

# PROFORMA FOR PREPARATION OF ANNUAL REPORT (January-2019-December-2019)

## APR SUMMARY

(Note: While preparing summary, please don't add or delete any row or columns)

### 1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	60	1283	343	1626
Rural youths	4	41	86	127
Extension functionaries	9	147	91	238
<b>Total</b>	<b>73</b>	<b>1471</b>	<b>520</b>	<b>1991</b>
Sponsored Training	4	194	0	194
Vocational Training	2	40	0	40

### 2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	30	20	-
Pulses	0	0	-
Cereals	45	21	-
Vegetables	91	17.8	-
Other crops	-	-	-
Hybrid crops	0	0	-
<b>Total</b>	<b>166</b>	<b>58.8</b>	<b>-</b>
Livestock & Fisheries	8	0	24
Other enterprises	47	0	47
<b>Total</b>	<b>55</b>	<b>0</b>	<b>71</b>
<b>Grand Total</b>	<b>221</b>	<b>58.8</b>	<b>142</b>

### 3. Technology Assessment

Category	No. of Technology Assessed	No. of Trials	No. of Farmers
Crops	11	121	121
Livestock	2	36	12
Various enterprises	0	0	0
<b>Total</b>	<b>13</b>	<b>157</b>	<b>133</b>

### 4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	259	7388
Other extension activities	153	Mass
<b>Total</b>	<b>412</b>	<b>7388</b>

### 5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	8	2	-	-	10	-	20
	Voice only							

	Voice & Text both							
	<b>Total Messages</b>	<b>8</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>20</b>
	<b>Total farmers Benefitted</b>	<b>7000</b>	<b>500</b>	<b>-</b>	<b>-</b>	<b>6000</b>	<b>-</b>	<b>13500</b>

#### 6. Seed & Planting Material Production

	Quintal/Number	Value Rs.	Distributed to No. of farmers
Seed (q)	<b>72.28</b>	289120	
Planting material (No.)	<b>23700</b>	11500	<b>649</b>
Bio-Products (kg)			
Livestock Production (No.)	1608 litr	72360	
Fishery production (No.)			

#### 7. Soil, water & plant Analysis

Type of Samples	No. of samples analysed	No. of Beneficiaries	Value Rs.
Soil	140	225	
Water			
Plant			
<b>Total</b>	<b>140</b>	<b>225</b>	

#### 8. Publications

Books	0
Training Manual	
Book Chapter	
Research papers	2
Seminar Papers	
Technical bulletins	1
Technical reports	3
Others (pl. specify)	13
<b>Total</b>	<b>19</b>

## DETAIL REPORT OF APR (Jan.2019 to Dec. 2019)

### 1. GENERAL INFORMATION ABOUT THE KVK

#### 1.1. Name and address of KVK with phone, fax and e-mail

Address	Telephone		E mail
	Office	FAX	
College of Agriculture, BUAT, Banda	05192-232315	-	<a href="mailto:kvkbanda@gmail.com">kvkbanda@gmail.com</a>

#### 1.2. Name and address of host organization with phone, fax and e-mail

Address	Telephone		E mail
	Office	FAX	
Directorate of Extension, Banda University of Agriculture & Technology, Banda	05192-232307	232307	<a href="mailto:Doe.buat@gmail.com">Doe.buat@gmail.com</a>

#### 1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Shyam Singh	-	9450791440	shyamsingh15350@gmail.com

#### 1.4. Year of sanction:

#### 1.5. Staff Position (as on 31<sup>th</sup> December, 2019)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent/Temporary	Category (SC/ST/OBC/Other)	Mobile no.	Age	Email id
1	Programme Coordinator	Dr. Shyam Singh	Sr. Scientist & Head	Agronomy	37400-67000	135300	13.12.2017	Permanent	SC	9450791440	49	Kvkbanda@gmail.com
2	Subject Matter Specialist	Dr S.C. Singh	Scientist	Horticulture	15600-39100	87200	09.02.2018	Permanent	OBC	9411159717	42	Kvkbanda@gmail.com
4	Subject Matter Specialist	Dr. Pragya Ojha	Scientist	Home Science	15600-39100	57800	12.12.2017	Permanent	Other	9458891879	30	Kvkbanda@gmail.com
5	Subject Matter Specialist	Dr. Manjul Pandey	Scientist	Plant Protection	15600-39100	57800	12.12.2017	Permanent	Other	6394584646	42	Kvkbanda@gmail.com
6	Subject Matter Specialist	Dr. Manvendra Singh	Scientist	Animal Science	15600-39100	57800	15.12.2017	Permanent	Other	8168313754	35	Kvkbanda@gmail.com
7	Subject Matter Specialist	Dr. Diksha Patel	Scientist	Agriculture Extension	15600-39100	56100	16.04.2018	Permanent	Other	7404797378	28	Kvkbanda@gmail.com
8	Computer Programmer	Shri Avinash Nigam	Computer Programmer	-	9300-34500	36500	11.12.2017	Permanent	Other	8400120570	34	Kvkbanda@gmail.com
9	Farm	Shri	Farm	-	930	3650	11.12.2	Perma	OBC	700732	2	Kvkban

	Manager	Ghan Shyam Yadav	Manager /Lab Asstt.		0-34500	0	017	nent		3455	7	da@gmail.com
10	Programme Assistant	Shri Ajay Kumar Tiwari	Farm Manager /Lab Asstt.	-	9300-34500	35400	24.02.2018	Permanent	Other	8933862656	28	Kvkbanda@gmail.com
11	Accountant / Superintendent	Shri Abhishhek Shahi	Accountant	-	9300-34500	36500	11.12.2017	Permanent	Other	7897830330	29	Kvkbanda@gmail.com
12	Stenographer	Shri Sarad Chandra	Stenographer	-	5200-20200	26300	11.12.2017	Permanent	OBC	9648711425	36	Kvkbanda@gmail.com
13	Driver	Shri Chandra Skekhar	Driver	-	5200-20200	22400	11.12.2017	Permanent	Other	9556407161	44	Kvkbanda@gmail.com
14	Driver	Shri Vikas Gupta	Driver	-	5200-20200	22400	11.12.2017	Permanent	Other	7379539458	28	Kvkbanda@gmail.com
15	Supporting staff	Shri Raghuv eer	Peon	-	18000-56	24900	01.06.2010	Permanent	SC	9452226449	50	
16	Supporting staff	Shri Preeta m	Peon	-	5200-20200	24200	01.09.2010	Permanent	SC		46	

1.6. Total land with KVK (in ha) : 8.89

S. No.	Item	Area (ha)
1	Under Buildings	01.69
2.	Under Demonstration Units	00.20
3.	Under Crops	07.00
4.	Orchard/Agro-forestry	--
5.	Others (specify)	--

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR			77.00	2011		Only Roof level construction
2.	Farmers Hostel	ICAR			25.50	2011		Foundation level
3.	Staff Quarters (6)				--	--		Nil
4.	Demonstration Units (2)				--	--		Nil
					--	--		Nil
5	Fencing				--	--		Nil
6	Rain Water harvesting system				--	--		Nil
7	Threshing floor				--	--		Nil
8	Farm godown				--	--		Nil

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep Bolero LX	2010	4,57,526		Good
Tractor Massy	2010	4,74,140		Good
Motorcycle	-	-	-	-

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Cultivator	2011	--	Old transferred from DDSF
Disc Harrow	2011	--	Old transferred from DDSF
Seeddril	2011	--	Old transferred from DDSF
Digital Camera	2014	7450	Good
Laptop+Biometric with UPS	2014	49000	Repairable
Desktop (Hp)	2019	49000	Good
UPS	2019	6000	Good
DSLR Camera	2019	43000	Good

1.8. A). Details SAC meeting\* conducted in the year

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	15.02.2019	<ol style="list-style-type: none"> <li>1. Dr. Atar Singh (Director, ICAR-ATARI, Kanpur)</li> <li>2. Dr. N. K. Bajpai (Director Extension, BUAT, Banda)</li> <li>3. Dr. G.S. Pawar (Dean, College of Agri.)</li> <li>4. Dr. S.V. Dwevdi (Dean, Horticulture)</li> <li>5. Dr. Narendra Singh (Asso. DE)</li> <li>6. Shri. A.K. Singh (DDA)</li> <li>7. Shri Pramod Kumar (DAO)</li> <li>8. Dr. I.N. Singh (CVO)</li> <li>9. Shri Subhash Chand Rajpoot (DPO, BAIF)</li> <li>10. Smt. Seema Khan (Social Worker)</li> <li>11. Dr. Parvej Khan (DHO)</li> <li>12. Shree Shivendra Singh Bhaghel (Senior Horticulture Supervisor)</li> <li>13. Shree Sachin Tiwari (IFFCO)</li> <li>14. Shri Kapil Gangwar (IFFCO)</li> <li>15. Shri. Shantibhusan Singh (Prog. Farmer)</li> <li>16. Sri Rahul Awasthi (Prog. Farmer)</li> <li>17. Shri Vigyan Sukhla (Prog. Farmer)</li> <li>18. Shri Pradeep Mishra ((Prog. Farmer)</li> <li>19. Shri Ashok Singh (Prog. Farmer)</li> <li>20. Shri Surendra Pal Singh (Prog. Farmer)</li> <li>21. Dr. Shyam Singh (Head, KVK)</li> <li>22. Dr. Subhash Chandra Singh (SMS, Horticulture)</li> <li>23. Dr. Nikhil Kumar Singh (SMS, Agronomy)</li> <li>24. Dr. Manjul Pandey (SMS, Plant Protection)</li> <li>25. Dr. Manvendra Singh (SMS, Animal Science)</li> <li>26. Dr. Sarita Devi (SMS, Home Science)</li> <li>27. Dr. Diksha Patel (SMS, Agriculture Extension)</li> <li>28. Ghanshyam Yadav (Fram Manager)</li> </ol>	<ol style="list-style-type: none"> <li>1. Crop cafeteria should be technology demsotration unit rather than only varaital demonstration unit</li> <li>2. use of waste decomposer should be promoted among farmers</li> <li>3. KVK and line departments should work in collaboration for effective transfer of technologies to farmers</li> <li>4. Programmes should be on breed improvement and round the year availability of green fodder</li> <li>5. Zero tillage and micro-irrigation technologies should be promoted</li> <li>6. There is need to promote horticulture crops including spices, biofortified crops among farmers</li> <li>7. There is need to promote enterpreurship among rural youth and women</li> <li>8. Use of sexed semen technology should be promoted among farmers.</li> <li>9. Organic farming and farmers should be promoted by developing nodal organic villages in the District.</li> </ol>	All the suggestions have been included in Action Plan (2020-21) of KVK, Banda

\* Attach a copy of SAC proceedings along with list of participants



# कृषि विज्ञान केन्द्र, बाँदा प्रसार निदेशालय



बाँदा कृषि एवं प्रौद्योगिक विश्वविद्यालय, बाँदा-210001, उ०प्र०  
Telephone No:- 05192- 232315; website:- banda.kvk4.in, e-mail:- kvkbanda@gmail.com

पत्रांक: / के०वी०के० / 2019

दिनांक / 10 / 2019

## वैज्ञानिक सलाहकार समिति दिनांक 15.10.2019 को आयोजित बैठक का कार्यवृत्त

निदेशक प्रसार महोदय की अध्यक्षता एवं निदेशक अटारी की उपस्थिति में आज दिनांक 15.10.2019 को कृषि विज्ञान केन्द्र, बाँदा की वैज्ञानिक सलाहकार समिति की बैठक केन्द्र के प्रशिक्षण कक्ष में सम्पन्न हुयी। इस बैठक में निम्न लिखित सदस्यों (जनपद के अधिकारी, वैज्ञानिक एवं प्रगतिशील कृषक) ने प्रतिभाग किया—

1.	डा० अतर सिंह निदेशक, अटारी, कानपुर	15.	श्री विज्ञान शुक्ला, प्रगतिशील कृषक
2.	डा० एन० के० बाजपेयी, निदेशक प्रसार	16.	अशोक सिंह, प्रगतिशील कृषक
3.	डा० जी०एस० पवार, अधिष्ठाता कृषि महाविद्यालय	17.	श्री प्रदीप मिश्रा, प्रगतिशील कृषक
4.	डा० एस० वी० द्विवेदी, अधिष्ठाता उद्यान महाविद्यालय	18.	श्री शान्ती भूषण, प्रगतिशील कृषक
5.	डा० नरेन्द्र सिंह, सह निदेशक प्रसार	19.	श्री सुरेन्द्र पाल सिंह, प्रगतिशील कृषक
6.	डा० ए०के० सिंह, उप कृषि निदेशक, बाँदा	20.	डा० श्याम सिंह, अध्यक्ष कृषि विज्ञान केन्द्र
7.	डा० प्रमोद कुमार, जिला कृषि अधिकारी	21.	डा० सुभाष चन्द्र सिंह, वैज्ञानिक, उद्यान
8.	डा० अई०एन० सिंह, मु०पशु चिकित्सा अधिकारी, बाँदा	22.	डा० निखिल कुमार सिंह, वैज्ञानिक, सस्य विज्ञान
9.	श्री सुभाष चन्द्र राजपूत, डी०पी०ओ०, बायफ, बाँदा	23.	डा० मानवेन्द्र सिंह, वैज्ञानिक, पशु विज्ञान
10.	श्रीमती सीमा खॉन, समाज कल्याण सेवा समिति, बाँदा	24.	डा० मंजुल पाण्डेय, वैज्ञानिक फसल सुरक्षा
11.	श्री परवेज खान, जिला उद्यान अधिकारी	25.	डा० दीक्षा पटेल, वैज्ञानिक, कृषि प्रसार
12.	श्री शिवेन्द्र सिंह बघेल, वरिष्ठ उद्यान निरीक्षक	26.	डा० सरिता देवी, वैज्ञानिक, गृह विज्ञान
13.	श्री सचिन तिवारी, इफको	27.	श्री घनश्याम यादव, प्रक्षेत्र प्रबन्धक
14.	श्री कपिल गंगवार, इफको		

बैठक में केन्द्र द्वारा समिति की पिछली बैठक दिनांक 15.02.2019 से सितम्बर, 2019 तक सम्पादित कराये गये क्रिया कलापों की समीक्षा हुयी एवं आगामी अर्धवार्षिक वित्तीय वर्ष अक्टूबर 2019 से मार्च, 2020 तक की कार्ययोजना पर विचार-विमर्श एवं सुझाव लिये गये। बैठक की शुरुआत करते हुये केन्द्र के अध्यक्ष डा० श्याम सिंह ने डा० अतर सिंह, निदेशक प्रसार एवं अन्य सभी माननीय सदस्यों का पौधे भेंट कर स्वागत किया तदपश्चात केन्द्र की संकलित प्रगति आख्या एवं आगामी अर्धवर्ष की कार्ययोजना को पावर प्वाइंट प्रजेन्टेशन के माध्यम से प्रस्तुत किया। प्रस्तुति के दौरान समिति के सदस्यों से सुझाव भी आमंत्रित किये गये। इसके पश्चात केन्द्र पर कार्यरत विभिन्न विषयों के विषय वस्तु विशेषज्ञों ने अपने-अपने विषय की प्रगति एवं कार्ययोजना प्रस्तुत की।

केन्द्र के विभिन्न वैज्ञानिकों द्वारा प्रस्तुत की गयी प्रगति आख्या एवं कार्ययोजना पर समिति के सदस्यों, उपस्थित प्रगतिशील कृषकों द्वारा संतोष व्यक्त किया गया साथ ही चर्चा के दौरान विभिन्न सदस्यों ने अपने-अपने सुझाव भी प्रस्तुत किये जो निम्नवत है।

### निदेशक अटारी, कानपुर के सुझाव—

1. क्राप कैफेटेरिया पर प्रजाति प्रदर्शन के अलावा तकनीकी प्रदर्शन भी लगाये।
2. वैज्ञानिक सलाहकार समिति में 02 (लघु एवं वृहद कृषक समूह) महिला सदस्य शामिल करें—
3. क्षेत्र विशेष की माँग के अनुसार तकनीकी का प्रसार करें।
4. तकनीकी का प्रदर्शन इन्सट्रक्शनल फार्म पर भी लगायें।
5. पशु विज्ञान सम्बन्धी एफ०एल०डी० एवं ओ०एफ०टी० के आंकड़े अलग प्रस्तुत करें।
6. कृषि अवशेषों के प्रभावी प्रबन्धन हेतु वेस्ट डिकम्पोजर का प्रचार करें।
7. तकनीकी हस्तान्तरण को प्रभावी बनाने के लिये कृषि विज्ञान केन्द्र एवं कृषि विभाग मिलकर कार्य करें।
8. बौछारी सिंचाई एवं टपक सिंचाई की विधि की जानकारी कृषकों तक पहुँचाई जाये।

### निदेशक प्रसार महोदय के सुझाव—

1. कृषि में वैज्ञानिकता को महत्व दें।
2. ओ०एफ०टी० एवं एफ०एल०डी० में तकनीकी सम्बन्धी मानकों का विश्लेषण अवस्य करें।
3. महिलाओं के लिये कटाई उपरान्त प्रबंधन, मूल्यवर्धन सम्बन्धी रोजगार परक प्रशिक्षण आयोजित करें।
4. जनपद में फल एवं बागवानी के अन्तर्गत क्षेत्रफल बढ़ाने के लिये प्रयास करें।

5. केन्द्र द्वारा सम्पादित कार्यों का प्रस्तुतीकरण और अच्छे तरीके से करें।
6. प्रशिक्षण के शीर्षक का उद्देश्य विस्तृत एवं सारगर्भित होना चाहिये।

#### सह निदेशक प्रसार महोदय के सुझाव—

1. बैठक के प्रारम्भ में वैज्ञानिक सलाहकार समिति के उद्देश्य एवं कार्य समझाये जाये।
2. प्रस्तुतीकरण आंकड़ों सहित करें।
3. मूल्यवर्धन के क्षेत्र में कार्य किया जाना चाहिये।
4. रिपोर्ट/पावर प्वाइंट में कार्यक्रमों के छायाचित्र विवरण सहित प्रस्तुत करें।
5. सरकार की योजनाओं के अनुसार नयी शब्दावली का समावेश करें।
6. जैविक खेती पर विशेष महत्व दिया जाना चाहिये।

#### डा० एस० वी० द्विवेदी प्राध्यापक उद्यान विज्ञान—

1. बैठक का क्रमांक अंकित करें साथ ही उन्होंने अवगत कराया कि केन्द्र के बीयूएटी में हस्तान्तरण के उपरान्त दिनांक 29.07.2017 को प्रथम बैठक आयोजित की गयी इस प्रकार यह केन्द्र की तृतीय बैठक होगी।
2. वैज्ञानिक सलाहकार समिति की रिपोर्ट में सदस्यों की सूची लगायी जाये।
3. पुरानी बैठकों में प्राप्त सुझावों पर की गयी कार्यवाही को आकड़ों सहित प्रस्तुत करें।

#### उप कृषि निदेशक महोदय—

1. जनपद में विभाग के कार्यों में अधिक सहभागिता करें।
2. केन्द्र द्वारा आयोजित प्रदर्शनों पर कृषकों का भ्रमण आयोजित करें।
3. नये-नये कृषि यंत्रों का प्रदर्शन किया जाये।

#### जिला कृषि अधिकारी—

1. मसाला वर्गीय फसलों का एवं बायो फोर्टीफाइड प्रजातियों का प्रचलन बढ़ाने के लिये कार्य किया जाये।

#### मुख्य पशु चिकित्सा अधिकारी—

1. पशुओं की नस्ल सुधारने हेतु थारपारकर एवं कान्क्रेज नस्लों द्वारा कृतिम गर्भाधान को बढ़ावा दिया जाय।
2. कृषकों में पशुओं के टीकाकरण हेतु जागरूकता फैलाई जाये।

#### जिला कार्यक्रम समन्वयक, बायफ—

1. सेक्ड सार्टेड सीमेने का प्रचार प्रत्येक कार्यक्रम में करें।

#### श्रीमती सीमा खॉन—

1. महिलाओं एवं बच्चों में कुपोषण की समस्या पर जागरूकता हेतु कार्यक्रम कराये जाये।
2. महिलाओं को भी स्वाम्बन सम्बन्धी प्रशिक्षण केन्द्र पर आयोजित किये जायें।

#### जिला उद्यान अधिकारी—

1. उद्यान विभाग से समन्वय स्थापित कर योजनाओं में सहभागिता बढ़ाई जाये।
2. फलों एवं सब्जियों की खेती कर फसल सघनता बढ़ाने हेतु कृषकों में जागरूकता फैलाई जाये।

#### श्री अशोक सिंह प्रगतिशील कृषक—

1. बीजोत्पादन को बढ़ावा दिया जाये।
2. मेड़ बन्दी व जल संरक्षण अभियान चलाया जाये।

#### श्री शान्ती भूषण प्रगतिशील कृषक —

1. रेनगन का प्रचार-प्रसार अधिक से अधिक होना चाहिये।
2. युवाओं के लिये कार्य कर उन्हें कृषि से जोड़े एवं तकनीकी ज्ञान के साथ-साथ सामाजिक जागरूकता की भी आवश्यकता है।

#### श्री विज्ञान शुक्ला प्रगतिशील कृषक —

1. युवाओं को खेती के विभिन्न आयामों पर प्रशिक्षित किया जाये।
2. जैविक खेती को बढ़ावा देने के उद्देश्य से नोडल गाँव विकसित करने के उद्देश्य से जैविक गाँव चयनित कर अभियान के रूप में जैविक खेती का प्रचार-प्रसार किया जाये।

(श्याम सिंह)  
अध्यक्ष

प्रतिलिपि: निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. समन्वयक तकनीकी सेल, कुलपति कार्यालय
2. निदेशक प्रसार, बाँदा कृषि एवं प्रौद्योगिक विश्वविद्यालय, बाँदा।
3. सलाहकार समिति के मा० सदस्य।

(श्याम सिंह)  
अध्यक्ष

## 2. DETAILS OF DISTRICT

### 2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
1	Paddy-Wheat (irrigated) Paddy-Wheat (Un-irrigated)
2	Fallow-Gram+Linseed
3	Sesamum-Gram/Lentil/Field pea

### 2.2 Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

S. No	Agro-climatic Zone	Characteristics
1	Zone-VI	Arid climate

### 2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Rakar	Heavy coarse soil	46670
2	Paruwa	Sandy-loam soil	142480
3	Mar	Loamy soil	78600
4	Kabar	Sandy soil	62509

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

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
1	Wheat	158943	363699	22.88
2	Barley	846	2404	28.42
3	Gram	96314	87395	9.07
4	Pea	1543	1478	9.58
5	Lentil	30975	21001	6.78
6	Mustard	2886	1940	6.72
7	Linseed	2855	2295	8.04
8	Toria	1240	1170	9.69
9	Paddy	51760	102019	16.28
10	Sorghum	23715	38262	11.46
11	Bajara	3251	6092	12.27
12	Maize	9	20	17.50
13	Greengram	2777	1083	6.68
14	Blackgram	3374	2001	4.26
15	Pigeon pea	17753	26774	15.08
16	Soyabean	22	17	5.74
17	Til	11085	4556	1.51
18	Groundnut	403	656	7.24

### 2.5. Weather data

Month	Rainfall (mm)	Temperature <sup>0</sup> C		Relative Humidity (%)
		Maximum	Minimum	
April-18	0	41.12	25.70	
May-18	22.7	41.61	28.39	
June-18	39.4	39.58	30.93	
July-18	373.54	33.28	28.87	
Aug-18	353.99	30.58	27.87	
Sept-18	107.8	30.50	26.25	
Oct-18	0	32.66	22.46	
Nov-18	0	26.78	16.33	
Dec-18	0	20.23	9.56	
Jan-19	2.65	19.55	9.25	
Feb-19	10.1	21.9	13.8	
March-19	0	25.9	15.8	



## 2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	720		
<i>Indigenous</i>	370789		
<b>Buffalo</b>	324091		
<b>Sheep</b>			
<i>Crossbred</i>	0		
<i>Indigenous</i>	12255		
<b>Goats</b>	125317		
<b>Pigs</b>			
<i>Crossbred</i>	0		
<i>Indigenous</i>	17566		
<b>Rabbits</b>			
<b>Poultry</b>			
Hens			
<i>Desi</i>			
<i>Improved</i>			
Ducks			
Turkey and others			

Category	Area	Production	Productivity
Fish			
<i>Marine</i>			
<i>Inland</i>			
Prawn			
Scampi			
Shrimp			

## 2.7 Details of Operational area / Villages (2019)

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Banda Sadar	Badokhar Khurd	Bargahni Luktara	Arhar, Sesmum Gram, Lentill, Wheat	Lack of Irrigation water Unavailability of improved variety seed	Moisture, Conservation Technique, Introduction of HYV, IPM, INM, IDM
	Tindvari	Bacheura	Arhar, Sesmum, Guava Gram, Lentill, Wheat	Lack of Irrigation water Unavailability of improved variety seed	Moisture, Conservation Technique, Introduction of HYV, IPM, INM, IDM
Baberu	Kamasin	Louhai Kamasin	Arhar, Sesmum, Gram, Lentill, Fieldpea, Paddy Wheat	Lack of Irrigation water Unavailability of improved variety seed	Moisture, Conservation Technique, Introduction of HYV, IPM, INM, IDM
	Baberu	Chhanera Lalpur	Arhar, Sesmum, Paddy Gram, Lentill, Fieldpea Wheat	Unavailability of improved variety seed	Introduction of HYV, IPM, INM, IDM
Atarra	Bisanda	Bisanda Atarra Rural	Arhar, Sesmum, Paddy Gram, Lentill, Fieldpea Wheat	Unavailability of improved variety seed	Introduction of HYV, IPM, INM, IDM

## 2.8 Priority/thrust areas

Crop/Enterprise	Thrust Area
Rice	Integrated Nutrient Management, IPM, Water Management
Urd & Til	Weed management, IDM
Sorghum	Moisture conservation, IPM, IDM
Pulse crops	Integrated Pest Management, IDM
Oilseed	Weed management, IPM, INM
Wheat	HYV, INM
Fruit & Vegetable crops	Varietal Assessment, ICM, Disease & Pest Management,

## 2.9 Intervention/ Programmes for the doubling the farmers income – during Januar- December, 2019

### Demonstrations

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent Yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Intercropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Intercropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

### Adopted village: Bachheura

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							
Kharif (Urd var. Local)	4.8	-	-	12800	11200	1.87	
Rabi (Pea var. Local)	9.35	-	-	11403	11037	1.96	

**Discussion:** Farmers were not aware about latest variety and grow these crops without using any fertilizers (Fertility status- Organic carbon-0.3%, N&P-Low and K- median). They were suggested to use 100Kg DAP/ha).

Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							
Kharif (Urd var. IPU-02-43)	6	-	-	14000.0	16000.0	2.14	
Rabi (Pea var. Aman)	16.55	-	-	14660.0	25060.0	2.7	

**Discussion:** After creating awareness through trainings about latest varieties and recommended dose of fertilizers, net income has been increased by using new varieties and 100Kg DAP/ha.

#### Adopted village: Jakhani

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							
Rice-Wheat-Summer Moong	1.8	-	-	12800	3800	0.64	
	9.35	-	-	11403	11037	1.96	

**Discussion:** Farmers were not aware about latest variety and grow these crops without using any fertilizers (Fertility status- Organic carbon-0.3%, N&P-Low and K- medium). They were suggested to use 100Kg DAP/ha).

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							
Kharif (Urd var. IPU-02-43)	2.4	-	-	14000.0	2000.0	0.85	
Rabi (Pea var. Aman)	16.55	-	-	14660.0	25060.0	2.7	

**Discussion:** After creating awareness through trainings about latest varieties and recommended dose of fertilizers, net income has been increased by using new varieties and 100Kg DAP/ha.

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Relay Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Relay Cropping System(Kharif-Rabi-Zaid)-Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mixed Farming System(Kharif-Rabi-Zaid)-Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation (Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
Mixed Farming System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
IFS System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
IFS System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

Note- Same format may be used for OFT.

### 3. TECHNICAL ACHIEVEMENTS

#### 3.A. Details of target and achievements of mandatory activities by KVK during 2019

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Total no. of Trials		Area in ha		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
13	13	150	150	55	54.875	206	206

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	75	60	2050	1626	244	412	4744	7388
Rural youth	10	4	250	127				
Extn. Functionaries	10	9	250	238				

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
90	72.28	-	30000	23700	649
	Lentil 17.61				
	Gram 45.18				
	Paddy 9.49				

Soil/plant/water Analysis		
5		
Target	Achievement	No. of farmers covered
140	140	225

## I. TECHNOLOGY ASSESSMENT

### Summary of technologies assessed under various **crops** by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Nutrient Management				
Varietal Evaluation				
Integrated Pest Management	Paddy	Assessment of IPM approach for Stem borer and leaf folder in paddy	10	10
	Chickpea	Assessment of IPM approach for pod borer management in chickpea	15	15
	Chickpea	Assessment of IPM practice for pod borer in Gram	10	10
Integrated Crop Management	Tomato	To assess the effect of staking with recommended spacing on yield and quality of tomato production	5	5
	Tomato	To assess the effect of staking with recommended spacing on yield and quality of tomato production	5	5
Integrated Disease Management				
Small Scale Income Generation Enterprises				
Weed Management	Paddy	Assessment of chemical weedicide in Paddy crop	5	5
	Wheat	Assessment of chemical weedicide in wheat	25	25
Resource Conservation Technology	Tomato	To Assess the effect of mulching (Crop Residue ) on production and quality of fruits	5	5
Farm Machineries				
Integrated Farming System				
Seed / Plant production				
Post Harvest Technology / Value addition				
Drudgery Reduction		Reduction of drudgery among farmers through vegetable transplanter	10	10
Storage Technique				
Others (Pl. specify) Agricultural Extension		Impact assessment of different extension teaching methods for adoption of scientific package of practices of Rabi pulse	15	15
		Effectiveness of different extension methods for reproductive management of dairy animals	16	16
<b>Total</b>			<b>121</b>	<b>121</b>

### Summary of technologies assessed under **livestock** by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Disease Management				
Evaluation of Breeds				
Feed and Fodder management				
Nutrition Management	Buffalo	Assessment of feeding calcium along with dewormer on health and	18	6



		production		
Production and Management	Buffalo	Calcium supplement and dewormer bolus	18	06
Others (Pl. specify)				
<b>Total</b>			36	12

### Summary of technologies assessed under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
Integrated Pest Management	Paddy	Assessment of IPM approach for Stem borer and leaf folder in paddy	10	10
	Chickpea	Assessment of IPM approach for pod borer management in chickpea	15	15
	Chickpea	Assessment of IPM practice for pod borer in Gram	5	5
Integrated Crop Management	Tomato	To assess the effect of staking with recommended spacing on yield and quality of tomato production	5	5
	Tomato	To assess the effect of staking with recommended spacing on yield and quality of tomato production	5	5
Weed Management	Paddy	Assessment of chemical weedicide in Paddy crop	5	5
	Wheat	Assessment of chemical weedicide in wheat	25	25
Resource Conservation Technology	Tomato	To Assess the effect of mulching (Crop Residue) on production and quality of fruits	5	5
Drudgery Reduction		Reduction of drudgery among farmers through vegetable transplanter	10	10
Others (Agricultural Extension)		Impact assessment of different extension teaching methods for adoption of scientific package of practices of Rabi pulse	15	15
		Effectiveness of different extension methods for reproductive management of dairy animals	16	16
Nutrition Management	Buffalo	Assessment of feeding calcium along with dewormer on health and production	16	8
	Buffalo	Calcium supplement and dewormer bolus	18	06

**Note:** Suppose **IPM in paddy** is the technology assessed by 50 KVKs in the Zone with 5 trials by each KVK, then IPM in paddy needs to be considered as a single technology, with  $50 \times 5 = 250$  trials and No. of KVKs will be 50. In addition, please note that even if IPM in paddy is done with various combinations of Technology Options (treatments), it may be considered as a single technology only.

## I.C. TECHNOLOGY ASSESSMENT IN DETAIL

(From each state please include the full details of three OFTs on technology assessment and or refinement under the broad thematic areas such as Integrated Crop Management, weed management, pest and disease management, nutrient management, resource conservation, livestock enterprises, Integrated Nutrient Management)

(The model for preparing the same is furnished below)

### WEED MANAGEMENT

**Problem definition:** Heavy infestation of weed in Paddy crop

**Technology assessed or refined (as the case may be):** Assessment of Herbicide in Paddy crop

An herbicide evaluation on transplanted rice was carried out by KVK, Banda at five farmers field's of two villages namely; Pachnehi and Bargahani. A popular herbicide namely, Bispyribac Sodium (Nominee Gold) were tested against the farmer practice (hand weeding). The chemical weedicide increases 8.71% yield in NDR-359 variety of rice. Weed management by bispyribac resulted maximum yield (36.7 q/ha) followed by farmers practice (33.5q/ha). This treatment has also maximum net return (Rs. 42405/ha) and 2.9 B:C ratio over farmers practice.

Technology Option	No. of trials	Yield (q/ha)	Yield increase (%)	Net Return (Rs./ha)	B:C Ratio
T-1: Farmer's practice (one hand weeding)	5	33.5	-	35725	2.5
T-2: Bispyribac (35 gm/ha)		36.7	8.71	42405	2.9

### WEED MANAGEMENT

**Problem definition:** Poor yield due to Infestation of weeds in wheat crop

**Technology assessed or refined (as the case may be):** Chemical weed management in wheat crop

Wheat is the main crop during rabi season in district Banda. In many areas wheat crop has been taken just after rice crop and on the other hand fallow- wheat and pulses wheat cropping system is years of the practice. Wheat crop faces weed infestation mainly of *Phalaris minor*, *Avena Spp.*, *Anagalis arvensis* and *Solanum spp.* A chemical weed management method was evaluated by KVK, Banda at five farmers field's of two villages. A popular herbicide combination namely, Chlorimuron+Metsulfuron methyl were tested against the farmer practice (hand weeding). The chemical weedicide increases 8.95% yield in Raj 4120 variety of wheat. Weed management by Chlorimuron+Metsulfuron methyl resulted maximum yield (32.4 q/ha) followed by farmers practice (29.5 q/ha). This treatment has also maximum net return (Rs. 39206 /ha) and 2.92 B:C ratio over farmers practice.

Technology Option	No. of trials	Yield (q/ha)	Yield increase (%)	Net Return (Rs./ha)	B:C Ratio
T-1: Farmer's practice (one hand weeding)	5	29.1	-	39206	2.62
T-2: Chlorimuron+Metsulfuron methyl (8 gm/ha)		32.4	10.18	33134	2.92

### **Integrated Crop Management**

**Problem definition:** Poor yield and quality of tomato fruits due to lack of knowledge about staking and proper spacing

**Technology Assessed or Refined (as the case may be):** To assess the effect of staking with recommended spacing on yield and quality of tomato production

KVK, Banda has assessed the effect of staking with recommended spacing (60cm X 60cm 60) on yield and quality of tomato where 3 trials have been conducted at farmers field. It was found that 52.50 per cent yield increased by staking with proper spacing method over flat bed method.

Treatments	Yield (Q/ha.)	% change in Yield	No. of fruit/plant	Cost of cultivation (Rs/ha)	Gross return (Rs/ha)	Net Income	BC Ratio**
T <sub>1</sub>	178.0	-	26	55900	178000	122100	3.18
T <sub>2</sub>	272.0	52.80	42	62900	272000	199600	4.32

Interference & Feed back	Staking with proper spacing (60cm X 60cm) method was found effective than flat bed method
Farmers Reaction	Staking method of planting of tomato gave higher yield accepted by majority of farmers of Banda District

### **PEST AND DISEASE MANAGEMENT**

**Problem definition:** low yield and poor quality of paddy due to heavy infestation of stem borer and leaf folder

**Technology Assessed (as the case may be):** IPM approach for Stem borer and leaf folder in paddy

Remarkable reduction in yield has been observed due to heavy infestation of stem borer and leaf folder in paddy. KVK, Banda conducted OFT for assessing the Integrated approach of stem borer and laef folder in paddy. IPM module i.e. foliar spray of Azadirachtin (1500ppm)@ 5ml per litre, Fipronil@7.5Kg/acre and Profenophos @2 ml/lit spray at ETL. The results revealed that the crop yield increased 22.1% and the number of dead heart decreased by 20.85% and 5.02% over T1 and T2 respectively. The net return and B:C ratio increased by Rs.73000 per ha. and 0.13 over farmer's practice.

**Table : Performance of Intergarted approaches for stem borer and leaf folder in paddy**

Technology Option	No. of trials	Area( h.)	Dead heart plants(%)	Yield (Q/ha)	% Increase in yield over farmer's practice	Gross cost(Rs./ha)	Gross return(Rs./ha)	Net Returns (Rs./ha)	B:C Ratio
Farmer's practice (chemical spray of choropyriphos @ 2.0L/ha)	10	04	18.00	36.00	22.1	25000	91800	66800	1.67
foliar spray of Azadirachtin (1500ppm)@ 5ml per litre, <u>Fipronil@7.5Kg/acre</u> and Profenophos @2 ml/lit. spray at ETL (Recommended Practice)			6.02	44.00		26000	99000	73000	1.80

**MSP@Rs.2550/Q**

**PEST AND DISEASE MANAGEMENT**

**Problem definition:** low yield of chickpea due to severe infestation of pod borer

**Technology Assessed (as the case may be):** IPM approach for pod borer management in chickpea

**Table : Performance of Integrated Pest Management for pod borer in chickpea**

<b>Technology Option</b>	<b>No.of trials</b>	<b>Area(ha)</b>	<b>Plant infestation(%)</b>	<b>No. of larvae/plant</b>	<b>Yield (Q/ha)</b>	<b>% Increase in yield over farmer's practice</b>	<b>Gross cost(Rs./ha)</b>	<b>Gross return(Rs./ha)</b>	<b>Net Returns (Rs./ha)</b>	<b>B:C Ratio</b>
Farmer's practice (chemical spray of Emamectin benzoate @ 500ml/ha)	15	06	Result awaited							
Bird percher@50/ha, nipping process before flowering, foliar spray of Azadirachtin (1500ppm)@ 5ml per litre, and spray of Indexcarb@500ml/ha at podding time at ETL (Recommended Practice)										

**PEST AND DISEASE MANAGEMENT**

**Problem definition:** low yield of chickpea due to severe infestation of pod borer

**Technology Assessed or Refined (as the case may be):** IPM approach for pod borer management in chickpea

Pod borer is a major pest of chickpea, responsible for heavy reduction (23.4 percent) in yield. KVK, Banda has conducted OFT on integrated pod borer management in chickpea. IPM approach i.e. installation of bird perchers@ 50/ha, nipping process before flowering stage, foliar spray of Azadirachtin (1500ppm)@ 5ml/lit at vegetative and flowering stage and spray of Indexcarb@500ml/ha at podding time at ETL(one larvae/m row length) was used for assessing the IPM approach for pod borer in chickpea. Results of OFT revealed that the yield of T2 was increased by 23.4 percent while number of larvae/m<sup>2</sup> infestation decreased to 14.2 q/ha and the yield was increased to 11.5q/ha over farmers practice. The net return was Rs 11224/ha and B:C ratio was 0.39. Farmers are satisfied by this technology for pod borer management.

<b>Technology Option</b>	<b>No.of trials</b>	<b>Plant infestation (%)</b>	<b>No. of larvae/plant</b>	<b>Yield (kg/ha)</b>	<b>% Increase in yield over farmer's practice</b>	<b>Gross cost (Rs./ha)</b>	<b>Gross return (Rs/ha)</b>	<b>Net Return (Rs/ha)</b>	<b>B:C ratio</b>
T1- Only chemical spray of Emamectin benzoate @500ml/ha (Farmers Practice)	10	16.1	1.8	11.5	--	23000	53130	30130	2.31
T2- Bird percher@50/ha, nipping process before flowering, spray of Azadirachtin (1500ppm) @ 5ml/lit, spray of Indexcarb@ 500ml/ha at podding time		3.2	0.56	14.2	23.4	24250	65604	41354	2.70

**MSP@4620Rs/Q**

## ANIMAL SCIENCE

**Problem Definition:** Low milk production in dairy buffaloes

**Technology Assessed or Refined (as the case may be):** To assess the effect of feeding calcium supplement after deworming on milk production in buffaloes

KVK Banda has conducted trial to find out the reason for low milk production in dairy buffaloes kept by farmers. Lack of knowledge regarding feeding of calcium supplement among farmers is the key reason behind the low production problem. The technology recommended (feeding calcium supplement @70 ml/day/animal) resulted in increase in milk yield by 17.30 %.

<i>Technology Option</i>	<i>No. of trials</i>	<i>Milk Yield lt./day/animal</i>	<i>Yield increase (%)</i>	<i>Gross cost (Rs./day/animal)</i>	<i>Gross return (Rs/day/animal)</i>	<i>Net Return (Rs/day/animal)</i>	<i>B:C Ratio</i>
T <sub>1</sub> Farmers Practice (Straw+Green Fodder + Concentrate)	6	5.2	-	60	208	148	3.46
T <sub>2</sub> Calcium supplement @70 ml /day/animal + Farmers Practice		6.1	17.30	68	244	173	3.58

## DRUDGERY REDUCTION

**Problem Definition:** Reduction of Human drudgery through Hand Operated Vegetable Transplanter

**Technology Assessed or Refined (as the case may be):** To assess the level of human drudgery during traditional and mechanized methods of vegetable transplanting.

Comparative Ergonomic study on the assessment of the level of human drudgery during traditional and mechanized methods of vegetable transplanting has been performed. Physiological parameters of farmers were assessed to analyze the work capacity and productivity during traditional and mechanized methods of vegetable transplanting.

<b>Treatments</b>	Handgrip Strength	Blood Pressure	Heart Rate	Postural Discomfort (% Change)	Center of Gravity (% Change)	Drudgery Index
T <sub>1</sub> (Traditional Method)	21 Kg	132/89 mmHg	110	55 %	68	48
T <sub>2</sub> (Mechanized Method)	30 Kg	119/80 mmHg	81	22 %	48	23

Interference & Feed back	The level of human drudgery was highly reduced with Hand Operated Vegetable Transplanter as compare to traditional method of vegetable transplanting. The work capacity and work performance of the farmers was also improved.
Farmers Reaction	Majority of farmers of Banda District revealed that Hand Operated Vegetable Transplanter was energy and time saving farm equipment and very easy to operate.

## AGRICULTURAL EXTENSION

**Problem definition:** Poor yield of Rabi pulse (Chickpea) due to less adoption of scientific package of practices of Chickpea

**Technology Assessed or Refined (as the case may be):** Impact assessment of different extension teaching methods for adoption of scientific package of practices of Rabi pulses (Chickpea)

Chickpea is the main Rabi pulse crop under rainfed condition of U.P. Bundelkhand. There is wide variation in the yield of Chick pea across the 7 districts of U.P. Bundelkhand because of the low adoption of recommended package of practices of Chickpea among the farming community. To accelerate adoption among farming community extension teaching methods were playing a crucial role. Hence KVK, Banda has initiated the trial on impact assessment of different extension teaching methods for adoption of scientific package of practices of Rabi pulse (Chickpea). In this trail one training on scientific package of practices of Chickpea and CFLD on Chick pea has been given to 5-5 farmers and their level of adoption of scientific package of practices of Chickpea crop have been assessed and it was found that the level of adoption has increased by 13.75 and 16.25 per cent after exposure to training and demonstration respectively to the farmers.

S. No.	Extension teaching methods	Level of adoption (%)		
		Pre	Post	Difference
1	Check (n=5)	38.75	40	1.25
2	Training (T1) (n=5)	37.5	51.25	13.75
3	Demonstration (T2) (n=5)	40	62.5	22.5

## II. FRONTLINE DEMONSTRATION

### a. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during 2018 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1.							
2.							

\* Thematic areas as given in Table 3.1 (A1 and A2)

### b. Details of FLDs implemented during 2019 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1.	Paddy	WM	(Bispiyribac (35gm/h)	Kharif (2019-20)	05	05	0	5	5	
2.	Wheat	ICM	Water soluble fertilizer application	Rabi (2018-19)	10	10	2	23	25	
3.	Wheat	ICM	Water soluble fertilizer application	Rabi (2019-20)	6.0	6.0	2	13	15	
4.	Okra	VE	HYV (Kashi Kranti)	Kharif (2019-20)	1	1	0	5	5	
5.	Onion	VE	HYV (L883)	Kharif (2019-20)	0.5	0.5	0	2	2	
6.	Tomato	VE	HYV (Kashi Anmol)	Rabi (2018-19)	1	1	5	3	8	
7.	Tomato	VE	HYV (Kashi Anmol)	Rabi (2019-20)	3.0	3.0	5	10	15	
8.	Chilli	VE	HYV (Kashi Uttam)	Rabi (2019-20)	1.0	1.0	4	6	10	
9.	Chilli	VE	HYV (Kashi Uttam)	Rabi (2018-19)	1	1	6	2	8	
10.	Brinjal	VE	HYV (Kashi Kranti)	Rabi (2018-19)	1	1	6	2	8	
11.	Brinjal	VE	HYV (Kashi Kranti)	Rabi (2019-20)	1	1	5	5	10	
12.	Mustard	IPM	IPM	Rabi (2018-19)	5	10	1	9	10	
13.	Brinjal	IPM	IPM	Rabi (2018-19)	4	1.6	0	4	4	
14.	Mustard	IPM	Yellowstickytrap@12/acre, spray azadiractin(0.03%)@5ml/lit., at preflowering time and	Rabi (2019-20)	10	10	3	17	20	

			spray of Imadialoprid 17.8sl@1ml/3lit. water+1ml. sticker/lit. of water at 15 days of interval							
15	Brinjal	IPM	Clipping of damaged shoots and early infested fruits at weekly interval, foliar spray of azadiractin(0.03%) @5ml/lit., spray of Prefenophos50%EC@2ml/lit. at flowering and fruiting time	Kharif (2019-20)	8.8	22	0	22	22	
16	Kitchen Garden	Kitchen Garden	Kitchen Garden Kit	Rabi (2018-19)	0.8	0.8	8	24	32	
17	Buffalo	Feed management	Mineral Mixture	Rabi (2018-19)	24	24	0	8	8	
18	Kitchen Garden	Kitchen Garden	Kitchen Garden Kit	Rabi (2018-19)	15	15	7	8	15	
19	Buffalo	Feed management	Mineral Mixture	Rabi (2019-20)	24	24	2	10	12	

#### Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)
				N	P	K				
Paddy	Khariif	Irrigated	Clay loam	low	Medium	Medium	Fellow	July, 3 <sup>rd</sup> week	Nov. 4 <sup>th</sup> week	835 mm
Okra	Khariif	Irrigated	Clay loam	low	Medium	Medium	Fellow	August, 1 <sup>nd</sup> week	Dec. 1 <sup>nd</sup> week	874 mm
Onion	Khariif	Irrigated	Clay Loam	Low	Medium	Medium	Fellow			895 mm
Tomato	Rabi	Irrigated	Clay loam	low	Medium	Medium	Okra	Nov. 2 <sup>nd</sup> week	March, 2 <sup>nd</sup> week	12.75
Chilli	Rabi	Irrigated	Clay loam	low	Medium	Medium	Cucurbits	Nov. 2 <sup>nd</sup> week	March, 2 <sup>nd</sup> week	12.75
Brinjal	Rabi	Irrigated	Clay loam	low	Medium	Medium	Cucurbits	Nov. 2 <sup>nd</sup> week	March, 2 <sup>nd</sup> week	12.75
Mustard	Rabi	Irrigated	Clay loam	low	Medium	Medium	Fellow	Nov. 1 <sup>st</sup> week	March 1 <sup>st</sup> week	12.75

#### Technical Feedback on the demonstrated technologies

S. No	Feed Back
1 Bispyribac (35gm/ha)	Bispyribac applied in upland condition control weed infestation upto 70%.
1. Okra (Kashi Kranti)	Resistant to YMV, medium plant height, 35-40 fruits/plant
2. Onion (L883)	Bulb medium in size, attractive in colour
3. Chilli (Kashi Anmol)	Resistant to leaf curl virus, profuse flowering and fruiting
4. Tomato (Kashi Aman)	Determinate type, Resistant to leaf curl virus, medium fruits size, 35-38 fruits/plant
5. Brinjal (Kashi Uttam)	Fruits are round in shape, profuse flowering and fruiting
6. IPM in Brinjal	It enhance the yield of Brinjal due to effective management of Shoot and fruit borer



## Farmers' reactions on specific technologies

S. No	Feed Back
1 Bispiyribac (35gm/ha)	Farmers were satisfied with the result of chemical weedicide in term of weed infestation and crop yield.
2. Okra (Kashi Kranti)	Farmers liked the variety Kashi Kranti due to resistant to YMV and yield performance.
3. Onion (L883)	Farmers liked the variety due to medium in size and heavy demand in the market before availability of Rabi Onion
4. Chilli (Kashi Anmol)	Farmers liked the variety Kashi Anmol due to resistant to leaf curl virus and yield performance
5. Tomato (Kashi Aman)	Farmers liked the variety Kashi Aman due to resistant to leaf curl virus and yield performance
6. Brinjal (Kashi Uttam)	Maximum number of fruits per plant (20-25 fruits/plant) and resistant to mycoplasma disease but this variety was less preferred by the farmers of Banda due to its indigo colour
7. Okra (Kashi Kranti)	Farmers were impressed with the concept of Kitchen gardening due to the availability of fresh and nutritious vegetables round the year. It was also cost effective.
8. IPM in Brinjal	Farmers were satisfied with the IPM technologies as it was low cost and locally manageable

## Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	03	19.02.2019 01.03.2019 14.03.2019	14+15+19=48	-
2	Farmers Training	01	06.06.2018	26	
3	Media coverage	44		Mass	
4	Training for extension functionaries				

## Performance of Frontline demonstrations

### Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut																		
Sesamum																		
Mustard	IPM	Yellow sticky trap@ 12/acre, spray azadiractin(0.03%)@5ml/lit., at preflowering time and spray of Imidacloprid 17.8sl@1ml/3lit. water+1ml. sticker/lit. of water at 15 days of interval	Giriraj	20	10	Result awaited												
	IPM	Yellow sticky trap@12/Acre, Spray Azadirachtin (1500PPM)@5ml/lit at pre flowering time and spray of Imidacloprid <a href="#">17.8 SL@ 1ml/3 lit</a> +1ml sticker/litre of water at 15 days of interval	Pitambari	10	10	13.1	10	12.0	9.3	29.0	16500	50400	33900	3.05	15200	39060	23860	2.56
Toria																		
Linseed																		
Sunflower																		
Soybean																		

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

**Frontline demonstration on pulse crops**

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
						High	Low	Average											
Pigeonpea																			
Blackgram																			
Greengram																			
Chickpea																			
Fieldpea																			
Lentil																			
Horsegram																			

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST



<b>Millets</b>																			
<b>Jowar</b>																			
<b>Bajra</b>																			
<b>Barnyard millet</b>																			
<b>Finger millet</b>																			
<b>Vegetables</b>																			
<b>Bottlegourd</b>																			
<b>Bittergourd</b>																			
<b>Cowpea</b>																			
<b>Spongegourd</b>																			
<b>Petha</b>																			
<b>Tomato</b>	<b>Varietal evaluation</b>	<b>Kashi Aman</b>	<b>8</b>	<b>1.0</b>	<b>286</b>	<b>232</b>	<b>259</b>	<b>163</b>	<b>58.89</b>			<b>55900</b>	<b>25900</b>	<b>20310</b>	<b>4.63</b>	<b>47300</b>	<b>16300</b>	<b>11570</b>	<b>3.44</b>
	<b>Varietal evaluation</b>	<b>Kashi Aman</b>	15	3.0	Result Awaited														
<b>Frenchbean</b>																			
<b>Capsicum</b>																			
<b>Chilli</b>	<b>Varietal evaluation</b>	<b>Kashi Anmol</b>	<b>8</b>	<b>1.0</b>	<b>112</b>	<b>97</b>	<b>104.5</b>	<b>76.5</b>	<b>36.60</b>			<b>43000</b>	<b>104500</b>	<b>61500</b>	<b>2.43</b>	<b>39100</b>	<b>76500</b>	<b>37400</b>	<b>1.96</b>
	<b>Varietal evaluation</b>	<b>F 1 Hybrid</b>	10	1.0	Result Awaited														
Brinjal	IPM	Clipping of damaged shoots and early infested fruits at weekly interval, foliar spray of azadiractin(0.03%) @5ml/lit.,	22	8.8	210	165.5	187.8	140.7	33.48%	-	-	22700	93750	71050	4.13	21500	70350	48850	3.27

		spray of Prefenophos50%EC@2ml/lit ., at flowering and fruiting time																	
	Varietal Evaluation	Kashi Uttam	8	1.0	286	211	248.5	167	48.80			51300	24850 0	19720 0	4.84	49400	16700 0	11760 0	3.38
	Varietal Evaluation	F 1 Hybrid	10	1.0	Result Awaited														
<b>Vegetable pea</b>																			
<b>Softgourd</b>																			
<b>Okra</b>	<b>V.E.</b>	<b>HYV (Kashi Kranti)</b>	08	0.5	101	80	90.5	60.6	49.34	-	-	20600	90500	69900	4.39	18900	60600	41700	3.21
<b>Colocasia (Arvi)</b>																			
<b>Broccoli</b>																			
<b>Cucumber</b>																			
<b>Onion</b>	<b>V.E.</b>	<b>HYV (L-883)</b>	02	0.5	225. 5	214.5	220	*	37.50	-	-	76500	880000	803500	11.50				
<ul style="list-style-type: none"> <li>As Kharif Onion introduce first time in the area.</li> </ul>																			
<b>Coriender</b>																			
<b>Lettuce</b>																			
<b>Cabbage</b>																			
<b>Cauliflower</b>																			
<b>Elephant fruit</b>																			
<b>Flower crops</b>																			
<b>Marigold</b>																			



<b>Medicinal &amp; aromatic plants</b>																			
<b>Mentholment</b>																			
<b>Kalmegh</b>																			
<b>Ashwagandha</b>																			
<b>Fodder Crops</b>																			
<b>Sorghum (F)</b>																			
<b>Cowpea (F)</b>																			
<b>Maize (F)</b>																			
<b>Lucern</b>																			
<b>Berseem</b>																			
<b>Oat (F)</b>																			

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST



## FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
<b>Cattle</b>																	
<b>Buffalo</b>	Feed management	Mineral Mixture	12	24	Results Awaited												
	Feed Management	Mineral Mixture	8	24	6.1	5.4	12.96			69	232	163	3.36	62	216	199	4.21
<b>Buffalo Calf</b>																	
<b>Dairy</b>																	
<b>Poultry</b>																	
<b>Sheep &amp; Goat</b>																	
<b>Vaccination</b>																	

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST





**FLD on Demonstration details on crop hybrids** *(Details of Hybrid FLDs implemented during 2019)*

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop													
Pulse crop													
Cereal crop													
Vegetable crop													
Fruit crop													
Other (specify)													

**Note :** Remove the Enterprises/crops which have not been shown















Layout and Management of Orchards	1	18	16	34	3	0	3	21	16	37
Cultivation of Fruit	3	70	9	79	17	0	17	87	9	89
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
<b>Total (b)</b>	<b>4</b>	<b>88</b>	<b>25</b>	<b>113</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>108</b>	<b>25</b>	<b>133</b>
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
<b>Total (c)</b>										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (d)</b>										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (e)</b>										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (f)</b>										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
<b>Total (g)</b>										
<b>GT (a-g)</b>	<b>11</b>	<b>281</b>	<b>25</b>	<b>306</b>	<b>46</b>	<b>4</b>	<b>50</b>	<b>327</b>	<b>29</b>	<b>356</b>
<b>III Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
<b>Total</b>										
<b>IV Livestock Production and Management</b>										
Dairy Management	2	57	0	57	9	0	9	66	0	66
Poultry Management	1	20	0	20	10	0	10	30	0	30
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	1	25	0	25	9	0	9	34	0	34
Disease Management	3	66	2	68	18	0	18	84	2	86
Feed & fodder technology	1	22	1	23	3	3	6	25	4	29
Production of quality animal products	1	20	1	21	6	3	9	26	4	30
Others (pl specify)	2	46	6	52	0	0	0	46	6	52
<b>Total</b>	<b>11</b>	<b>256</b>	<b>10</b>	<b>266</b>	<b>55</b>	<b>6</b>	<b>61</b>	<b>311</b>	<b>16</b>	<b>327</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	1		13	13		27	27		40	40
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	1		12	12		2	2		14	14

Minimization of nutrient loss in processing	1		22	22		11	11		33	33
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	1		22	22		16	16		38	38
Value addition	1		15	15		7	7		22	22
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care	1		29	29		4	4		33	33
Others (pl specify)										
<b>Total</b>	<b>6</b>	<b>0</b>	<b>113</b>	<b>113</b>	<b>0</b>	<b>67</b>	<b>67</b>	<b>0</b>	<b>180</b>	<b>180</b>
<b>VI Agril. Engineering</b>										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
<b>Total</b>										
<b>VII Plant Protection</b>										
Integrated Pest Management	05	80	21	101	18	04	22	98	25	123
Integrated Disease Management	02	39	-	39	14	02	16	53	02	55
Bio-control of pests and diseases	01	22	-	22	02	-	02	24	-	24
Production of bio control agents and bio pesticides	01	02	20	22	01	-	01	03	20	23
Others (pl specify)										
<b>Total</b>	<b>9</b>	<b>143</b>	<b>41</b>	<b>184</b>	<b>35</b>	<b>6</b>	<b>41</b>	<b>178</b>	<b>47</b>	<b>225</b>
<b>VIII Fisheries</b>										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
<b>Total</b>										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
<b>Total</b>										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics	2	25	1	26	10	1	11	35	2	37

Formation and Management of SHGs	1	0	23	23	0	2	2	0	25	25
Mobilization of social capital	1	18	2	20	5	2	7	23	4	27
Entrepreneurial development of farmers/youths										
WTO and IPR issues	1	20	0	20	5	0	5	25	0	25
Others (pl specify)	4	55	18	73	17	1	18	72	19	91
<b>Total</b>	<b>9</b>	<b>118</b>	<b>44</b>	<b>162</b>	<b>37</b>	<b>6</b>	<b>43</b>	<b>155</b>	<b>50</b>	<b>205</b>
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>60</b>	<b>1071</b>	<b>242</b>	<b>1313</b>	<b>212</b>	<b>101</b>	<b>313</b>	<b>1283</b>	<b>343</b>	<b>1626</b>

### Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	21	0	21	0	0	0	21	0	21
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	01	12	-	12	08	-	08	20	-	20
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1	-	18	18		10	10	-	28	28
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching	1		42	42		16	16		58	58
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
<b>TOTAL</b>	<b>4</b>	<b>33</b>	<b>60</b>	<b>93</b>	<b>8</b>	<b>26</b>	<b>34</b>	<b>41</b>	<b>86</b>	<b>127</b>

**Training for Rural Youths including sponsored training programmes (Off campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
<b>TOTAL</b>										

**Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	21	0	21	0	0	0	21	0	21
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	01	12	-	12	08	-	08	20	-	20
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1	-	18	18		10	10	-	28	28
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching	1		42	42		16	16		58	58







Fisheries Management										
Others (pl. specify)										
<b>Total</b>										
<b>Home Science</b>										
Household nutritional security										
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
<b>Total</b>										
<b>Agricultural Extension</b>										
Capacity Building and Group Dynamics										
Others (pl. specify) (Quality seed production and Vermicomposting training by ASCI)	2	30	0	30	10	0	10	40	0	40
<b>Total</b>	2	30	0	30	10	0	10	40	0	40
<b>GRAND TOTAL</b>	<b>4</b>	<b>142</b>	<b>0</b>	<b>142</b>	<b>52</b>	<b>0</b>	<b>52</b>	<b>194</b>	<b>0</b>	<b>194</b>

**\*Name of sponsoring agencies involved: State department of Agriculture for Master Trainer programme for Kisan Pathshala Programme.**

### Details of vocational training programmes carried out by KVKs for rural youth

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop production and management</b>										
Commercial floriculture										
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming										
Others (pl. specify)										
<b>Total</b>										
<b>Post harvest technology and value addition</b>										
Value addition										
Others (pl. specify)										
<b>Total</b>										
<b>Livestock and fisheries</b>										
Dairy farming										
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
<b>Total</b>										
<b>Income generation activities</b>										
Vermicomposting	1	19	0	19	1	0	1	20	0	20
Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
Repair and maintenance of farm machinery and implements										
Rural Crafts										
Seed production	1	19	0	19	1	0	1	20	0	20
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dyeing etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
<b>Total</b>	<b>2</b>	<b>38</b>	<b>0</b>	<b>38</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>40</b>	<b>0</b>	<b>40</b>
<b>Agricultural Extension</b>										
Capacity building and group dynamics										
Others (pl. specify)										
<b>Total</b>										
<b>Grand Total</b>	<b>2</b>	<b>38</b>	<b>0</b>	<b>38</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>40</b>	<b>0</b>	<b>40</b>

### IV. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	24	543	4	547
Diagnostic visits	46	267	08	275
Field Day	12	225	13	238
Group discussions	24	146	14	160
Kisan Ghosthi	34	1550	60	1610
Film Show	01	50	02	52
Self -help groups	02	30	2	32
Kisan Mela	04	1690	25	1715
Exhibition	02	450	08	458
Scientists' visit to farmers field	94	182	21	203
Plant/animal health camps	02	57	07	64
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop	01	25	06	31
Method Demonstrations				
Celebration of important days	5	1250	114	1364
Special day celebration	5	450	23	473
Exposure visits	3	158	08	166
Others (pl. specify)				
<b>Total</b>	<b>259</b>	<b>7073</b>	<b>315</b>	<b>7388</b>

#### Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	
Extension Literature	05
News paper coverage	132
Popular articles	08
Radio Talks	-
TV Talks	08
Animal health camps (Number of animals treated)	2 (192)
Others (pl. specify)	
<b>Total</b>	<b>153 (192)</b>

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	04	01	-	-	07	-	12
	Voice only							
	Voice & Text both							
	<b>Total Messages</b>	04	01	-	-	07	-	12
	<b>Total farmers Benefitted</b>	<b>7000</b>	<b>500</b>	<b>-</b>	<b>-</b>	<b>6000</b>	<b>-</b>	<b>13500</b>

## V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS

Number of KVKs organised Technology Week	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
	Gosthies			
	Lectures organized			
	Exhibition			
	Film show			
	Fair			
	Farm Visit			
	Diagnostic Practicals			
	Distribution of Literature (No.)			
	Distribution of Seed (q)			
	Distribution of Planting materials (No.)			
	Bio Product distribution (Kg)			
	Bio Fertilizers (q)			
	Distribution of fingerlings			
	Distribution of Livestock specimen (No.)			
	Total number of farmers visited the technology week			

## VI. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

### Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Paddy	PB-1718		10.50		
Oilseeds						
Pulses						
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Others						
<b>Total</b>						

**Production of planting materials by the KVKs**

<b>Crop</b>	<b>Name of the crop</b>	<b>Name of the variety</b>	<b>Name of the hybrid</b>	<b>Number</b>	<b>Value (Rs.)</b>	<b>Number of farmers</b>
Commercial						
Vegetable seedlings	Brinjal			3000		110
	Chilli			4000		50
	Tomato			10000		154
	Cauliflower			3000		100
	Broccoli			500		20
	Cabbage			2500		120
Fruits	Papaya			550		50
	Moringa			20		-
	Jackfruit			50		20
	Jamun			30		10
	Custard apple			50		15
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings						
Forest Species						
Others						
<b>Total</b>						

**Production of Bio-Products**

<b>Bio Products</b>	<b>Name of the bio-product</b>	<b>Quantity</b>	<b>Value (Rs.)</b>	<b>No. of Farmers</b>
		<b>Kg</b>		
Bio Fertilisers	NADEP Compost	10000	20000	
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others				
<b>Total</b>				

**Table: Production of livestock materials**

<b>Particulars of Live stock</b>	<b>Name of the breed</b>	<b>Number</b>	<b>Value (Rs.)</b>	<b>No. of Farmers</b>
<b>Dairy animals</b>				
Cows	Tharparkar	1608 litres milk	72360	
Buffaloes				
Calves				
Others (Pl. specify)				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
<b>Piggery</b>				
Piglet				
Others (Pl. specify)				
<b>Fisheries</b>				
Indian carp				
Exotic carp				
Others (Pl. specify)				
<b>Total</b>				

## VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	140	62	07	
Water				
Plant				
Manure				
Others (pl.specify)				
<b>Total</b>				

## VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Number of SACs conducted
KVK, Banda	2 (15.02.2019 and 15.10.2019)

## IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution
Banda Krishi Samachar issue- 04	1000
Banda Krishi Samachar issue- 05	1000
Bundeli Krishi Chaupal: Krishak vikas hetu ek shaskat madhyam	200
Pratham Bundeli Krishi Chaupal	200

## X. PUBLICATIONS

Category	Number
Research Paper	02
Technical bulletins	01
Technical reports	03
Others (pl. specify)/Abstract	13

## XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)



### XIII. DETAILS ON HRD ACTIVITIES

#### A. HRD activities organized in identified areas for KVK staff by the Directorate of Extension

Name of the SAU	Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
<b>Total</b>				

#### B. HRD activities organized in identified areas for KVK staff by Zonal Project Directorate

Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
<b>Total</b>			

### XIV. CASE STUDIES (CASE STUDIES MAY BE GIVEN IN DETAIL AS PER THE FOLLOWING FORMAT)

*Each Zone should propose a minimum of three case studies with good action photographs (with captions on the backside of the hard copy of the photos) on the following topics*

- a) Effective popularization on a larger scale of any one FLD technology and its role in transformation of district agriculture with respect to that particular crop or enterprise*
  - b) Performance of the end results of any one technology assessed, its refinement if any and its impact in district agriculture with respect to that crop or enterprise*
  - c) Effect of production and supply of seeds and planting material / animal breed / or bio-product and its impact on district agriculture with respect to that crop/ enterprise/ bio-product*
- The general format for preparing the above case studies are furnished below*



## KVK Case study-01

### Organic Farming: A Boon For Bundelkhand

**Situation analysis/ Problem statements:-** Mr. Vigyan Sukha, village Attara Gramin, Post: Atarra block: Naraini, district: Banda, was given training on different aspect of organic farming.. He was earlier involved with traditional; agriculture. He was growing paddy-wheat/Gram/ Lentil in his 1.5 hac. Land. He was hardly getting net profit of Rs.1.00 lakh Per year.

**Plan, Implement and Support:-** KVK Bnada given training on different aspect of organic farming like preparation of vermicomposting, NADEP compost, bio-fertilizers, bio-pesticide, mushroom etc. This KVK has encouraged the farmer for preparation and marketing of organic products.

**Output:-** Mr. Vigyan Sukla adopted the different aspect of organic farming as per suggestion of KVK's scientist for his 1.5 ha land. He has also opened a commercial dairy with 62 indigenous cows and 4 Murrah Buffaloes. Currently he is producing 220 litres milk per day and 5000 qt. vermicompost per year. The economical gain in terms of per unit expenditure gross income, net return and BCR are recorded. Rs 263000, Rs. 1582000, Rs. 1319000 and 6.01 respectively.

**Outcome:-** The outcome in terms of quality and price of produce motivated the other farmers to produce organic products. Mr. Vigyan Sukla is very happy on improvement in their income, livelihood and set forth example for others. He also promoted by Line department of Banda. He got sanction of opening Jaivik outlet centre under RKVY scheme.

**Impact:-** Mr. Vigyan Sukla is becoming one of the progressive and learned farmers for others with regards to popularization of organic farming in Bundelkhand region. This technology helps him for livelihood, empowerment and make him enthusiastic regards organic farming. He is one of the progressive farmer after a becoming a part of KVK activities and get their effectiveness for his own development. Mr. Sanjay Singh is very happy with this improved production and management technology and set forth example for other farmers of the district.



Farmer with Hon'ble MP, Banda znd Chitrakoot and KVK's scientist



KVK, Scientists inspecting vermicompost unit

## KVK Case study-02

### Vegetable Production: Boon For Small And Marginal Farmers

**Situation analysis/ Problem statements:-** Mr. Gaya Prashad, village Bargaahni, block: Badhokhar Khurd district: Banda, a farmer who was selected for Front line demonstration of Tomato (Kashi Aman). He was earlier involved production of agricultural crops like Gram, Lentil, Green gram in his 1 acre land. He has limited income with this profession.

**Plan, Implement and Support:-** KVK, Banda has encouraged the farmer for scientific package of practices of Tomato, chilli, and Brinjal crop starting from land preparation to harvesting. The High yield variety of Tomato, chilli, and Brinjal was adopted by the farmers.

**Output:-** Mr. Gaya Prashad adopted the scientific package of practices of Tomato, chilli, and Brinjal crop as per suggestion of KVK's scientist. He has taken 3 acre land on lease for vegetable production. Now he is growing HYV of Tomato, chilli, and Brinjal in 4 acres of Land. The economical gain in terms of per unit expenditure gross income, net return and BCR are recorded. Rs 0.9 Lakh, Rs. 3.45 Lakh , Rs. 2.54 Lakh and 3.89 correspondingly.

**Outcome:-** Mr. Gaya Prashad is very happy with quality and production of vegetable. He is also satisfied with improvement in his income, livelihood and also set forth example for other farmers.

**Impact:-** Mr. Gaya Prashad is becoming one of the progressive and learned farmers for others with regards to popularization of Vegetable farming. Mr. Sanjay Singh is very happy with this improved production and management technology and set forth example for other farmers of the district. He has also been awarded by KVK, Banda on the occasion of Kisan Samman Diwas.



A farmers with KVK's scientist



Brinjal Crop at farmers field



**D.2 . Publications (Print & Electronic media) (Jan 2019 to Dec 2019)**

S. No	Particulars	Number sold	Revenue generated in Rs.	Number of farmers benefited
01	Books			
02	Technical bulletins			
03	Technology Inventory			
04	CDs			
05	DVDs			
06	Video films			
07	Audio CDs			
08	Others if any (please specify)			

**E. Technology Products provided (Jan 2019 to Dec 2019)**

S. No	Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
01	Seeds		Quintal		
02	Planting materials		Numbers		
03	Livestock		Numbers		
04	Poultry birds		Numbers		
05	Bio-products		Quintals		
06	Others pl. specify				

**F. Technology services provided (Jan 2019 to Dec 2019)**

S. No	Particulars	Number of farmers benefited
01	Soil and water testing	
02	Plant diagnostics	
03	Details about the services to line Departments	
04	Others if any (please specify)	

**XV. TECHNOLOGICAL BACKSTOPPING BY DIRECTORATES OF EXTENSION (Jan 2019 to Dec 2019)**

States covered:

Number of Directorates of Extension:

**A. Details on Directors of Extension**

S. No	Name of the SAU	Name of the Director of Extension	Number of KVKs for which technological backstopping is provided					
			SAU/CAU	DU	ICAR	NGO	SDA	Others (pl. specify)

**B. Workshops / meetings organized during Jan 2019 to Dec 2019**

S. No.	Details of workshop/meeting conducted	No. of KVKs participated

**C. Visits made by DE / Officials in the Directorate to KVKs during Jan 2019 to Dec 2019**

S. No.	Particulars	Number of visits
01	SAC meetings	
02	Field days	
03	Workshops / seminars	
04	Technology week	
05	Training programmes	
06	Others pl. specify	

**D. Overseeing of KVKs activities during Jan 2019 to Dec 2019**

S. No.	Particulars	Number of fields visited	Major observations / remarks	Major suggestions given
01	On Farm Trials			
02	Front Line Demonstration			
03	Others pl. specify			

**E. Publication on Technology inventory during Jan 2019 to Dec 2019**

S. No.	Particulars	Number
01	Directorates published the technological inventory	
02	Directorates constantly updating the technological inventory	

**F. Technological Products provided to KVKs during Jan 2019 to Dec 2019**

<b>S. No.</b>	<b>Major technologies provided</b>	<b>Number of KVKs</b>
01	Seeds	
02	Planting materials	
03	Bio-products	
04	Livestock breed	
05	Livestock products	
06	Poultry breed	
07	Poultry products	
08	Others pl. specify	

-----XXXXXXXX-----

**Special programme organised by KVK, Banda**

<b>S. No.</b>	<b>Name of activities</b>	<b>No. of activities</b>	<b>Date</b>	<b>No. of participants</b>
1	Associated in successful organization of First Extension Council Meeting of Directorate of Extension, BUAT, Banda	01	13.04.2019	70
2	Celebration of world Environment Day	01	05.05.2019	15
3	Soil health campaign	02	30.04.2019	62
4	Seed treatment campaign	04	09.05.19, 17.06.2019, 21.06.2019, 04.07.2019	97
5	Animal Health camp	02	28.06.2019 and 30.06.2019	256
6	Mushroom production awareness programme	02	21.10.2019 and 21.01.2020	43
7	Live-telecasting of Scientist farmers interaction	03	04.06.2019, 11.09.2019 and 29.01.2020	222
8	Conducted master trainers training programme at KVK under Kisan Pathshala	02	09.06.2019 and 09.10.2019	180
9	Bundelkhand Jaivik corridor programme	01	18.06.2019	89
10.	Bundeli Krishi Chaupal	01	19.06.2019	154
11.	Tree plantation programme at DFI, village, Bachheura	01	05.07.2019	57
12.	Block level Kharif Ghosthi	08	July, 2019	1270
13.	Celebration of Parthenium awareness week	01	16-22.08.2019	50
14.	Tree plantation programme	01	17.09.2019	110
15.	Live-telecasting of National Animal disease control programme	01	11.09.2019	245
16.	Live-telecasting of Prime Minister Kisan Mandhan Scheme	01	11.09.2019	245
17.	Stockholders meeting for climate Smart Agriculture	01	12-13.09.2019	38
18.	Swachhta hi Seva Pakhwada	10	11.09.2019	350
19.	Kisan Mela at Kalinger	01	23.09.2019	450
20.	Celebration of 150 <sup>th</sup> anniversary of Mahatama Gandhi	01	02.10.2019	160
21.	Celebration of Mahila Kisan Diwas	01	15.10.2019	30
22.	Women Literacy Workshop organized by BAIF	01	05.10.2019	25
21.	Fertilizer use awareness programme	01	22.10.2019	144
22.	QRT review meeting	01	13-14.11.2019	07
23.	Constitutional day	01	26.11.2019	20
24.	World soil Health day	01	05.12.2019	56
25.	Kisan Samman Diwas	01	23.12.2019	83

<b>28.</b>	Kisan aur Vigyan Diwas	01	25.12.2019	53
<b>Total</b>		<b>53</b>	-	<b>4581</b>

Extension Activities

Attented Kisan pathshala at village level	16	10, 13.17.20.06.2019	1060
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