ACTION PLAN, 2021

KRISHI VIGYAN KENDRA, PATNA

GENERAL INFORMATION ABOUT THE KVK

Introduction:

Krishi Vigyan Kendra Agwanpur, Barh (Patna) was established on 1st August, 1992. It is one of the leading institutions for frontline extension education mandated to organize vocational trainings in agriculture and allied sector with emerging advances in agricultural research on regular basis. The centre is also dedicated to organize and conduct front line demonstration in consultation with the subject matter specialists for testing, refining and documenting technologies for developing region specific and sustainable land use system. The centre is working to promote and co-ordinate agricultural and allied activities in farming community and to bring development among the under privileged section in a systematic, productive, sustainable and self-regenerating manner.

Patna district in general and Tal land is especially popular for Rabi pulses like lentil & gram and oilseed like rapeseed & mustard. At the same time the upland of the district is quite suitable for kharif pulses (red gram) and oil seeds (castor and seasmum). Diara land of the Patna district is famous for the production of the almost all crops of Rabi and Summer season but it is flooded during kharif season. The flooded region is rich in organic matter percentage and the productivity of the area is much higher in comparison to upland without the use of organic or inorganic manure / fertilizer. In the past five years the production as well as productivity of these crops has been increased considerably. The main reason for these yield gaps are their relegation on uncared and marginal lands under rainfed situation and imbalance use for fertilizer. This centre is using the latest agro-technologies under the prevailing agro-eco system available to the farmers.

In India pulse covers 13.74% of gross cropped area and account for 6.7% of gross national production with the productivity of 565 kg/ha where as in Bihar it covers 4.75% of gross cropped area with the productivity of 714 kg/ha. Hence, there is large scope to promote the production and productivity of pulses and oilseed in Bihar especially in the Tal region of Patna district.

Address	**Telephone**	**E mail**
Agwanpur, Barh, Patna- 803214	7549476543	patnakvk@gmail.com

1. **Name of host organization** : Bihar Agricultural University

Address	**Telephone**		**E mail**
	Office	**FAX**	
Bihar Agricultural University Sabour, Bhagalpur- 813210			

2. Staff Position

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Senior Scientist & Head	Dr Kumari Sharda	Senior Scientist & Head	Permanent	Others
2	Subject Matter Specialist	Dr. Mrinal Verma	Subject Matter Specialist	Permanent	Others
3	Subject Matter Specialist	Dr. Bishnu Deo Singh	Subject Matter Specialist	Permanent	Others
4	Subject Matter Specialist	Sri Brajesh Patel	Subject Matter Specialist	Permanent	BC
5	Subject Matter Specialist	Sri Rajeev Kumar	Subject Matter Specialist	Permanent	Others
6	Subject Matter Specialist	Vacant	Subject Matter Specialist	-	-
7	Subject Matter Specialist	Vacant	Subject Matter Specialist	-	-
8	Programme Assistant	Dr. Prakash Chandra Gupta	Programme Assistant (LabTech.)	Permanent	Others
9	Computer Programmer	Sri Akhilesh Kumar	Programme Assistant (Computer)	Permanent	BC
10	Farm Manager	Vacant	Farm Manager	-	-
11	Assistant	Sri Jayant Prasad	Assistant	Permanent	EBC
12	Stenographer	Vacant	-	-	-
13	Driver	Sri Kanhaiya kumar Rai	Driver	Permanent	BC
14	Driver	Vacant	-	-	-
15	Supporting Staff	Bachhan Sah	Messenger cum Peon	Permanent	Others
16	Supporting Staff	Vacant	-	-	-

3. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	1.5
2.	Under Demonstration Units	0.3
3.	Under Crops	14.2
4.	Orchard/Agro-forestry	4.0
5.	Others with details	-
	Total	**20.0**

4. Major farming systems/enterprises (based on the analysis made by the KVK)

S. No.	Farming system/enterprise
1	Rice -wheat
2	Rice- wheat –Moong
3	Maize-oilseed-vegetable
4	Rice-Maize-Moong
5	Rice-Potato-Wheat
6	Rice-Potato-Onion
7	Rice-Potato-wheat –maize

8	Rice-Wheat-Mentha
9	Vegetable-oilseed-Moong
10	Vegetable-lentil-Maize
11	Vegetable –gram-Moong
12	Gram- and Lentil in Tal

5. About Patna District

DEMOGRAPHIC FEATURES	
Area (in ha.)	3,17,236
No. of Sub-Division	06
No. of Block	23
No. of Gram Panchayat	321
No. of Village	1395
Total Population	5,835,465
Population Density (per sq. km.)	1823
SC Population	9,20,918 (15.8%)
ST Population	16,350 (0.28)
Sex Ratio	897
Literacy rate	70.68%

Source: As per 2011 Census

6. Description of Agro-climatic Zone & major agro ecological situations (based on soil and Topography)

S. No	Agro-climatic Zone	Characteristics
1	ACZ-IIIB	Old alluvial sandy loam to clay, large tal and diara areas. Most of rainfall is received in month of July to September bringing with it the problem of recurrent flood. The highest gross irrigated area as percentage of gross cropped area lies in zone III with 76.35% under assured means of irrigation. Despite hight gross irrigated area at 76.35% in Zone III, it is low in cropping intensity at only 135.11 % water stagnation for ling period during kharif season hampers crop cultivation during Kharif.

Source: Strategic research and extension plan of Patna district- Prepared by ATMA, Patna & National institute of Agricultural Extension Management Rajendra Nagar Hyderabad.

7. Agro ecological situation

S. No	Agro ecological situation	Area (ha)	Characteristics
1	Tal	38885.00	Water logging more than 3 months & heavy textured soil
2	Diara	45599.80	Undulated light texture soil
3	Jalla	3508.00	Peculiar situation, water stagnation more than 2 months medium heavy soil, clay loam to clay in texture
4	Irrigated plain	67637.24	Well irrigated plain land & medium to heavy soil irrigated sone

			canal with most fertile land tract of the district
5	Rainfed plain	83403.85	Un irrigated plain land & medium to heavy soil

8. Soil types

S. No	Soil type	Characteristics	Area in ha
1	Clay to clay loam	Heavy soils Rap cracking in summer good water holding capacity and fertility status.	38855
2	Sandy loam, light texture soil	Undulated, high sand percentage low water holding capacity medium fertility status	45599
3	Medium to heavy soil	Peculiar situation, water stagnation more than 2 months medium heavy soil, good water holding capacity medium fertility status	51262

9. Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Area (ha)	Production (q)	Productivity (q/ha)
1.	Wheat	95170.0	266190.5	2797.00
2.	Maize	8035.0	35434.0	4410.0
3	Potato	10185	238329.0	23400.0
4	Gram	28000.0	38428.0	1480.0
5	Lentil	46135.0	59514.0	1290.0
6	Pea	2636.0	3110.0	1180.0
7	Lethyrus	10000.0	10200.0	1020.0
8	Lentil	3820.0	2444.0	640.0
9	Barley	7170.00	5664.0	1933.0
10	Mustard/ Rai	7170.0	5664.0	790.0
11	Sunflower	70.0	78.0	1110.0
12	Linseed	3820.0	2444.0	640.0
13	Paddy	135000.0	4064.9	3171.0
14	Maize	10060	29599.5	2856.0
15	Arhar	2977.0	4555.0	1530.0
16	Moong	500.00	366.0	720.0
17	Urd	479.0	326.0	680.0
18	Til	100.00	24.0	450.0
19	Sunflower	24.0	52.0	1120.0
20	Ground Nut	20.0	23.0	1140.0
21	Castor	292.0	298.0	650.0

10. Details of operational area / villages

Sl. No.	Name of Taluk	Name of the block	Name of the villages	Major crops & enterprises	Major problems identified (crop-wise)	Identified Thrust Areas
1	Barh	Barh	Puraibagi	Paddy, Maize, Lentil, Gram, Lathyrus, coriander, Nigella and dairy	Use of local variety, use of higher seed rate, imbalance fertilizer use and maximum use of insecticide & pesticide, no use of biofertilizer, Lack of irrigation facilities	IPM, INM, Improved seed and Use of biofertilizer

2	Belchi	Belchi	Tilhar	Vegetable, maize, lentil, oilseed, Poultry and Dairy	Imbalance use of fertilizer, no biofertilizer use and maximum use of pesticide and no vermicomposting	IPM, INM, Improved seed and Use of biofertilizer
3	Belchi	Belchi	Murtuzapur	Rice , wheat, Maize, Pulse, vegetable, Oil seed and dairy	Use of local variety, Imbalance use of fertilizer, use of higher seed rate and maximum use of pesticide	IPM, INM, Improved seed, Use of biofertilizer and rearing improved crossbreds
4	Belchi	Belchi	Moglani	Rice , wheat	Residue burning	Use of Happy Seeder, ZTD
5	Naubatpur	Naubatpur	Narayanpur	Vegetables, Cereals and Pulses	Higher dose of Insecticides and pesticides	Organic Farming
6	Bihta	Bihta	Bishunpura Kanchanpur Painal Mahamdpur Bajidpur	Cereal and pulses	Traditional farming	Use of machineries under CRA Program

11. Priority thrust areas

S. No	Thrust area
1.	Use of bio fertilizer and organic manure.
2.	Integrated Nutrient Management
3.	Integrated Pest Management.
4.	Medicinal & aromatic plants for high income return.
5.	Bee keeping and Mushroom production.
6.	Seed production of cereals oilseed, Pulses Vegetables and Spices.
7.	Ensuring availability of mushroom spawn round the year
8.	Farm Mechanization

12. Training program to be organized (January 2021 to December 2021)

Home Science

Thematic Area	Title of Training	Qr. No.	Duration	Venue OFF/On Campus	Tentative Date	Participants/Trainees								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Practicing Farmer														
Women and child care	Care of pregnant & lactating women.	**3rd Quarter**	02	OFF		0	5	0	0	0	15	0	20	20
Value addition	Different recipes of mushroom	**3rd Quarter**	01	OFF		0	5	0	0	0	15	0	20	20
Minimization	Different cooking methods	**4th Qua**	02	OFF		0	5	0	0	0	15	0	20	20

of nutrient less in process ing		**rter**												
Rural Youth														
Value additio n	Value addition Mushroom	**1st Qu arte r**	01	ON/OF F		5	0	0	0	15	0	20	0	20
Value additio n	Value addition Mango.	**1st Qu arte r**	01	ON/OF F		5	0	0	0	15	0	20	0	20
Income Generat ion activitie s for woman	Embroidery for income generation	**3rd Qu arte r**	01	ON/OF F		0	5	0	0	0	1 5	0	2 0	20
Extension Functionaries														
Capacit y buildin g	Capacity building of Aanganwari workers	**3rd Qu arte r**	01	ON/OF F		5	0	0	0	15	0	20	0	20

1. **Agricultural Engineering**

Thema tic Area	**Title of Training**	**Peri od**	**Durati on**	**Venue OFF/O n Campu s**	**Tentat ive Date**	**Participants/Trainees**								
						SC		**ST**		**Othe r**		Total		
						M	**F**	**M**	**F**	**M**	**F**	M	**F**	**T**
Practicing Farmer														
Use of plastic in farming practice s	Use f poly house/ poly tunnel for seedling raising	**Ist qua rter (Jan - Mar ch)**	2	ON/OF F		2	0	0	0	23	0	25	0	25
do	Plastic mulching in vegetable crops	-Do-	2	ON/OF F		3	0	0	0	27	0	30	0	30
Micro-irrigatio n	Use of drip irrigation in vegetable	-Do-	2	ON/OF F		5	0	0	0	15	0	20	0	20

	production													
Other	Advantages of summer ploughing	**IInd Qtr(Apr - June)**	2	ON/OFF		3	0	0	0	17	0	20	0	20
Other	Mechanization of harvesting and threshing of wheat	-Do-	2	ON/OFF		3	0	0	0	17	0	20	0	20
Other	Use of drum seeder for direct seeding of rice.	**3rd Qtr(July - Sept)**	1	ON/OFF		3	0	0	0	17	0	20	0	20
Use of plastic in farming practices	Direct seeding of rice by planter	-Do-	1	ON/OFF		5	0	0	0	15	0	20	0	20
Resource conservation Technique	Use and advantages of Self Propelled rice transplanter	-Do-	2	ON/OFF		5	0	0	0	15	0	20	0	20
Other	Use of rotavator for land preparation.	-Do-	1	ON/OFF		3	0	0	0	17	0	20	0	20
Resource conservation Technique	Use of Happy seeder for residue management	**4th Quarter (Oct-Dec)**	1	ON/OFF		4	0	0	0	16	0	20	0	20
Micro-irrigation	Water conservation techniques in irrigation	-Do-	1	ON/OFF		3	0	0	0	17	0	20	0	20
Micro irrigation	Drip irrigation/sprinkler irrigation	-Do-	1	ON/OFF		3	0	0	0	17	0	20	0	20
Rural Youth														
RCT	Mechanization of farm implements	1st Quarter	5	ON/OFF		3	0	0	0	17	0	20	0	20

Repair of maintenance of farm implements	Repair and maintenance of different farm machinery	2nd Quarter	5	ON/OFF		3	0	0	0	17	0	20	0	20
Protected cultivation	Resource conservation techniques for vegetable crop.	3rd Quarter	2	ON/OFF		2	0	0	0	18	0	20	0	20
Repair & maintenance farm implements	Custom hiring of agricultural machinery	-Do-	2	ON/OFF		5	0	0	0	15	0	20	0	20
Repair & maintenance farm implements	Developing skills to manufacture small hand tools/ use of small tools for drudgery reduction.	4th Quarter	2	ON/OFF		3	0	0	0	17	0	20	0	20
Extension Functionaries														
Micro Irrigation	Adoption of Drip/ Sprinkler system by farmers	1nd Quarter	1	ON/OFF		0	0	0	0	15	0	15	0	15
Protected cultivation	Zero tillage technology	-3rd Quarter	1	ON/OFF		0	0	0	0	15	0	15	0	15
Care & maintenance of farm implements	Technology of Rotavator operation	4th Quarter	1	ON/OFF		3	0	0	0	17	0	20	0	20

2. **Extension Education**

Thematic Area	Title of Training	Qrt. No.	Duration	Venue	Tentative Date	Participants/Trainees								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Practicing Farmer														
Group dynamics	Need and importance of farmers club/SHG	1st Quarter	2	ON/OFF		3	0	2	0	10	5	15	5	20
Formation and management of SHGs	Formation and management of SHG	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Leadership Development	Importance of leadership in the development of Agriculture	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Mobilization of social capital	Effective utilization of social & natural resources.	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Entrepreneurial development of Farmers / youth	Development of entrepreneurship skill among Farmers	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Group dynamics	Need and importance of farmers club/SHG	2nd Quarter	2	ON/OFF		3	0	2	0	10	5	15	5	20
Formation and management of SHGs	Formation and management of SHG	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Leadership Development	Importance of leadership in the development of Agriculture	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Mobilization of social capital	Effective utilization of social & natural resources.	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20

Entrepreneurial development of Farmers / youth	Development of entrepreneurship skill among Farmers	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Group dynamics	Need and importance of farmers club/SHG	3rd Quarter	2	ON/OFF		3	0	2	0	10	5	15	5	20
Formation and management of SHGs	Formation and management of SHG	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Leadership Development	Importance of leadership in the development of Agriculture	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Mobilization of social capital	Effective utilization of social & natural resources.	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Entrepreneurial development of Farmers / youth	Development of entrepreneurship skill among Farmers	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Group dynamics	Need and importance of farmers club/SHG	4th Quarter	2	ON/OFF		3	0	2	0	10	5	15	5	20
Formation and management of SHGs	Formation and management of SHG	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Leadership Development	Importance of leadership in the development of Agriculture	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Mobilization of social capital	Effective utilization of social & natural resources.	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20

Entrepreneurial development of Farmers / youth	Development of entrepreneurship skill among Farmers	-do-	2	ON/OFF		3	0	2	0	10	5	15	5	20
Rural youth														
Vermin culture	Vermin composting	1st Quarter	3	ON/OFF		3	0	2	0	15	5	20	5	25
Enterpreneurship	Role of Enterpreneur in Agriculture	-do-	3	ON/OFF		3	0	2	0	15	5	20	5	26
ICT	Use of ICT in Agriculture	2nd Quarter	3	ON/OFF		3	0	2	0	15	5	20	5	27
Integrated farming System	Goatery	-do-	3	ON/OFF		3	0	2	0	15	5	20	5	25
Vermin culture	Vermin composting	3rd Quarter	3	ON/OFF		3	0	2	0	15	5	20	5	25
Formation and management of SHGs	Need and Importance of SHG / Farmers club	-do-	3	ON/OFF		3	0	2	0	15	5	20	5	25
Vermin culture	Vermin composting	4th Quarter	3	ON/OFF		3	0	2	0	15	5	20	5	25
Integrated farming	Dairy farming	-do-	3	ON/OFF		3	0	2	0	15	5	20	5	25
Extension Functionaries														
Formation and management of SHGs	Need and Importance of SHG / Farmers club	1st Quarter	2	ON		5	0	0	0	15	0	20	0	20
Group dynamics	Significance of Group Farming	1st Quarter	2	OFF		5	0	0	0	15	0	20	0	20

Market led Extension	Use of ICT Tools for market access.	2nd Quarter	2	OFF		5	0	0	0	15	0	20	0	20
Leadership Development	Role & Importance of Leaders in managing Groups	2nd Quarter	2	ON		5	0	0	0	15	0	20	0	20
Market led Extension	Use of ICT Tools for market access.	3rd Quarter	2	ON		5	0	0	0	15	0	20	0	20
Vermincompost	Importance of vermicompost in organic farming	3rd Quarter		OFF		5	0	0	0	15	0	20	0	20
Formation and management of SHGs	Capacity building of Extension Functionaries	4th Quarter		OFF		5	0	0	0	15	0	20	0	20
Group dynamics	Significance of Group Farming	4th Quarter	2	ON		5	0	0	0	15	0	20	0	20

3. **Plant Protection**

Thematic area	**Title of Training**	**Quarter**	**Duration**	Venue	**Tentative Date**	**Participants**								
						SC/ST				**Other**		**Total**		
						M	F	M	F	M	F	M	F	**T**
Practicing Farmer														
IPM	Management of diamond back moth in cauliflower	1th Quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of major disease of mango	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of early and late blight of potato	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of aphids in oilseed crops	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of leaf curl disease of tomato	-Do-	2	OFF		2	1	0	0	15	2	17	3	20

IDM	Management of mal formation in mango	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of stem borer in maize	2nd Quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Integrated disease management in vegetable crops	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Importance of NPV in controlling fruit and shoot borer of Brinjal	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of stem borer in paddy	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of bacterial leaf blight in paddy	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of damping off in nursery of vegetable crop	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of cut worm in lentil and gram	3rd Quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of seed and soil born disease of lentil	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Importance of pheromone trap in managing fruit and shoot borer in brinjal	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of white fly in solanaceae vegetable	-Do-	2	OFF		2	1	0	0	15	2	17	3	20

IDM	Management of rust in lentil	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Importance of NPV in controlling pod borer of gram	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Importance of deep ploughing in pest management	4th Quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of Yellow vein mosaic in Bhindi	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Importance of NPV in controlling fruit and shoot borer of Brinjal	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Integrated pest management in maize	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Integrated disease management in onion	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Preparation of neem Kernel extract for controlling insect pest	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Rural youth														
Crop diversification	Button mushroom cultivation	1st Quarter	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Button mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20

Crop diversification	Oyster mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Milky Mushroom cultivation	2nd Quarter	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Milky Mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Paddy straw mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Oyster mushroom cultivation	3rd Quarter	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Button mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Oyster mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Milky Mushroom cultivation	4th Quarter	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Milky Mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Crop diversification	Paddy straw mushroom cultivation	-Do-	3	ON		2	1	0	0	15	2	17	3	20
Extension functionaries														
IPM	Management of early and late blight of potato	1st quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of nematode problem in soil	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of anthracnose and die back disease in mango	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of major insect pest of vegetable crops	2nd quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of major disease of paddy	-Do-	2	OFF		2	1	0	0	15	2	17	3	20

IDM	Management of collar rot disease of papaya	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of major insect pest of pulse crops	3rd quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of major disease of pulse and oilseed crop	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Importance of seed treatment in controlling major disease of wheat	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
IPM	Management of major insect pest of maize	4th quarter	2	OFF		2	1	0	0	15	2	17	3	20
IDM	Management of mosaic disease in moong	-Do-	2	OFF		2	1	0	0	15	2	17	3	20
Production of bio control agent and bio pesticide	Importance of bio control agent in managing insect pest of Paddy	-Do-	2	OFF		2	1	0	0	15	2	17	3	20

4. **Soil Science**

Thematic area	Title of Training	Quarter	Duration	Venue	Tentative Date	Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Practicing Farmer														
Soil health and fertility management	Importance of balanced fertilizer application in onion production	1st Quarter	2	OFF		4	1	0	0	18	2	22	3	25
Soil and water testing	Importance of soil and water testing for	-Do-	2	OFF		4	1	0	0	18	2	22	3	25

	better crop production													
Integrated nutrient management	Integrated nutrient management in paddy	-Do-	2	OFF		4	1	0	0	18	2	22	3	25
Production and use of organic input	Vermicompost production techniques	-Do-	2	ON		4	1	0	0	18	2	22	3	25
Micronutrient deficiency in crop	Importance of secondary and micronutrient in crop production	-Do-	2	OFF		4	1	0	0	18	2	22	3	25
Soil and water testing	Importance of soil and water testing for better crop production	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Soil fertility management	Nutrient management in maize	2nd Quarter	2	OFF		5	0	0	0	18	2	23	2	25
Soil and water conservation	Importance of BGA application in water conservation in paddy	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Integrated nutrient management	Integrated nutrient management in paddy	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Nutrient use efficiency	Importance of PSB application in enhancing P use efficiency	-Do-	2	OFF		4	1	0	0	18	2	22	3	25
Management of problematic soil	Reclamation of usar land	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Micronutrient deficiency in crop	Role and deficiency symptoms of zinc in paddy	-Do-	2	OFF		5	0	0	0	18	2	23	2	25

Soil fertility management	Importance of balanced fertilizer application in vegetable crop	3rd Quarter	2	OFF		5	0	0	0	18	2	23	2	25
Soil and water testing	Importance of soil testing for better crop production	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Integrated nutrient management	Integrated nutrient management in pulses	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Management of problematic soil	Reclamation of usar land	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Micronutrient deficiency in crop	Importance of boron nutrition in managing hollow heart and browning of cauliflower	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Nutrient use efficiency	Importance of PSB culture in improving P use efficiency	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Soil fertility management	Importance of green manuring in soil fertility management	4th Quarter	2	OFF		5	0	0	0	18	2	23	2	25
Soil and water conservation	Importance of growing cover crop in soil and water conservation	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Integrated nutrient management	Integrated nutrient management for sustainable agriculture production	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Micronutrient deficiency in crop	Importance of Fe and Zn containing fertilizer in managing leaf chlorosis in	-Do-	2	OFF		5	0	0	0	18	2	23	2	25

	paddy													
Nutrient use efficiency	Importance of using neem and sulphur coated urea in improving N use efficiency	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Soil and water testing	Importance of soil and water testing for better crop production	-Do-	2	OFF		5	0	0	0	18	2	23	2	25
Rural Youth														
Soil health and fertility management	Practical hand on soil testing using soil testing kit	1st quarter	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Blue green algae production technique	-Do-	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Vermicompost production and their marketing	2nd quarter	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Blue green algae production technique	-Do-	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Practical hand on soil testing using soil testing kit	3rd quarter	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Vermicompost production and their marketing	-Do-	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Vermicompost production and their marketing	4th quarter	3	ON		5	0	0	0	16	4	21	4	25
Production and use of organic inputs	Practical hand on soil testing using soil testing kit	-Do-	3	ON		5	0	0	0	16	4	21	4	25
Extension functionaries														

Soil health and fertility management	Fertilizer recommendation for rice through crop manager (webapp)	1st quarter	1	OFF		2	0	0	0	16	2	18	2	20
Integrated nutrient management	Integrated nutrient management in Paddy	-Do-	1	OFF		2	0	0	0	16	2	18	2	20
Micronutrient deficiency in crops	Fertilizer recommendation for rice through crop manager (webapp)	2nd quarter	1	ON		2	0	0	0	16	2	18	2	20
Integrated nutrient management	Role of green manuring in soil fertility management	-Do-	1	OFF		2	0	0	0	16	2	18	2	20
Integrated nutrient management	Integrated nutrient management in pulses	3rd quarter	1	OFF		2	0	0	0	16	2	18	2	20
Micronutrient deficiency in crops	Fertilizer recommendation for wheat through crop manager (webapp)	-Do-	1	OFF		2	0	0	0	16	2	18	2	20
Integrated nutrient management	Fertilizer recommendation for Maize through crop manager (webapp)	4th quarter	1	OFF		2	0	0	0	16	2	18	2	20
Micronutrient deficiency in crops	Role of micronutrient, their deficiency, symptoms and corrective measures for different crops.	-Do-	1	OFF		2	0	0	0	16	2	18	2	20

13. Frontline demonstration to be conducted* 2021

Sl. No	Season	Crop	Variety	Area in ha.	No. of Demonstration
1	Kharif	Paddy	R. Sweta	12	
2		Madua		0.25	
3		Turmeric	R. Sonia	01	
4		Fodder crop	Napier	02	
5	Rabi	Wheat	HD- 2967	04	
6		Mushroom	Oyster, Button, Milky	100 kg.	
7		Vegetable Seed	Nutrigarden	100 pkt.	100
8		Sodium Benzoate		500 gm	25 farmers
9		Citric Acide		500 gm	25 farmers
10		Potassium meta bisulphate		500 gm	25 farmers

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
								SC		ST		Other		Total		
					Name of Inputs	Demo	Local	M	F	M	F	M	F	M	F	T

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T

* Repeat the above tables and information in Point no. 4 for EACH FLD being proposed.

a) Seed and planting material production by utilization of instructional farm (Crops / Enterprises)

Name of the Crop / Enterprise	Variety / Type	Period From…… to ……..	Area (ha.)	Details of Production				
				Type of Produce	Expected Production (quintals)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)
Paddy					150			
Gram					40			
Wheat					120			
Mustard					25			
Linseed					30			
Mango					1000 plants			

Guava					1000 plants			
Citrus					1000 plants			
Ornamental					2500 plants			

b) Village Seed Production Programme

Name of the Crop / Enterprise	Variety / Type	Period From…… to ……..	Area (ha.)	No. of farmers	Details of Production				
					Type of Produce	Expected Production(q)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)

14. Extension Activities

Nature of Extension Activity	No. of activities	Total		
		Male	Female	Total
Field Day	16	220	110	330
KisanMela	4	100	50	150
KisanGhosthi	11	100	50	150
Method Demonstrations	10	50	10	60
Group meetings	8	200	100	300
Lectures delivered as resource persons	5	100	50	150
Advisory Services	150	200	100	300
Scientific visit to farmers field	40	80	40	120
Diagnostic visits	300	200	50	250
Exposure visits	2	100	25	125
Soil health Camp	2	400	100	500
Soil test campaigns	2	300	100	400
Scientific visit to farmers field	35	781	241	1022
Farmers visit to KVK	500	800	300	1100
Swatchta Hi Sewa	15	450	154	604

15. Revolving Fund (in Rs.)

Opening balance of 2019-2020 (As on 01.04.2020)	Amount proposed to be invested during 2021-22	Expected Return

16. Expected fund from other sources and its proposed utilization

Project	Source	Amount to be received (Rs. in lakh)
BSDM/RPL	**Bihar Govt.**	**0.096**

17. On-farm trials to be conducted*

ON FARM TRIAL (2021-22)

OFT: 1 (Agricultural Engineering)

1	**Title of On Farm Trial**	Assessment of different bag storage method to minimize losses in storage
2	**Problem diagnosed**	Post-Harvest losses in storage.
3	**Details of Technologies selected for Assessment**	**Farmers Practice**- Storage in Plastic Bag **Tech Option I**- Storage in thin PVC bag and putting inPlastic Bag **Technology Option II**- Storage in Hermetic Bag and putting in Plastic Bag
4	**Source of Technology**	University of Illions, USA, BAU Sabour
5	**Performance Indicator**	Moisture Content %, Germination Rate %, Storage Loss%, BC ratio
6	**Replication**	10
7	**Production system and thematic area**	Pulse- Fallow
8	**Constraints identified**	Storage loss during storage of pulses resulting poor income
9	**Process of Farmer Participation**	

OFT: 2 (Agricultural Engineering)

1	**Title of On Farm Trial**	Assessment of different Mulching Materials in production of Vegetables
2	**Problem diagnosed**	Weed probalem as well as water management.
3	**Details of Technologies selected for Assessment**	**Farmers Practice**- Without Mulching **Tech Option I**- Mulching with paddy straw **Technology Option II**- Mulching with Plastic Mulching Material
4	**Source of Technology**	BAU Sabour
5	**Performance Indicator**	No of irrigation, weed population/m2, yield q/ha & BC ratio
6	**Replication**	10
7	**Production system and thematic area**	Pulses- Vegetables
8	**Constraints identified**	High cost of weeding and water utilization.
9	**Process of Farmer Participation**	

OFT: 3 (Extension Education)

1	**Title**	Impact of Community Radio Programmeonawareness(knowledg related to Nutritional and health wellbeing of Radio Listener
2	**Problem diagnosed**	Low awareness level on Nutrition and health wellbeing among Listeners (Daily life experience, books and newspaper and TV/radio are the main sources of information as coated by Information Sources and Awareness Level of Rural Communities on Food and Nutrition Security Discussion Paper 7 (MANAGE-Centre for Agricultural Extension Innovations, Reforms, and Agripreneurship (CAEIRA)
3	**Details of Technology**	**Tech Option I** – Farmers listeningCommunity Radio **Tech Option II** - Farmers listening other media
4	**Source of technology**	C.R. Compendium
5	**No. of Farmers**	50 Radio listener
6	**Production system and Thematic Area**	Capacity Building
7	**Constraints identified and Feedback of research**	
8	**Performance of Technology Performance Indicator**	Change in Nutritional awareness (knowledge), Change in awareness (knowledge) related to health wellbeing due to listening of C.R
9	**Process of Farmers Participation & their reaction**	

OFT: 4 (Extension Education)

1	**Title**	Study on awareness and perception of farmers about Soil Health In Paddy cultivation.
2	**Problem diagnosed**	Low awareness about benefits of Soil Health Card among farmers
3	**Details of Technology**	**Tech Option I -** Farmers having no Soil Health Card **Tech Option II -** Farmers having Soil Health Card but not follow the recommendation. **Tech Option III -** Farmers having Soil Health Card and follow the recommendation.
4	**Source of technology**	BAU,Sabour, Bhagalpur
5	**No. of Farmers**	20
6	**Production system and Thematic Area**	Capacity Building
7	**Performance of Technology with performance indicator**	Awareness about SHC, Difficulty in calculation of Fertilizer dose, Change in pattern of fertilizer use and Yield
8	**Final Recommendation for Micro level Situation**	
9	**Process of Farmers Participation and their reaction**	

OFT : 5 (Plant Protection)

1	**Title**	Crop residue management through mushroom production.
2	**Problem diagnosed**	Mustard straw is not suitable for cattle feed and farmers used to burn in the Field after threshing leads to environmental pollution and hazzard to soil health.
3	**Technological option**	**Farmers Practice:** - Use of wheat straw as substrate for oyster

		mushroom production (P. florida) **Technology option-I:** - 50% Wheat straw + 50% Mustard straw as substrate. **Technology option-II:** - 75% Wheat straw + 25% mustard straw as substrate. **Technology option-III:** - 50% Wheat straw + 50% mustard straw supplemented with 20gm besan / kg straw.
4	**Source of Technology**	NCMR Solan
5	**Replication**	5
6	**Production system and thematic area:**	
7	**Performance of the technology with performance indicators**	Yield disease appearance Size of fruit.
8	**Constraints identified**	
9	**Process of Farmer Participation**	
10	Critical Input.	Critical Input :- Mushroom Spawn, P.P. Bag, Formaldhyde.

OFT-: 6 (Plant Protection)

1	**Title**	Evaluation of different fungicide for controlling Foot rot (Sclerotinia sclerotiorum) of coriander cultivated in raing season.
2	**Problem diagnosed**	Coriander is cultivated in raing season for leaf purpose in the district suffers severe problem of Foot rot leads to heary economic loss to the farmers.
3	**Technological option**	**Farmers Practice:** - No seed & soil treatment only Foliar spray of mancozeb @ 2 gm/lit water. **Technology Option-I:** Seed treatment with T. Viridae @ 6 gm/kg seed and soil treatment with T. viridea @ 4 kg/ha. **Technology Option-II:** Seed & soil treatment with T. viridae + Foliar spray of sulfex @ 3 gm/lit water at15 days interval. **Technology Option-III:** Seed & soil treatment with T. Viridea + foliar spray of metalaxyl @ 1 gm/ lit. water at 15 days interval.
4	**Source of Technology**	BAU, Ranchi
5	**Replication**	5 ($200m^{2)}$
6	**Production system and thematic area:**	
7	**Performance of the technology with performance indicators**	Disease Incidance, Yield, Net Income & B:C Ratio
8	**Constraints identified**	
9	**Process of Farmer Participation**	
10	Critical Input	Seed, Chemical

OFT: 9 (Soil science)

1	**Title**	**Evaluation of phosphate management through different**

		sources for enhancing productivity of Arhar in Patna district.
2	**Problem diagnosed**	**Poor nutrient management Practices leads to low yield and profitability**
3	**Technological option**	Farmers Practice- No fertilizer application in Arhar crop. Technological Option I:- RDF i.e use of N @ 20 kg/ha,$P_2 0_5$ @ 40 kg/ ha (basal)and $K_2 0$ @ 20 kg/ ha (basal)(Through DAP and MOP) Technological Option II:-Seed treatment with Rhizobium and PSB, 40 Kg$P_2 0_5$/haP_2O_5 through SSP and 20 Kg $K_2 0$/ha through MOP. (In all technological option seed treatment will be done as per standard Practice, Pheromone trap will be used @10 trap/ha)
4	**Source of Technology**	BAU, Sabour
5	**Replication**	07
6	**Production system and thematic area:**	Maize/Arhar - Green gram
7	**Performance of the technology with performance indicators**	No. of Branch / Plant, No. of Pod / Branch, No. of seed / pod, yield (q/ha), B:C ratio
8	**Constraints identified**	
9	**Process of Farmer Participation**	

OFT: 10 (Soil science)

1	**Title**	Evaluation of Sulphur and Boron Application in mustard on crop yield.
2	**Problem diagnosed**	Deficiency of Sulphur and Boron leads to poor crop yield of mustard.
3	**Technological option**	Farmers Practice: Use of N @ 75 kg/ha P_2O_5 @ 55 kg/ha. TO I- RDF i.e use of N @ 60 kg/ha (½ basal + ½ at flowering stage) P_2O_5@ 40kg/ha (basal) K_2O@ 40 kg/ha (basal) TO II- RDF+20kg/S/ha TO III- RDF+ 20kg/S/ha+1 kg/ B/ha.
4	**Source of Technology**	BAU, Sabour
5	**Replication**	06
6	**Production system and thematic area:**	Rice- Mustard/Wheat- Grenn gram
7	**Performance of the technology with performance indicators**	No. of branch / plant, No. of pod / branch, No of seed /Siliqua, yield (q/ha), B:C ratio
8	**Constraints identified**	
9	**Process of Farmer Participation**	

18. List of Projects to be implemented by funding from other sources (other than KVK fund)

Sl. No.	Name of the project	Fund expected (Rs.)
1	ATMA Patna	2.5 Lakh
2	SMART New Delhi	0.50 Lakh
3	BAU, Sabour (Video Confe.)	4 Lakh
4	BAU Sabour (IFS)	2 Lakh

19. No. of success stories proposed to be developed with their tentative titles - 04

20. Scientific Advisory Committee

Date of SAC meeting held during 2020-21	Proposed date during 2021-22
14.10.2020	October, 2021

21. Soil and water testing

Details	No. of Samples	No. of Farmers									No. of Villages	No. of SHC distributed
		SC		ST		Other		Total				
		M	F	M	F	M	F	M	F	T		
Soil Samples	500							355	145	500	25	500
Water Samples	-											

22. Fund requirement and expenditure (Rs.)*

Item	Fund required for 2021-22 (Lakh)
Pay & Allowances	**148**
TA	**1.50**
Contingency	**18**
HRD	**1**
NR	**10**

* Any additional requirement may be suitably justified.

23. **Every KVK should bring a brief write-up supported by quality photographs about the technology having wide acceptability among the farming community of the district with factual data**