom Production | 6 | 3 | - | 17 | 20 |
| Employment generation | Detergent making | 3 | 2 | | 18 | 20 |
| | Total | 15 | 10 | | 50 | 60 |
| Veterinary Science | | | | | | |
| Dairy Management | Entrepreneurship development in dairy farming | 6 | 4 | - | 16 | 20 |
| Goat farming | Entrepreneurship development in goat farming | 5 | 5 | - | 15 | 20 |
| | Total | 11 | 9 | | 31 | 40 |

(c) Extension Functionaries

| Thematic Area | Title | Duration | No. of participants | | | |
|------------------------------|--|----------|---------------------|----|--------|-------|
| | | | SC | ST | Others | Total |
| Crop Production | | | | | | |
| Productivity enhancement | Improved practices for kharif crops production | 2 | 4 | - | 21 | 25 |
| Productivity enhancement | Improved practices for rabi crops production | 2 | 3 | - | 22 | 25 |
| Plant Protection | | | | | | |
| Integrated pest management | Integrated pest management in rabi crops | 2 | 4 | - | 21 | 25 |
| Home Science | | | | | | |
| Women and child care | Healthcare and nutrition | 2 | 5 | - | 20 | 25 |
| Veterinary Science | | | | | | |
| Dairy Management | New trends in dairy farming | 2 | 5 | - | 20 | 25 |
| Extension Education | | | | | | |
| Entrepreneurship development | Income generation through vermicomposting | 2 | 3 | - | 17 | 20 |

Extension Activities 2017-18

| Nature of Extension Activity | No. of activities | Farmers | | | Extension Officials | | | Total | | |
|---|-------------------|-------------|------------|-------------|---------------------|-----------|------------|-------------|------------|-------------|
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Field Day | 10 | 300 | 50 | 350 | 10 | - | 10 | 310 | 50 | 360 |
| Kisan Mela | 3 | - | - | - | - | - | - | - | - | Mass |
| Kisan Ghosthi /Kisan chaupal | 40 | 700 | 100 | 800 | 25 | 10 | 35 | 725 | 110 | 835 |
| Exhibition | 1 | - | - | - | - | - | - | - | - | mass |
| Method Demonstrations | 6 | 60 | 10 | 70 | 3 | 2 | 5 | 63 | 12 | 75 |
| Workshop | 1 | - | - | - | - | - | - | - | - | Mass |
| Lectures delivered as resource persons | 25 | 600 | 20 | 620 | 25 | 15 | 40 | 625 | 35 | 660 |
| Newspaper coverage | 30 | - | - | - | - | - | - | - | - | Mass |
| Radio talks | 04 | - | - | - | - | - | - | - | - | Mass |
| TV talks | 05 | - | - | - | - | - | - | - | - | Mass |
| Popular articles | 03 | - | - | - | - | - | - | - | - | Mass |
| Extension Literature | 05 | - | - | - | - | - | - | - | - | - |
| Advisory Services | 500 | 400 | 100 | 500 | - | - | - | - | - | 500 |
| Scientific visit to farmers field | 100 | 60 | 30 | 90 | 10 | - | 10 | 70 | 30 | 110 |
| Farmers visit to KVK | 500 | 400 | 100 | 500 | - | - | - | - | - | 500 |
| Diagnostic visits | 10 | 40 | 15 | 15 | - | - | - | 40 | 15 | 55 |
| Exposure visits | 1 | 100 | - | - | - | - | - | - | - | 100 |
| Soil health Camp | 5 | - | - | - | - | - | - | - | - | mass |
| Animal Health Camp | 4 | 160 | - | 160 | - | - | - | - | - | 160 |
| Soil test campaigns | 4 | - | - | - | - | - | - | - | - | 4 |
| Celebration of important days (specify) | 3 | - | - | - | - | - | - | - | - | mass |
| Any Other (Specify) | - | - | - | - | - | - | - | - | - | - |
| Krishi Vikas Utsav | - | - | - | - | - | - | - | - | - | - |
| Technical bulletin | 1 | - | - | - | - | - | - | - | - | 1 |
| Total | 1261 | 2820 | 425 | 3105 | 73 | 27 | 100 | 1833 | 252 | 3360 |

Action plan of FLD for the year 2017-18

(A) FRONT LINE (Cluster) DEMONSTRATION OILSEEDS AND PULSES (2017-18)

| S.N. | Crop | Previous crop and cropping system | | | Farming situation | | Area (ha) | Variety | Sowing time | Technology Demonstrated | Input of demonstration cost. |
|---------------------|------------|-----------------------------------|--------|--------|-------------------|-----------|-----------|--------------------------|--------------------|---------------------------------|------------------------------|
| | | Summer | Kharif | Rabi | Rainfed | Irrigated | | | | | |
| Kharif Pulse | | | | | | | | | | | |
| 1. | Pigeon pea | | | | | | 10 | NA-1/Malvi 16 | Jun-July | Bio fungicide+seed+insecticide | 110000/- |
| Oilseed | | | | | | | | | | | |
| 1. | Mustard | Moong | Paddy | Rai | - | - | 10 | Pusa Mahak/R.Suflam | October - December | Seed+ Sulphur+ insecticide | 60000/- |
| Pulses | | | | | | | | | | | |
| 1. | Lentil | Moong | Paddy | Lentil | Rainfed | - | 50 | Arun/HUL 57 | Nov. | Seed+ Rhizobium /Trichoderma | 175000/- |
| 2. | Chickpea | | | | | | 20 | As per variety available | Oct. | Seed+ Rhizobium /Trichoderma | 200000/- |
| 3. | Moong | Moong | Paddy | Wheat | | Irrigated | 30 | PDM-139 | March | Seed+treatment material+sulphur | 15000/- |
| Total | | | | | | | | | | | 390000/- |

(B)FRONT LINE DEMONSTRATION OTHER THAN OILSEED & PULSES (2017-18)

| S.N. | Crop | Previous crop and cropping system | | | Farming situation | | Area (ha) | Variety | Sowing time | Technology Demonstrated | Input of demonstration cost. |
|--------------|---------------------|-----------------------------------|--------|-----------|-------------------|-------------------|-----------|-------------------|-------------|-------------------------------|------------------------------|
| | | Summer | Kharif | Rabi | Rainfed | Irrigated | | | | | |
| 1. | Paddy | Vegetable | Paddy | Wheat | - | Rainfed/Irrigated | 10 | Sahbhagi/R. Sweta | June-August | Seed+ ZnSo4 | 25000/- |
| 2. | Wheat | Moong | Paddy | Wheat | - | Irrigated | 20 | HD 2985/HI 1563 | Nov. | Late sown variety + Herbicide | 150000/- |
| 3. | Kitchen garden | Veg. | Veg. | Veg. | | Irrigated | 50 nos. | Veg. seeds | July-Feb. | Seeds+ seedlings | 20000/- |
| 4. | Mushroom Production | - | - | - | - | - | 50 nos. | Oyster | Oct./Nov. | Seed/spawn+chemicals | 20000/- |
| 5. | Animals | Goat | | | | | 15 | Black Bengal | | Goat | 50000/- |
| 6. | Paddy | insecticides | | | | | 5 ha | Insecticide | Jul - Sep | | 12000/- |
| 7. | Cabbage | Moong | Maize | Vegetable | - | Irrigated | 2ha | Hybrid | Sept.- Nov. | Seed | 32000/- |
| 8. | Okra | Vegetable | Paddy | Wheat | - | Irrigated | 2ha | VRO-6 | Feb.- March | Seed+ herbicide | 12000/- |
| Total | | | | | | | | | | | |

ACTION PLAN FOR ON FARM TRIAL 2017-18

OFT-1

Title of on farm trial: Performance of drought tolerant varieties of paddy in Gaya district.

Problem diagnosed: Erratic monsoon, low water table during May to August in kharif season causing delay in transplanting which ultimately reduces yield.

- Less availability of water and abundance of upland in Gaya district

Technical option: (Varieties)

I. Farmers Variety

II. Sahbhagi

III. Shushk Samrat

IV. Sabour Ardhjal

Plot size: 0.30ha each farmer

No. of Replication: 10 (Farmers)

Source: IRRI & BAU, Sabour

Performance Indicator:

1. No. of tiller/ sq. meter
2. Grains/ earhead
3. 1000 grain wt (gm)
4. Cost of cultivation (Rs. /ha)
5. Yield (q/ha)
6. B: C ratio

OFT-2

Title of on farm trial: Assessment of yield in Paddy through “App” based fertiliser recommendation

Problem diagnosed: Injudicious use of fertilisers

Source: BAU, Sabour

Details of technology

Technological Option:-

1. TO-I : Rice crop manager based nutrient recommendation
2. TO-II: Nutrient Expert based nutrient recommendation
3. TO-III: State recommendation (RDF)
4. Farmers practice

Replication: 10

Performance Indicator:

1. No. of tillers/m²
2. Grains per ear head
3. 1000 grain weight (gm)
4. Cost of cultivation (Rs/ha)
5. Yield (qt/ha)
6. B:C Ratio

OFT-3

Title of on farm trial: Assessment of yield in short duration paddy at different dose of fertilizer recommendation.

Problem diagnosed: injudicious use of fertilisers

Source: BAU, Sabour

Details of technology

Technological Option:-

1. TO-I: Current recommended dose of fertilizer (80:40:20Kg, N: P₂O₅: K₂O per ha)
2. TO-II: Proposed dose of fertilizer (100:45:30Kg, N: P₂O₅: K₂O per ha)
3. Farmers practice

Replication: 10

Performance Indicator:

1. No. of tillers/m²
2. Grains per ear head
3. 1000 grain weight (gm)
4. Cost of cultivation (Rs/ha)
5. Yield (qt/ha)
6. B:C Ratio

OFT-4

Title of on farm trial: Assessment of different fungicides in management of false smut of rice

Problem diagnosed:

- About 5-10% yield losses due to infestation of false smut
- Market price of rice reduced due to conidial infestation in rice

Source: B.A.U., Sabour

Details of technology

Technical option:

- I. Farmers practice – No use of fungicide
- II. Spraying of Copper Oxichloride 50 WP @ 2 kg/ha at ear emergence
- III. Spraying of Propyconazol 500 ml/ha at ear emergence

Plot size: - 0.30ha each farmer

Replication: 10

Performance Indicator:

1. Percent ear infected
2. Yield estimation
3. Benefit cost ratio

OFT-5

Title of on farm trial: Assessment of some bio/ pesticides against root rot and wilt complex in lentil

Problem diagnosed:

- About 30-35% yield loses due to root rot and wilt complex in lentil
- Farmers are using only fungicide as seed treatment

Source: IARI, New Delhi

Details of technology

Technical option:

- I. Farmers practice - No seed treatment
- II. Seed treatment with *Tricoderma* species @10g/ Kg + soil application @5kg/ha with FYM before sowing
- III. Seed treatment with *Carbendazim* @ 2g/kg

Plot size: - 0.30ha each farmer

Replication: 10

Performance Indicator:

1. Percentage of plant died
2. Yield estimation
3. Benefit cost ratio

OFT- 6

Title of on farm trial: - Assessment of different substrate supplement used in Oyster Mushroom production

Problem diagnosed: - Low yield and less net return from cultivation of Oyster Mushroom

Source: Directorate of Mushroom Research, Solan, H.P.

Details of technology:

Technical option:

- I. Farmers practices (use of wheat straw as base material).
- II. Use of wheat straw + wheat bran @ 10% on dry weight of base material.
- III. Use of wheat straw + rice bran @ 10% on dry weight of base material
- IV. Use of wheat straw + pulse husk @ 10% on dry weight of base material

Replication: 10

Performance Indicator:

1. Quantity of Produced
2. B: C ratio

OFT- 7

Title of on farm trial: Assessment of different pulse for preparation of nugget (Badi)

Problem diagnosed: Less durability and poor appearance of Badi

Source: CFTRI

Details of technology:

Technological option

- I. Farm women practices (Urad Badi)
- II. Preparation of Badi of Chana Dal
- III. Preparation of Badi of Moong Dal

Replication: 10

Performance Indicator:

1. Colour
2. Taste
3. Storability
4. B: C ratio.

OFT- 8

Title of on farm trial: Effect of probiotics on milk production of dairy animals

Thematic Area: Disease management

Problem diagnosed: Low digestibility and low productivity in dairy animals

Source of technology: BVC, Patna

Details of technology

Technological Option:-

1. Farmers Practice: No probiotic supplementation
2. TO-I: Probiotic supplementation @ 10g per day
3. TO-II: Probiotic supplementation @ 25g per day

Replication: 10

Performance Indicator:

1. Milk production
2. Cost of milk production
3. Gross benefit
4. Net benefit
5. B:C ratio

OFT- 9

Title of on farm trial: Efficacy of area specific mineral mixture for Bihar and other mineral mixture

Problem diagnosed: Deficiency of some minerals in cattle feed results in low milk production

Source: BVC Patna

Details of technology

Technological Option:-

1. Farmers practice : Use of simple mineral mixture @ 50 g / day for 2 months
2. TO-I : Use of Area specific mineral mixture @ 50 g / day for 2 months
3. TO-II: Use of chelated mineral mixture @ 50 g / day for 2 months

Replication: 10

Performance Indicator:

1. Milk production
2. Cost of milk production
3. Gross return
4. Net return
5. BCR

OFT- 10

Title of on farm trial: Assessment of effect of different extension teaching methods used for enhancing yield of paddy

Problem diagnosed: Low yield of paddy due to improper use of extension teaching method.

Source: BAU, Sabour

Details of technology

Technological Option:-

1. Farmers practice: No extension teaching methods used
2. TO-I : Lecture + group discussion + literature
3. TO-II: Lecture + success story + literature
4. TO-III: Lecture + literature + demonstration

Replication: 40

Performance Indicator:

1. No. of tillers/m²
2. No. of grain/panicle
3. 1000 grain weight (g)
4. Yield (qt/ha)
5. B:C Ratio

OFT- 11

Title of on farm trial: Evaluation of application of different levels of boron on browning and other qualities of cauliflower.

Problem diagnosed: Production of poor quality curd of cauliflower in the Gaya district

Source: BAU, Sabour

Details of technology

Technological Option:-

1. Farmers practice: soil application of borax @ 5Kg/ha
2. TO-I : Soil application of borax @10Kg/ha
3. TO-II: Soil application of borax @15Kg/ha
4. TO-III: Soil application of borax @15Kg/ha + foliar application of boron @0.2%

Replication: 10

Performance Indicator:

1. Colour of curd
2. Weight of curd
3. Height of plant (cm)
4. Yield (qt/ha)
5. B:C Ratio