

PROFORMA FOR PREPARATION OF ANNUAL REPORT (April-2015-March-2016)**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 | 72 | 1534 | 526 | 2060 |
| Rural youths | 5 | 145 | 0 | 145 |
| Extension functionaries | 2 | 85 | 4 | 89 |
| Sponsored Training | - | - | - | - |
| Vocational Training | 6 | 76 | 72 | 148 |
| Total | 85 | 1840 | 602 | 2442 |

2. Frontline demonstrations

| Enterprise | No. of Farmers | Area (ha) | Units/Animals |
|-----------------------|----------------|-------------|---------------|
| Oilseeds | 30 | 12 | - |
| Pulses | 35 | 14 | - |
| Cereals | 20 | 8 | - |
| Vegetables | - | - | - |
| Other crops | 52 | 24.8 | - |
| Hybrid crops | - | - | - |
| Total | 137 | 58.8 | - |
| Livestock & Fisheries | 10 | - | 10 |
| Other enterprises | 10 | - | 10 |
| Total | 20 | - | 20 |
| Grand Total | 157 | 58.8 | 20 |

3. Technology Assessment & Refinement

| Category | No. of Technology Assessed & Refined | No. of Trials | No. of Farmers |
|----------------------------|--------------------------------------|---------------|----------------|
| Technology Assessed | | | |
| Crops | 5 | 15 | 15 |
| Livestock | - | - | - |
| Various enterprises | 5 | 15 | 15 |
| Total | 10 | 30 | 30 |
| Technology Refined | | | |
| Crops | - | - | - |
| Livestock | - | - | - |
| Various enterprises | - | - | - |
| Total | - | - | - |
| Grand Total | - | - | - |

4. Extension Programmes

| Category | No. of Programmes | Total Participants |
|----------------------------|-------------------|--------------------|
| Extension activities | 3086 | 6128 |
| Other extension activities | 15 | - |
| Total | 3101 | 6128 |

5. Mobile Advisory Services

| Name of KVK | Message Type | Type of Messages | | | | | | Total |
|-------------|---------------------------------|------------------|-----------|---------|-----------|-----------|------------------|-------|
| | | Crop | Livestock | Weather | Marketing | Awareness | Other enterprise | |
| | Text only | - | - | - | - | - | - | - |
| | Voice only | - | - | - | - | - | - | - |
| | Voice & Text both | - | - | - | - | - | - | - |
| | Total Messages | - | - | - | - | - | - | - |
| | Total farmers Benefitted | - | - | - | - | - | - | - |

6. Seed & Planting Material Production

| | Quintal/Number | Value Rs. |
|----------------------------|----------------|-----------|
| Seed (q) | 64.59 | - |
| Planting material (No.) | - | - |
| Bio-Products (kg) | - | - |
| Livestock Production (No.) | - | - |
| Fishery production (No.) | - | - |

7. Soil, water & plant Analysis

| Samples | No. of Beneficiaries | Value Rs. |
|--------------|----------------------|--------------|
| Soil | 323 | 14600 |
| Water | 57 | 2850 |
| Plant | - | - |
| Total | 380 | 17450 |

8. HRD and Publications

| Sr. No. | Category | Number |
|---------|-----------------------------|--------|
| 1 | Workshops | 1 |
| 2 | Conferences | 1 |
| 3 | Meetings | 5 |
| 4 | Trainings for KVK officials | 5 |
| 5 | Visits of KVK officials | 5 |
| 6 | Book published | - |
| 7 | Training Manual | - |
| 8 | Book chapters | - |
| 9 | Research papers | 2 |
| 10 | Lead papers | - |
| 11 | Seminar papers | 2 |
| 12 | Extension folder | 11 |
| 13 | Proceedings | 1 |
| 14 | Award & recognition | 1 |
| 15 | On going research projects | 1 |

DETAIL REPORT OF APR-2015-16**1. GENERAL INFORMATION ABOUT THE KVK****1.1. Name and address of KVK with phone, fax and e-mail**

| Address | Telephone | | E mail |
|--|------------------------|---------------------|--|
| Krishi Vigyan Kendra, Junagadh Agricultural University, Khapat-360579, Porbandar (Gujarat) | Office 0286-2912562 | FAX 0286-2242416 | kvk_khapat@yahoo.co.in kvkkhapat@jau.in |

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

| Address | Telephone | | E mail |
|--|--|--------------------------------------|--------|
| | Office | FAX | |
| Junagadh Agricultural University Junagadh- 362001 (Gujarat) | (1)0285- 2671784 (2)0285-2672080-90 | (1) 0285-2672004 (2) 0285-2672653 | - |

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

| Name | Telephone / Contact | | |
|------------------|---------------------|-------------|--|
| | Residence | Mobile | Email |
| Dr. R. K. Odedra | - | 09825280843 | rkodedra@jau.in |

1.4. Year of sanction: 2005

1.5 Staff Position (as on 30th March, 2016)

| Sl. No. | Sanctioned post | Name of the incumbent | Designation | Discip-line | Pay Scale (Rs.) | Present basic (Rs.) | Date of joining | Permanent /Temporary | Category (SC/ST/OBC/Others) | Mobile no. | Age | Email id |
|---------|-----------------------------|-----------------------|--------------|------------------|---------------------------|---------------------|-----------------|----------------------|-----------------------------|------------|-----|-----------------------|
| 1 | Programme Coordinator | Dr. K. D. Patel | PC | Horticulture | 37400-67000 | 23710 | 24-3-15 | Permanent | Gen*. | 9428014409 | 53 | kdpatel@jau.in |
| 2 | Subject Matter Specialist | Dr. R. K. Odedra | I/c PC | Horticulture | 15600-39100 | 15600 | 1-06-09 | Permanent | OBC | 9825280843 | 57 | rkodedra@jau.in |
| 3 | Subject Matter Specialist | P. J. Gohil | SMS | Agronomy | 15600-39100 | 22220 | 21-8-06 | Permanent | OBC | 9428188120 | 43 | pjgohil@jau.in |
| 4 | Subject Matter Specialist | R. B. Vadher | SMS | Entomology | 15600-39100 | 22220 | 19-8-06 | Permanent | OBC | 9824237767 | 37 | rbvadher@jau.in |
| 5 | Subject Matter Specialist | D. S. Thakar | SMS | Home Science | 15600-39100 | 15600 | 22-8-06 | Permanent | Gen. | 9909927399 | 36 | diptithakar@jau.in |
| 6 | Subject Matter Specialist | S. R. Thaker | SMS | Fisheries | 15600-39100 | 15600 | 31-8-06 | Permanent | Gen. | 9824274050 | 55 | srthaker@jau.in |
| 7 | Subject Matter Specialist | H. A. Patel | SMS | Animal Husbandry | 15600-39100 | 15600 | 6-4-15 | Permanent | Gen. | 9998687479 | 31 | hasmukh.vet@gmail.com |
| 8 | Programme Assistant | Vacant | - | - | 9300-34800 | - | - | - | Gen. | - | - | - |
| 9 | Computer Programmer | J J. Naliyapara | Comp. Prog. | - | 9300-34800 | 11750 | 12-6-08 | Permanent | OBC | 9998698063 | 38 | jjnaliyapara@jau.in |
| 10 | Farm Manager | V. M. Savaliya | Farm Manager | - | 9300-34800 15500 (fix) | 15500 | 31-03-15 | Permanent (Fix pay) | Gen. | 9909989754 | 28 | savaliyav@yahoo.com |
| 11 | Accountant / Superintendent | B. S. Bokhariya | OS | -- | 9300-34800 | 11750 | 18-6-08 | Permanent | OBC | 9978055059 | 40 | bsbokhiriya@jau.in |
| 12 | Stenographer | Vacant | - | - | - | - | - | - | - | - | - | - |
| 13 | Driver | Vacant | - | - | 5200-20200 | - | - | - | - | - | - | - |
| 14 | Driver | Vacant | - | - | 5200-20200 | - | - | - | - | - | - | - |
| 15 | Supporting staff | B. M. Vyas | Peon | - | 4440-7440 | 9240 | 01-6-05 | Permanent | Gen. | 9825088114 | 52 | - |
| 16 | Supporting staff | Vacant | - | - | 4440- | - | - | - | - | - | - | - |

| | | | | | | | | | | | | |
|--|--|--|--|--|------|--|--|--|--|--|--|--|
| | | | | | 7440 | | | | | | | |
|--|--|--|--|--|------|--|--|--|--|--|--|--|

1.6. Total land with KVK (in ha) :

| S. No. | Item | Area (ha) |
|--------|---------------------------|-----------|
| 1 | Under Buildings | 2.451 |
| 2. | Under Demonstration Units | 0.337 |
| 3. | Under Crops | 14.660 |
| 4. | Orchard/Agro-forestry | 2.798 |
| 5. | Others (specify) | 0.344 |

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 | 13/10/07 | 588 | - | - | - | completed |
| 2. | Farmers Hostel | ICAR | 31/7/08 | 288 | - | - | - | completed |
| 3. | Staff Quarters (6) | ICAR | 24/11/07 | 446 | - | - | - | completed |
| 4. | Demonstration Units | ICAR | - | - | - | - | - | Proposed |
| 5 | Fencing | ICAR | 2009 | 500 RM | - | - | - | completed |
| 6 | Threshing floor | ICAR | 2009 | 900 | - | - | - | completed |
| 7 | Farm godown | ICAR | 2009 | 129 | - | - | - | completed |
| 8 | Open well | ICAR | - | 6 m dia. | - | - | - | completed |
| 9 | Implement shed | ICAR | 2011 | 76.4 | - | - | - | completed |

B) Vehicles

| Type of vehicle | Year of purchase | Cost (Rs.) | Total kms. Run | Present status |
|--------------------|------------------|------------|----------------|----------------------------|
| Tractor (Farmtrac) | 2005 | 380000 | 36812Hours | Good |
| Bolero Jeep | 2005 | 496000 | 2,15,8214 Km | Good after major repairing |
| Motor cycle | 2010 | 47000 | 7265Km | Good |

C) A. Equipments & AV aids

| Name of the equipment | Year of purchase | Cost (Rs.) | Present status |
|-----------------------|------------------|------------|----------------|
| Fax machine | 2008-09 | 17200 | Running |
| LCD projector | 2008-09 | 100000 | Running |

B. Equipments & AV aids procured under RKVY

| Name of the equipment | Year of purchase | Cost (Rs.) | Present status |
|--|------------------|------------|----------------|
| Zerox machine | 2008-09 | 124000 | Running |
| R.O. plant | 2008-09 | 24450 | Running |
| Hcl laptop computer | 2008-09 | 47,500 | Running |
| Food processor | 2008-09 | 5,495 | Running |
| Multipurpose bullock drawn pipe frame implement head peace | 2008-09 | 27,500 | Running |

| | | | |
|---|---------|-----------|---------|
| Rotavator tractor operated | 2008-09 | 96,000 | Running |
| Planter tractor operated | 2008-09 | 44,000 | Running |
| Tractor drawn harrow cum cultivator cum intercultivator frame 86" | 2008-09 | 37,500 | Running |
| Samsung double door refrigerator | 2008-09 | 17,650 | Running |
| Electrolux grill microwave / oven | 2008-09 | 9,580 | Running |
| Panasonic LCD projector | 2008-09 | 103,912 | Running |
| Multi purpose groundnut cum wheat thresher | 2008-09 | 114,000 | Running |
| Cotton shredder | 2008-09 | 242,000 | Running |
| Solar street light | 2008-09 | 28,000 | Running |
| Solar lanterns | 2008-09 | 4,800 | Running |
| Solar cooker | 2008-09 | 3,300 | Running |
| Mobile seed grading unit | 2008-09 | 1,685,000 | Running |
| Decorticators | 2008-09 | 95,850 | Running |
| Winnowing fan | 2008-09 | 8,500 | Running |
| Chaff cutter | 2008-09 | 30,188 | Running |
| High tech sprayer pump | 2008-09 | 1,850 | Running |
| Battery operated sprayer pump | 2008-09 | 4,940 | Running |

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

| Sr. No. | Date | Number of Participants | Salient Recommendations | Action taken |
|---------|----------------------------|---|---|--|
| 1 | 30 th Jan. 2016 | 1 Dr. A. R. Pathak, Hon'ble Vice Chancellor, J.A.U., Junagadh 2 Shri Virambhai Karavadra, President, Taluka Panchayat, Porbandar 3 Dr. A. M. Parakhia, DEE, JAU, Junagadh 4 Dr. T. Radha krishnan , Director, DGR (ICAR), Junagadh 5 Shri V. P. Korat I/c. Deputy Project Director (FTC), Porbandar 6 Dr. N. B. Jadav, Programme Coordinator, KVK, Dhoraji 7 Shri Kuldeep Vala, Rep. DAO, Porbandar 8 Shri M. D. Odedra, I/c Deputy Director (Horti.), Porbandar 9 Shri J. L. Gohel, Rep. Asst. Dir., Fisheries, Porbandar 10 Shri K. P. Dadhania, Rep. Dep. Dir. of AH, Porbandar 11 Shri H. M. Jadav, Rep. DI C, Porbandar 12 Dr. R. B. Thanki, ARS, DFRS, JAU, Ratia 13 Shri L. R. Chavda, Rep. of ARS, CRS, JAU, Khapat 14 Shri K. G. Balas, DWDU, Porbandar 15 Shri M. M. Khara, Rep., Dy. Cons. Forest, Porbandar 16 Dr. R. K. Odedra, PC, KVK, Porbandar 17 Shri Balubha Khimabhai Bhutiya At: Khambhodar, Ta. & Dist. Porbandar 18 Shri Kalubhai Gangabhai Antroliya At: Kadeji, Ta. Kutiyana, Dist. Porbandar 19 Shri Hasmukhbhai Nathubhai Chavda At: Gokran, Ta. Kutiyana, Dist. Porbandar 20 Shri Bhanubhai Rajsibhai Bapodra At: Ranavav, Ta, Ranavav, Dist. Porbandar 21 Smt. Nirmalaben Ramjibhai Ravat At: Rana Vadvala, Ta. Ranavav, Dist. Porbandar 22 Smt. Arunaben Nandlal Tank At: Aniyari, Ta. Ranavav, Dist. Porbandar 23 Smt. Meenaben Hamukhbhai Chavda At: Gokran, Ta. Kutiyana, Dist. Porbandar 24 Shri U. D. Nimavat, FHW, Sodhana, Ta. & Dist. Porbandar 25 Shri Ajay Gohel, MPHWS, Sodhana, Ta. & Dist. Porbandar 26 Shri Manjibhai Naranbhai Korla At: Shingda, Ta. & Dist. Porbandar 27 Shri Ramjibhai Karabhai Dhokia At: Choliyana, Ta. Kutiyana, Dist., Porbandar 28 Shri Samatbhai Hardasbhai Odedra | 1. More emphasis on pulses FLDs & training 2. OFT/FLDs on soil test based fertilizer application should be conducted 3. FLDs & Training on crop diversification should be conducted 4. FLDs on Green gram variety GG-5 should be conducted 5. Training on plant protection in org. Farming system 6. Check the possibility of use of seaweed as biomass 7. AI should be done with semen of Jafrabadi breed available at CBF, JAU 8. Training on ITK in Ani. Hus. Should be conducted | 1. The suggestion has been incorporated 2. Accepted and will be conducted 3. Accepted and will be incorporated in the action plan 4. Will be conducted 5. Accepted and will be conducted 6. Will be checked 7. Accepted and will be done next year 8. Will be conducted |

| | | | | |
|--|----|--|--|--|
| | 29 | At: Kansabad, Ta. Kutiyana, Dist. Porbandar Shri Maldebhai Thebabhai Kuchhadia | | |
| | 30 | At: Kuchhadi, Ta. & Dist. Porbandar Shri Sureshbhai Jerajbhai Dalsania | | |
| | 31 | At: Ishwariya, Ta. Kutiyana, Dist. Porbandar Shri Nagabhai Devabhai Sundavadra, | | |
| | 32 | At: Degam, Ta. & Dist., Porbandar Shri Pratapbhai Jodhabhai Sundavdra, | | |
| | 33 | At: Degam, Ta. & Dist., Porbandar Shri Devabhai Karabhai Bhutiya | | |
| | 34 | At: Adityana, Ta. Ranavav, Dist. Porbandar Shri Devabhai Arbhambhai Odedra | | |
| | 35 | At: Kadegi, Ta. Kutiyana, Dist. Porbandar Mrs. Hansaben Ramjibhai Dhokia | | |
| | 36 | At: Choliyana, Ta. Kutiyana, Dist., Porbandar Mrs. Kamlaben Nandlal Tank | | |
| | | At: Aniyari, Ta. Ranavav, Dist. Porbandar | | |

Note : This yellow mark may be treated as an example

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

2. DETAILS OF DISTRICT (2015-16)

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

| S. No | Farming system/enterprise |
|--------------|----------------------------------|
| 1 | Rainfed Farming System |

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

| S. No | Agro-climatic Zone | Characteristics |
|--------------|---------------------------|--|
| 1 | South Saurashtra | Porbandar district is located between 21° to 22° N latitude and 69° to 70° E longitude. Khapat- N 21° 40' 12" and E 69° 37' 14" Soil: medium black & silty loam with calcareous in nature pH: of the soil is ranging from 8.01 to 8.58 Water: Ec value up to 8.1 mm / cm Average Rainfall: 668.mm Temperature Range: 41.0° C to 12.0 °C |

| Sr. No | Agro ecological situation | Characteristics |
|---------------|---|---|
| 1. | Shallow black soil with low rainfall | Soil: Sandy clay loam to clay Rainfall: <750 mm |
| 2. | Hilly soil with low rainfall | Soil: Sandy clay loam to sandy clay Rainfall: <750 mm |
| 3. | Medium black soil with low rainfall | Soil: Sandy clay to clay Rainfall: <750 mm |
| 4. | Deep black soil with low rainfall (Ghed) | Soil: clay Rainfall: <750 mm |
| 5. | Mix red & black soil with medium rainfall | Soil: Sandy clay loam to clay loam Rainfall: 750-1000 mm |

2.3 Soil type/s

| Sr. No | Soil type | Characteristics | Area in ha |
|---------------|-------------------------------|------------------------|-------------------|
| 1. | Sandy clay loam to clay | Rainfall: <750 mm | 34241 |
| 2. | Sandy clay loam to sandy clay | Rainfall: <750 mm | 46080 |
| 3. | Sandy clay to clay | Rainfall: <750 mm | 86627 |
| 4. | Clay | Rainfall: <750 mm | 56880 |
| 5. | Sandy clay loam to clay loam | Rainfall: 750-1000 mm | 5707 |

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

| Sr. No | Crop | Area (ha) | Production (MT) | Productivity (Kg/ha) |
|---------------|-------------|------------------|------------------------|-----------------------------|
|---------------|-------------|------------------|------------------------|-----------------------------|

| | | | | |
|---|--------------|-------|--------|-------|
| 1 | Groundnut | 85390 | 109299 | 1280 |
| 2 | Cotton | 8905 | 4452 | 500 |
| 3 | Wheat | 34505 | 97496 | 2825 |
| 4 | Cumin | 26330 | 17309 | 650 |
| 5 | Gram | 21570 | 27609 | 1280 |
| 6 | Green gram | 11695 | 7894 | 675 |
| 7 | Pearl millet | 425 | 595 | 1400 |
| 8 | Castor | 3325 | 6982 | 2100 |
| 9 | Forage crops | 22310 | 546495 | 24500 |

2.5. Weather data

| Month | Rainfall (mm) | Temperature ° C | | Relative Humidity (%) |
|----------------|---------------|-----------------|---------|-----------------------|
| | | Maximum | Minimum | |
| January 2015 | - | 27.62 | 7.72 | 55.75 |
| February 2015 | - | 29.68 | 10.78 | 56.69 |
| March 2015 | 17.6 | 31.08 | 12.53 | 55.12 |
| April 2015 | - | 32.32 | 15.98 | 67.69 |
| May 2015 | - | 33.45 | 19.34 | 65.88 |
| June 2015 | 119.6 | 31.28 | 22.05 | 78.78 |
| July 2015 | 76.2 | 31.13 | 22.16 | 78.75 |
| August 2015 | 16.0 | 30.70 | 22.18 | 93.38 |
| September 2015 | 76.0 | 31.19 | 22.66 | 76.73 |
| October 2015 | - | 34.91 | 22.93 | 60.03 |
| November 2015 | - | 32.90 | 22.19 | 44.16 |
| December 2015 | - | 30.09 | 12.26 | 45.58 |
| Total | 305.4 | - | - | - |

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

| Category | Population | Production | Productivity |
|-------------------|------------|------------|--------------|
| Cattle | | | |
| <i>Crossbred</i> | - | - | - |
| <i>Indigenous</i> | 83108 | - | - |
| Buffalo | 105346 | - | - |
| Sheep | | | |
| <i>Crossbred</i> | - | - | - |
| <i>Indigenous</i> | 22649 | - | - |
| Goats | 22325 | - | - |
| Pigs | - | - | - |
| <i>Crossbred</i> | - | - | - |
| <i>Indigenous</i> | - | - | - |
| Rabbits | - | - | - |
| Poultry | | | |
| Hens | - | - | - |
| <i>Desi</i> | 2069 | - | - |
| <i>Improved</i> | - | - | - |
| Ducks | - | - | - |
| Turkey and others | - | - | - |

| Category | Area | Production | Productivity |
|---------------|-------------------|--------------------|--------------|
| Fish | 10748 (Fisherman) | 91513 MT (Capture) | - |
| <i>Marine</i> | - | - | - |
| <i>Inland</i> | - | - | - |
| Prawn | - | - | - |
| Scampi | - | - | - |
| Shrimp | - | - | - |

2.7 Details of Operational area / Villages (2015-16)

| Sl.No. | Taluk | Name of the block | Name of the village | Major crops & enterprises | Major problem identified | Identified Thrust Areas |
|--------|-------|-------------------|---------------------|---------------------------|--------------------------|-------------------------|
|--------|-------|-------------------|---------------------|---------------------------|--------------------------|-------------------------|

| | | | | | | |
|----|-----------|-------------|---|--|---|---|
| 1. | Porbandar | Cluster I | 1. Khambhodar 2. Majivana 3. Fatana 4. Sodhana 5. Shingda | Groundnut Wheat Cumin Coriander Sorghum Gram Fenugreek | White grub & stem rot in groundnut Wilt & blight in cumin Powdery mildew in coriander | IPM INM Improved package of practices IDM Poor quality water |
| 2. | Ranavav | Cluster II | 1. Khijdal 2. Rana Vadvala 3. Bhod 4. Rana Khirasara 5. Aniyari | Groundnut Cotton Sorghum Wheat Cumin Pearl millet | White grub & stem rot in groundnut Pink ball worm & sucking pest in cotton Wilt & blight in cumin | IPM INM Improved package of practices IDM INM in Horticulture |
| 3. | Kutiyana | Cluster III | 1. Pasvari 2. Segras 3. Bhogsar 4. Mal 5. Baloch | Groundnut Cotton Castor Sorghum Wheat Cumin Gram | White grub & stem rot in groundnut Pink ball worm & sucking pest in cotton Wilt & blight in cumin | IPM INM Improved package of practices IDM Problematic soil Poor quality irrigation water |

2.8 Priority/thrust areas

| Crop/Enterprise | Thrust area |
|-----------------|---|
| Groundnut | Integrated Nutrient Management, Integrated Pest & Disease Management, Soil moisture conservation, Improved variety, organic farming |
| Cotton | Integrated Pest Management, Integrated Nutrient Management |
| Wheat | Integrated Nutrient Management, Soil moisture conservation |
| Cumin | Integrated disease management, irrigation management, organic farming |
| Coriander | Improved variety, IDM |
| Chick pea | Improved variety, INM, organic farming |
| Sorghum | Soil moisture conservation |
| Horticulture | Improved package of practices of spices, PHT in fruits & vegetables |
| Fisheries | Integrated fish farming, freshwater aquaculture, seaweed cultivation |
| Farm women | Income generating activities, Value addition in agricultural produce, women & child care |

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2015-16

| 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 |
| 10 | 10 | 30 | 30 | 58 | 58.8 | 155 | 157 |

| 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 | 72 | 72 | 2160 | 2060 | 16 | 16 | - | 6128 |
| Rural youth | 11 | 11 | 330 | 293 | - | - | - | - |
| Extn. Functionaries | 2 | 2 | 60 | 89 | - | - | - | - |
| | 85 | 85 | 2550 | 2442 | 16 | 16 | - | 6128 |

| Seed Production (Qtl.) | | | Planting material (Nos.) | | |
|------------------------|-------------|-------------------------------|--------------------------|-------------|-------------------------------|
| 5 | | | 6 | | |
| Target | Achievement | Distributed to no. of farmers | Target | Achievement | Distributed to no. of farmers |
| 96 | 64.6 | - | - | - | - |

I.A 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 | Sesame | Effect of sulphur on yield of summer sesame | 3 | 3 |
| Varietal Evaluation | - | - | - | - |
| Integrated Pest Management | Groundnut | Management of White grub in groundnut | 3 | 3 |
| Integrated Crop Management | - | - | - | - |
| Integrated Disease Management | - | - | - | - |
| Small Scale Income Generation Enterprises | - | - | - | - |
| Weed Management | - | - | - | - |
| Resource Conservation Technology | Cumin | Effect of seed rate in maintenance of germination in cumin: | 3 | 3 |
| | Cumin | Performance of drip irrigation with sowing method in cumin | 3 | 3 |
| | Chili | Effect of planting geometry on chili | 3 | 3 |
| Farm Machineries | - | - | - | - |
| Integrated Farming System | - | - | - | - |
| Seed / Plant production | - | - | - | - |
| Post Harvest Technology / Value addition | - | - | - | - |
| Drudgery Reduction | Solar cooker | Comparison of solar Cooker with traditional cooking system | 5 | 5 |
| Storage Technique | Mango | Effect of salt & oil on spoilage of mango pickles | 3 | 3 |
| Others (Pl. specify): Nutrition | | | | |
| | | | | |
| | | | | |
| Total | | | 23 | 23 |

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 | - | - | - | - |
| Production and Management | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Total | | | - | - |

Summary of technologies assessed under various enterprises by KVKs

| Thematic areas | Enterprise | Name of the technology assessed | No. of trials | No. of farmers |
|-------------------------|------------|---|---------------|----------------|
| Nutrition | Nutrition | Evaluation of low cost high calorie and protein diets made from locally available food material | 5 | 5 |
| Integrated Fish Farming | Fisheries | Effect of culture density on fish (major carp) production in using cage in pond | 1 | 1 |
| | Fisheries | Fattening of baby Lobster using cage for better production | 1 | 1 |
| Total | | | 7 | 7 |

I. B. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops by KVKs

| Thematic areas | Crop | Name of the technology refined | No. of trials | No. of farmers |
|---|------|--------------------------------|---------------|----------------|
| Integrated Nutrient Management | - | - | - | - |
| Varietal Evaluation | - | - | - | - |
| Integrated Pest Management | - | - | - | - |
| Integrated Crop Management | - | - | - | - |
| Integrated Disease Management | - | - | - | - |
| Small Scale Income Generation Enterprises | - | - | - | - |
| Weed Management | - | - | - | - |
| Resource Conservation Technology | - | - | - | - |
| Farm Machineries | - | - | - | - |
| Integrated Farming System | - | - | - | - |
| Seed / Plant production | - | - | - | - |
| Value addition | - | - | - | - |
| Drudgery Reduction | - | - | - | - |
| Storage Technique | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Total | | | - | - |

Summary of technologies refined under various livestock by KVKs

| Thematic areas | Name of the livestock enterprise | Name of the technology refined | No. of trials | No. of farmers |
|----------------------------|----------------------------------|--------------------------------|---------------|----------------|
| Disease Management | - | - | - | - |
| Evaluation of Breeds | - | - | - | - |
| Feed and Fodder management | - | - | - | - |
| Nutrition Management | - | - | - | - |
| Production and Management | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Total | | | - | - |

Summary of technologies refined under various enterprises by KVKs

| Thematic areas | Enterprise | Name of the technology assessed | No. of trials | No. of farmers |
|----------------|------------|---------------------------------|---------------|----------------|
| NIL | | | | |

I.C. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

(A). Technologies Assessed/refined during Rabi/Summer 2014-15

INTEGRATED CROP MANAGEMENT

Problem definition: Lower yield of cumin due to poor germination

Technology Assessed: Effect of seed rate in maintenance of germination in cumin

KVK, Porbandar in Gujarat conducted on-farm trial to assess the effect of seed rate in maintenance of germination in cumin. Results indicated that sowing of cumin with seed rate of 12-15 kg seed/ha +6-8 hrs warm water soaking improved germination, increased yield net returns and BCR than without warm water soaking.

Table 1 Effect of seed treatments on germination, yield and economics of cumin

| Technology Option | No. of trials | Germination (%) | Yield (kg./ha) | Net Returns (Rs./ha) | BCR |
|--|---------------|-----------------|----------------|----------------------|------|
| 12-15 kg seed/ha | 3 | 70.37 | 830.3 | 77500 | 3.95 |
| 12-15 kg seed/ha (6-8 hrs warm water soaking followed by shed) | | 90.47 | 914.7 | 86437 | 4.10 |

PEST AND DISEASE MANAGEMENT

On Farm Trail 1

Problem definition: Heavy infestation of sucking pest in Bt cotton

Technology Assessed: Integrated management of sucking pest in Bt. cotton

Bt. Cotton is an important commercial crop of Porbandar district. However, there is high incidence of sucking pest like aphids, jessids, thrips and mites resulting in yield loss. KVK, Porbandar conducted on-farm trial to assess the integrated management of sucking pest in Bt. cotton. The assessed technology of alternate spraying of recommended pesticides + *Verticillium lecanii* @ 30 g/10 lit of water + Neem oil (1500 ppm) @ 30 ml/10 lit of water increased the yield during 14-15 by 10.9% and 13.09% under recommended practice and intervention respectively than farmers' practice. The less numbers of sucking pest in the farmers' practice may be due to use of higher doses of newer pesticides but the difference was very negligible causing no economic damage to the crop. The same results are also achieved in the pooled results of four years trials during 2011-12 to 2014-15.

Table 2 Integrated management of sucking pest in Bt. cotton

| Technology Option | No. of trials | Incidence of Ahpid (%) | Incidence of Jessids (%) | Incidence of Thrips (%) | Incidence of Mites (%) | Yield (kg/ha) | % Increase in yield over farmer's practice |
|--|---------------|------------------------|--------------------------|-------------------------|------------------------|---------------|--|
| Higher doses of new chemical pesticides (Farmer's practice) | 3 | 4.2 | 1.89 | 3.8 | 2.89 | 2750 | -- |
| Dimethioate 10ml/10 lit of water or Imidachloprid 7.5 ml/10 lit of water or Profenophos 16 ml/10 lit of water (Recommended Practice) | | 5.1 | 2.21 | 4.42 | 3.6 | 3050 | 10.9 |
| Alternate spraying of recommended pesticides + <i>Verticillium lecanii</i> @ 30 g/10 lit of water + Neem oil (1500 ppm) @ 30 ml/10 lit of water (Intervnetion) | | 5.3 | 2.34 | 4.91 | 3.7 | 3110 | 13.09 |

Table 3 Polled results (2011-12 to 2014-15)

| Technology Option | No. of trials | Incidence of Ahpid (%) | Incidence of Jessids (%) | Incidence of Thrips (%) | Incidence of Mites (%) | Yield (kg/ha) | % Increase in yield over farmer's practice |
|--|---------------|------------------------|--------------------------|-------------------------|------------------------|---------------|--|
| Higher doses of new chemical pesticides (Farmer's practice) | 12 | 3.4 | 1.5 | 3.3 | 2.8 | 2415 | -- |
| Dimethioate 10ml/10 lit of water or Imidachloprid 7.5 ml/10 lit of water or Profenophos 16 ml/10 lit of water (Recommended Practice) | | 4.1 | 1.8 | 4.2 | 3.7 | 2551 | 5.63 |
| Alternate spraying of recommended pesticides + <i>Verticillium lecanii</i> @ 30 g/10 lit of water + Neem oil (1500 ppm) @ 30 ml/10 lit of water (Intervnetion) | | 4.5 | 1.9 | 4.7 | 4.1 | 2607 | 7.95 |

On Farm Trail 2

Problem definition: Heavy infestation of wilt in chickpea

Technology Assessed: Effect of seed treatment on wilt in chick pea

Chickpea is an important pulse crop of cultivated on conserved soil moisture in large acreage of Ghed area in Porbandar district. However, there is high incidence of wilt in chickpea resulting in yield loss as the farmers are not giving seed treatment to chick pea. KVK, Porbandar conducted on-farm trial to assess the effect of seed treatment on wilt in chickpea. The assessed technology of seed treatment with *Trichoderma* @ 8 g/kg seed + vitavax (Carboxin) @ 3g/kg seed increased the yield during 14-15 by 10.31% and 13.18% under recommended practice and intervention respectively then farmers' practice.

Table 4 Integrated management of sucking pest in Bt. cotton

| Technology Option | No. of trials | Incidence of wilt (%) | Yield (kg/ha) | % Increase in yield over farmer's practice | Net income (Rs./ha) | BCR |
|---|---------------|-----------------------|---------------|--|---------------------|------|
| No seed treatment (Farmer's practice) | 3 | 10.1 | 1745 | -- | 40340 | 3.60 |
| Seed treatment with Carbendazime @ 3g/kg seed (Recommended Practice) | | 3.8 | 1925 | 10.31 | 45200 | 3.76 |
| Seed treatment with <i>Trichoderma</i> @ 8 g/kg seed + vitavax (Carboxin) @ 3g/kg seed (Intervnetion) | | 3.2 | 1975 | 13.18 | 45800 | 3.83 |

Table 5 Pooled Results (2011-12 to 2014-15)

| Technology Option | No. of trials | Incidence of wilt (%) | Yield (kg/ha) | % Increase in yield over farmer's practice | Net income (Rs./ha) | BCR |
|--|---------------|-----------------------|---------------|--|---------------------|------|
| No seed treatment (Farmer's practice) | 12 | 9.80 | 1487 | -- | 35979 | 3.20 |
| Seed treatment with Carbendazime @ 3g/kg seed (Recommended Practice) | | 3.78 | 1621 | 9.0 | 39735 | 3.44 |
| Seed treatment with Trichoderma @ 8 g/kg seed + vitavax (Carboxin) @ 3g/kg seed (Intervention) | | 2.43 | 1735 | 16.7 | 42653 | 3.51 |

It can be concluded from the pooled results that recommended practices and intervention reduced incidence of wilt and recorded 9.0 & 16.7 percent higher yield than farmers' practices respectively. Higher net income and BCR were also achieved in intervention than farmer's practice.

NUTRIENT MANAGEMENT

On Farm Trail 1

Problem definition: Lower production & productivity of onion

Technology assessed: Effect of sulphur on onion production.

KVK, JAU, Porbandar in Gujarat conducted on-farm trial to find out effect of sulphur on onion production. The assessed practice of RDF + 20 kg sulphur/ha (readily available in the market: Cosavet 80% G) at the time of sowing recorded 20.8 % higher yield (30.72 t./ha), net returns of Rs. 74200/ha and 1.67 BC ratio than farmer's practice, which was as effective as recommended practice.

Table 6 Effect of seed Bio fertilizers on wheat yield (Rabi 2014-15)

| Technology Option | No. of trials | Yield (tone/ha) | Increase in Yield (%) | Income (Rs./ha) | B:C Ratio |
|---|---------------|-----------------|-----------------------|-----------------|-----------|
| No use of sulphur (Farmers Practice) | 3 | 25.44 | - | 38440 | 1.34 |
| RDF + 20 kg sulphur/ha through gypsum at the time of sowing or elemental sulphur 20-25 DATP (Recommended Practice) | | 28.38 | 11.5 | 60880 | 1.56 |
| RDF + 20 kg sulphur/ha (readily available in the market Cosavet 80% G) at the time of sowing (Intervention) | | 30.75 | 20.8 | 74200 | 1.67 |

Table 7 Pooled results (2011-12 to 2014-15)

| Technology Option | No. of trials | Yield (tone/ha) | Increase in Yield (%) | Income (Rs./ha) | B:C Ratio |
|---|---------------|-----------------|-----------------------|-----------------|-----------|
| No use of sulphur (Farmers Practice) | 3 | 26.48 | - | 31624 | 1.27 |
| RDF + 20 kg sulphur/ha through gypsum at the time of sowing or elemental sulphur 20-25 DATP (Recommended Practice) | | 28.98 | 9.4 | 49624 | 1.46 |
| RDF + 20 kg sulphur/ha (readily available in the market Cosavet 80% G) at the time of sowing (Intervention) | | 30.11 | 13.7 | 55356 | 1.50 |

It can be also concluded from the pooled results that application of sulphur @ 20 kg/ha available in the market Cosavet 80% G (intervention) increased 13.7 % yield of onion than farmer's practice. Additional income of Rs. 23732 was incurred under intervention than FP.

On Farm Trail 2 (Summer 2015)

Problem definition: Lower production & productivity of summer sesame

Technology assessed: Effect of sulphur on yield of summer sesame

KVK, JAU, Porbandar in Gujarat conducted on-farm trial to find out effect sulphur on yield of summer sesame. The assessed practice of RDF + 20 kg sulphur/ha (readily available in the market: Cosavet 80% G) at the time of sowing recorded 18.7

% higher yield (1523 kg/ha), net returns of Rs. 89877/ha and 4.1 BC ratio then farmer's practice, While under recommended practice the yield was 1477 kg/ha which was 15.12% higher than farmer's practice.

Table 8 Effect of sulphur on yield and economics of summer sesame

| Technology Option | No. of trials | Yield (tone/ha) | Increase in Yield (%) | Income (Rs./ha) | B:C Ratio |
|---|---------------|-----------------|-----------------------|-----------------|-----------|
| No use of sulphur (Farmers Practice) | 3 | 1283 | - | 75717 | 3.5 |
| RDF + 20 kg sulphur/ha through gypsum or elemental sulphur at the time of sowing (Recommended Practice) | | 1477 | 15.12 | 87163 | 4.0 |
| RDF + 20 kg sulphur/ha (readily available in the market) at the time of sowing (Intervention) | | 1523 | 18.70 | 89877 | 4.1 |

RESOURCE CONSERVATION

Problem definition: Lower productivity and profitability in cumin cultivation

Technology Assessed: Performance of drip irrigation with sowing method in cumin

KVK, Porbandar conducted on-farm trial on performance of drip irrigation with sowing method in cumin. Results revealed that drip irrigation with either broadcasting or row sowing increased yield, net returns and BC ratio than without drip irrigation.

Table 9 Effect of drip irrigation and sowing methods on yield and economics of cumin

| Technology Option | No. of trials | Yield (kg/ha) | Net Returns (Rs./ha) | BC Ratio |
|--|---------------|---------------|----------------------|----------|
| Broad casting method without drip irrigation | 3 | 743.3 | 92913 | 3.33 |
| Broad casting method with drip irrigation | | 882.3 | 82388 | 4.08 |
| Row sowing without drip irrigation | | 826.0 | 76250 | 3.65 |
| Row sowing with drip irrigation | | 940.3 | 89238 | 4.61 |

INTEGRATED NUTRIENT MANAGEMENT

On Farm Trail 1

Problem definition: Lower productivity and profitability in wheat due indiscriminate use of chemical fertilizers

Technology Assessed: Effect of bio fertilizers on wheat yield.

KVK, JAU, Porbandar in Gujarat conducted on-farm trial to find out effect of bio fertilizers on wheat yield. The assessed practice of seed treatment with *Azotobacter* & PSB culture @ 250 g./10 kg seed recorded 7.6 % higher yield (4230 kg/ha), net returns of Rs. 63730/ha and 3.54 BC ratio then farmer's practice.

Table 10 Effect of seed Bio fertilizers on wheat yield (Rabi 2014-15)

| Technology Option | No. of trials | Yield (kg./ha) | Increase in Yield (%) | Income (Rs./ha) | B:C Ratio |
|---|---------------|----------------|-----------------------|-----------------|-----------|
| Application of only DAP & Urea in different doses (Farmers Practice) | 3 | 3930 | - | 55030 | 3.00 |
| RDF 120-60-0 NPK kg/ha (Recommended Practice) | | 4175 | 6.2 | 61675 | 3.37 |
| Seed treatment with <i>Azotobacter</i> & PSB culture (250g/10kg seed) + 75% of RDF (Intervention) | | 4230 | 7.6 | 63730 | 3.54 |

Table 11 Polled results (2011-12 to 2014-15)

| Technology Option | No. of trials | Yield (kg./ha) | Increase in Yield (%) | Income (Rs./ha) | B:C Ratio |
|---|---------------|----------------|-----------------------|-----------------|-----------|
| Application of only DAP & Urea in different doses (Farmers Practice) | 12 | 3698 | - | 50227 | 2.08 |
| RDF 120-60-0 NPK kg/ha (Recommended Practice) | | 4012 | 8.5 | 54977 | 2.27 |
| Seed treatment with <i>Azotobacter</i> & PSB culture (250g/10kg seed) + 75% of RDF (Intervention) | | 4133 | 11.8 | 58457 | 2.46 |

Pooled results showed that application of bio fertilizers with 75% RDF considerably increased the yield and net profit over farmers' practice. The yield and net profit under intervention was also higher than recommended dose of fertilizers (RP).

(B). Technologies Assessed/refined during 2015-16

INTEGRATED CROP MANAGEMENT

On farm trail: 1

Problem definition: Lower yield of cumin due to poor germination

Technology Assessed: Effect of seed rate in maintenance of germination in cumin

KVK, Porbandar in Gujarat conducted on-farm trial to assess the effect of seed rate in maintenance of germination in cumin. Results indicated that sowing of cumin with seed rate of 12-15 kg seed/ha +6-8 hrs. warm water soaking improved germination and increased yield by 32% with additional income of Rs.23702.

Table 1 Effect of seed treatments on germination, yield and economics of cumin

| Technology Option | No. of trials | Germination (%) | Yield (kg/ha) | Net Returns (Rs./ha) | BCR |
|--|---------------|-----------------|---------------|----------------------|------|
| 12-15 kg seed/ha | 3 | 69.0 | 642.8 | 45922 | 2.64 |
| 12-15 kg seed/ha (6-8 hrs warm water soaking followed by shed) | | 88.6 | 848.9 | 69624 | 3.48 |

On farm trail: 2 (Summer 2016)

Problem definition: Lower yield of chili

Technology Assessed: Effect of planting geometry in chili

Results: Awaited

PEST AND DISEASE MANAGEMENT

On Farm Trail 1

Problem definition: Heavy infestation of white grub in groundnut

Technology Assessed: Management of white grub in groundnut

Groundnut is a major crop of Porbandar district cultivated in Kharif season. However, there is high incidence of white grub since last 3-4 years resulting in yield loss. KVK, Porbandar conducted on-farm trial to assess the integrated management of white grub in groundnut. The technology of application of carbofuran 3 G @ 40 kg/ha at the time of sowing, spraying the trees on bund with carbaryl @ 40 g/10 lit water increased the yield by 37.0% and 41.5% under recommended practice and intervention respectively then farmers' practice. The white grub population was also noticeably reduced in recommended practice and intervention. Net income and BCR were also considerably higher in recommended practice and intervention.

Table 2 Integrated management of white grub in groundnut

| Technology Option | No. of trials | White Grub population/m ² | Yield (kg/ha) | % Increase in yield over farmer's practice | Net Profit (Rs./ha) | BCR |
|---|---------------|--------------------------------------|---------------|--|---------------------|------|
| Chloropyriphos @ 4 lit./ha at the time of attack (Farmer's practice) | 3 | 6 | 1537 | -- | 35266 | 2.35 |
| Seed treatment with chloropyriphos @ 25 ml/kg, Spraying the trees on bund with carbaryl @ 40 g/15 lit water (Recommended Practice) | | 1 | 2106 | 37.0 | 61126 | 3.65 |
| Application of carbofuran 3 G @ 40 kg/ha at the time of sowing, Spraying the trees on bund with carbaryl @ 40 g/10 lit water (Intervention) | | 1 | 2175 | 41.5 | 65500 | 4.05 |

NUTRIENT MANAGEMENT**On Farm Trail 1 (Summer 2016)**

Problem definition: Lower production & productivity of summer sesame

Technology assessed: Effect of sulphur on yield of summer sesame

Results: Awaited

RESOURCE CONSERVATION**On farm trail: 1**

Problem definition: Lower productivity and profitability in cumin cultivation

Technology Assessed: Performance of drip irrigation with sowing method in cumin

KVK, Porbandar conducted on-farm trial on performance of drip irrigation with sowing method in cumin. Results revealed that higher yield of 784 kg/ha and 858 kg/ha was recorded under drip irrigation with broadcasting and row sowing respectively. Net return (Rs. 62160 & 70670) and BCR (3.22 & 3.52) was also higher under drip irrigation with broadcasting and line sowing respectively. Broadcasting without drip irrigation recorded lowest yield, net return and BCR.

Table 3 Effect of drip irrigation and sowing methods on yield and economics of cumin

| Technology Option | No. of trials | Yield (kg/ha) | Net Returns (Rs./ha) | BC Ratio |
|--|---------------|---------------|----------------------|----------|
| Broad casting method without drip irrigation | 3 | 632 | 44680 | 2.60 |
| Broad casting method with drip irrigation | | 784 | 62160 | 3.22 |
| Row sowing without drip irrigation | | 712 | 53880 | 2.92 |
| Row sowing with drip irrigation | | 858 | 70670 | 3.52 |

OTHER ENTREPRISE**On farm trail: 1**

Problem definition: Drudgery of farm women in traditional cooking system

Technology Assessed: Comparison of solar Cooker with traditional cooking system

KVK, JAU Porbandar in Gujarat conducted on farm trails on Comparison of solar Cooker with traditional cooking system. Total five farm women were selected for the trails from different villages of the district. Five items like, mango murabba, sesame mukhwas, salted groundnut, sweet potato and sweet corn were prepared by traditional method, sunlight heat and solar cooker. The results showed that solar cooking saved time, fuel consumption and cost considerably in all the items.

Table 4 Results: Mango Murabba (2015-16)

| Sr. No. | Observation | Traditional Method | Sunlight Heat | Solar Cooker |
|---------|--------------------|--------------------|---------------|--------------|
| 1 | Time Consumption | 1.45 hrs. | 36.45 hrs. | 3.45 hrs. |
| 2 | Fuel Consumption | 120 g. gas | - | - |
| 3 | Cost Saving | - | 14.7 % | 16.7 % |
| 4 | Organo laptic test | | | |
| a | Taste/ sweetness | 4 | 5 | 5 |
| b | Texture | 5 | 5.6 | 6.9 |
| c | Consistency | 4 | 6 | 7 |
| d | Overall Acceptance | - | - | √ |

| Sr. No. | Item | Sesame Mukhvas | | | Salted Groundnut | | | Sweet Potato | | | Sweet Corn | | |
|---------|---------------------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|
| | | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker |
| 1 | Time Consumption (minute) | 20 | 15 | 30 | 45 | 30 | 180 | 20 | 60 | 120 | 15 | 10 | 30 |
| 2 | Fuel Consumption (g) | 300 | 50 | - | 650 | 100 | - | 350 | 200 | - | 250 | 45 | - |
| 3 | Cost Saving (%) | - | 3.57 | 7.14 | - | 17.24 | 31 | - | 12.5 | 58.3 | - | 14.7 | 41.2 |
| 4 | Organolaptic Test | | | | | | | | | | | | |
| a | Taste | 5 | 5 | 7 | 4 | 6 | 7 | 4 | 4 | 6 | 5 | 5 | 6 |
| b | Consistency | 4 | 5 | 7 | 4 | 5 | 8 | 3 | 5 | 6 | 4 | 6 | 8 |
| d | Overall Acceptance | - | - | √ | - | - | √ | - | - | √ | - | - | √ |

Note:

1. Organolaptic test based on ranking method as follows

1-3 Dislike 4-6 Like 7-9 Most like

The data is average value of ranking given by the group of women

Table 5 Pooled Results: Mango Murabba (2013-14 to 2015-16)

| Sr. No. | Observation | Traditional Method | Sunlight Heat | Solar Cooker |
|---------|--------------------|--------------------|---------------|--------------|
| 1 | Time Consumption | 1.45 hrs. | 36.45 hrs. | 3.45 hrs. |
| 2 | Fuel Consumption | 120 g. gas | - | - |
| 3 | Cost Saving | - | 11.93% | 15.23% |
| 4 | Organo laptic test | | | |
| a | Taste/ sweetness | 4 | 5 | 5 |
| b | Texture | 5 | 5.5 | 6.8 |
| c | Consistency | 4.1 | 5.9 | 6.9 |
| d | Overall Acceptance | - | - | √ |

| Sr. No. | Item | Sesame Mukhvas | | | Salted Groundnut | | | Sweet Potato | | | Sweet Corn | | |
|---------|---------------------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|-------------------------------|-------------------------------|--------------|
| | | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker | Traditional Method (Firewood) | Preparation by Roasting (Gas) | Solar Cooker |
| 1 | Time Consumption (minute) | 20 | 15 | 30 | 45 | 30 | 180 | 20 | 60 | 120 | 15 | 10 | 30 |
| 2 | Fuel Consumption (g) | 300 | 50 | - | 650 | 100 | - | 350 | 200 | - | 250 | 45 | - |
| 3 | Cost Saving (%) | - | 2.14 | 6.05 | - | 12.18 | 26.7 | - | 18.7 | 57.9 | - | 9.6 | 26.9 |
| 4 | Organolaptic Test | | | | | | | | | | | | |
| a | Taste | 5.0 | 5.0 | 6.3 | 4.0 | 6.0 | 7.0 | 4.0 | 4.0 | 6.0 | 5.0 | 5.0 | 6.0 |
| b | Consistency | 4.0 | 5.0 | 7.0 | 4.0 | 5.0 | 8.0 | 3.0 | 5.0 | 6.0 | 4.0 | 6.0 | 8.0 |
| d | Overall Acceptance | - | - | √ | - | - | √ | - | - | √ | - | - | √ |

Pooled results revealed that cooking with solar cooker consistently saved time, fuel and cost over three years in all the items than traditional cooking method. In addition, taste and consistency was also good with solar cooking.

On farm trail: 2**Problem definition:** Spoilage of mango pickles**Technology assessed:** Effect of salt & oil on spoilage of mango pickles

KVK, JAU Porbandar in Gujarat conducted on farm trails on effect of salt & oil on spoilage of mango pickles. Total three farm women were selected for the trails. The treatment 20% salt (200 g.) + 200 ml oil/kg mango maintained colour texture and aroma of the pickle since 180 days while in general practice slightly funky aroma and dark brown colour was observed. In addition 35.3% and 38.4% cost could be saved in recommended and assessed practice than general practice.

Table 6 Effect of salt and oil on colour, texture & aroma of mango pickle.

| Technology Option | Self life (days) | Colour | Texture | Aroma | Cost saving (%) |
|--|------------------|------------|--------------|----------------------------------|-----------------|
| General practices - Salt 12% (120 gm) + Oil 800 ml/ kg mango | 180 | Dark brown | Soft | Slight funky aroma after monsoon | - |
| Recommended practices - Salt 15% (150 gm) + Oil 250 ml/ kg mango | 180 | Brown | Hard to soft | Good aroma | 35.3 |
| Refinement - Salt 20% (200 gm) + Oil 200 ml/ kg mango | 180 | Red brown | Hard to soft | Fresh aroma | 38.4 |

On farm trail: 3**Problem definition:** Mal nutrition in rural children**Technology Assessed:** Evaluation of low cost high calorie and protein diets made from locally available food material

KVK, JAU Porbandar in Gujarat conducted on farm trails on evaluation of low cost high calorie and protein diets made from locally available food material. Total five farm families were selected for the trails. The results indicated that low cost, high calorie diet prepared from locally available food material i. e. soybean, chick pea, and Gud increased height, body weight and hemoglobin than routine homemade diet.

Table 6 Effect of low cost high calorie protein diet on height, weight and hemoglobin of rural children

| Technology Option | Increase in 3 months | | |
|---|----------------------|-------------|----------------|
| | Height (cm) | Weight (kg) | Hemoglobin (%) |
| Control-Routine homemade diet | - | - | - |
| Recommended by PHC (Different healthy diets in different areas) | 1.6 | 0.8 | 0.5 |
| | 1.8 | 1.2 | 0.8 |

On farm trail: 4**Problem definition:** low production of fish (major carp)**Technology Assessed:** Effect of culture density on fish (major carp) production in using cage in pond**Results:** Awaited**On farm trail: 5****Problem definition:** Lower price of baby lobster due to small size**Technology Assessed:** Fattening of baby Lobster using cage for better production**Results:** Awaited

II. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2014-15 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 | Groundnut | INM | INM | Trainings, Field days FLDs & OFTs | 40 | 2500 | 1300 |
| 2 | Groundnut | IDM | <i>Trichoderma</i> | Trainings, Field days FLDs & OFTs | 90 | 4500 | 2100 |
| 3 | Cotton | INM | INM | Trainings, Field days FLDs & OFTs | 15 | 525 | 275 |
| 4 | Wheat | INM | INM | Trainings, Field days FLDs & OFTs | 12 | 450 | 160 |
| 5 | Cumin | IDM | IDM | Trainings, Field days FLDs & OFTs | 15 | 120 | 18 |
| 6 | Chick pea | Varietal Evaluation | Improved variety GG-3 | Trainings, Field days FLDs & OFTs | 18 | 1400 | 850 |
| 7 | Green Gram | Varietal Evaluation | GM-4 | Trainings, Field days FLDs & OFTs | 28 | 1200 | 300 |
| 8 | Lucerne | Varietal Evaluation | Improved variety Anand-2 | Trainings, Field days FLDs & OFTs | 5 | 80 | 20 |
| 9 | Solar cooker | Renewable energy | Solar cooker | Trainings, Field days FLDs & OFTs | 15 | 95 | - |
| 10 | Seaweed | Sea weed cultivation | Sea weed cultivation | Trainings, Field days FLDs & OFTs | 3 | 100 | - |
| 11 | Agril. Eng. | Improved machineries | Groundnut pod grader | Trainings, Field days FLDs & OFTs | 5 | 100 | - |

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

b. Details of FLDs implemented during 2015-16 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

i) FLDs conducted during Rabi 2014-15

Cereals:

| 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 | Wheat | INM | INM | Rabi-2014-15 | 10 | 10 | 3 | 17 | 20 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|-------|-----------|----------------------------------|--------------|----------------|--------|------|---------------|------------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Wheat | Rabi-2014 | Irrigated | Medium Black | Low | medium | high | Groundnut | 12 to 24/11/2014 | - | 645.5 | 31 |

Horticultural 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 | Cumin | IDM | IDM | Rabi-2014 | 12 | 12 | 2 | 18 | 20 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|-------|---------|----------------------------------|--------------|----------------|--------|------|---------------|----------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Cumin | Rabi-14 | Irrigated | Medium Black | Low | medium | high | Groundnut | 20 -29/11/2014 | - | 645.5 | 31 |

Oilseed & Pulses Crops:

| Sr. 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 | Gram | Varietal | GG-3 | Rabi 2014-15 | 8 | 8 | - | 24 | 24 | - |
| 2. | Green gram | Varietal | GM-4 | Summer 2015 | 4 | 4 | 2 | 8 | 10 | |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|------------|--------------|----------------------------------|--------------|----------------|--------|------|---------------|--------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Gram | Rabi 2014-15 | Rainfed | Medium Black | Low | medium | high | - | 5-17/11/2014 | 18-02/3/2015 | 645.5 | 31 |
| Green gram | Summer 2015 | Irrigated | Medium Black | Low | medium | high | | 8-22/2/2015 | 6-20/5/2015 | 645.5 | 31 |

Other Crops:**Lucerne**

| Sr. 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 | Lucerne | Varietal | Anand-2 | Rabi 2014-15 | 5 | 5 | - | 10 | 10 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|---------|--------------|----------------------------------|--------------|----------------|--------|------|---------------|------------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Lucerne | Rabi 2014-15 | Irrigated | Medium Black | Low | medium | high | G. Nut | 27/11 -2/12/2014 | - | 645.5 | 31 |

ii) FLDs conducted during 2015-16

Cereals:

| Sr. 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 | Wheat | INM | INM | Rabi-2015 | 8 | 8 | - | 20 | 20 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|-------|-----------|----------------------------------|--------------|----------------|--------|------|---------------|-------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Wheat | Rabi-2015 | Irrigated | Medium Black | Low | medium | high | Groundnut | 10-24/11/15 | - | 286.8 | 10 |

Horticultural Crops:

| Sr. 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 | Cumin | IDM | IDM | Rabi-2014 | 12 | 12 | - | 20 | 20 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|-------|---------|----------------------------------|--------------|----------------|--------|------|---------------|-------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Cumin | Rabi-15 | Irrigated | Medium Black | Low | medium | high | Groundnut | 16-25/11/15 | - | 286.8 | 10 |

Oilseed & Pulses Crops:

| Sr. 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 | Groundnut | INM | INM | Kharif 2015 | 8 | 8 | - | 20 | 20 | - |
| 2 | Groundnut | IDM | IDM | Kharif 2015 | 4 | 4 | - | 10 | 10 | - |
| 3 | Gram | Varietal | GG-3 | Rabi 2015-16 | 8 | 8 | 17 | 3 | 20 | - |
| 4 | Gram | IPM | NPV | Rabi 2015-16 | 4 | 4 | - | 10 | 10 | - |
| 5 | Green gram | Varietal | GM-4 | Summer 2016 | 4 | 2 | - | 5 | 5 | Due to low rainfall in the district, no irrigation facilities |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|------------|--------------|----------------------------------|--------------|----------------|--------|------|---------------|-----------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Groundnut | Kharif 2015 | Rainfed | Medium Black | Low | medium | high | Groundnut | 28/5 to 20/6/15 | 11-30/10/15 | 286.8 | 10 |
| Groundnut | Kharif 2015 | Rainfed | Medium Black | Low | medium | high | Groundnut | 26/5 to 25/6/15 | 14-29/10/15 | 286.8 | 10 |
| Gram | Rabi 2015-16 | Irrigated | Medium Black | Low | medium | high | - | 5-17/11/15 | - | 286.8 | 10 |
| Gram | Rabi 2015-16 | Irrigated | Medium Black | Low | medium | high | - | 8-22/11/15 | - | 286.8 | 10 |
| Green gram | Summer 2016 | Irrigated | Medium Black | Low | medium | high | - | 20/2 to 26/2/16 | - | 268.8 | 10 |

Cotton

| Sr. 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 | Cotton | INM with full package | INM with full Package | Kharif 2015 | 10 | 10 | 3 | 22 | 25 | Nil |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|--------|-----------|----------------------------------|--------------|----------------|--------|------|----------------|-----------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Cotton | Kharif 15 | Rainfed/irrigated | Medium Black | Low | medium | high | G. Nut/ Cotton | 20/5 to 12/6/15 | - | 286.8 | 10 |

Lucerne

| Sr. 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 | Lucerne | Varietal | Anand-2 | Rabi 2015-16 | 5 | 2.8 | - | 7 | 7 | Due to very low rainfall, no irrigation facility |

Details of farming situation

| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
|---------|--------------|----------------------------------|--------------|----------------|--------|------|---------------|------------------|--------------|------------------------|-------------------|
| | | | | N | P | K | | | | | |
| Lucerne | Rabi 2015-16 | Irrigated | Medium Black | Low | medium | high | G. Nut | 20/11 to 6/12/15 | - | 286.8 | 10 |

Technical Feedback on the demonstrated technologies

| S. No | Feed Back |
|-------|--|
| 1 | INM in groundnut increased production as well as the quality |
| 2 | Micronutrients and IPM improves the growth and yield of cotton |
| 3 | Creating awareness among the farmers about improved/high yielding varieties of the related crops |
| 4 | Leads the farmers from traditional agriculture to scientific & sustainable agriculture by the use of recommended/improved package of practices and ultimately reduce the cost of cultivation |
| 5 | Make the farmers aware about Integrated Pest & Disease Management by the proper use of insecticide/fungicides. |
| 6 | Improved variety of Lucerne is better than the local variety |
| 7 | INM in wheat was better than farmers' practices |

Farmers' reactions on specific technologies

| S. No | Feed Back |
|-------|--|
| 1 | An improved variety particularly of chick pea GG-3 is good and can give its potential yield with proper management practices. |
| 2 | If the seeds of the new varieties are generously available through Govt. Agencies, they are interested in sowing of demonstrated improved varieties. |
| 3 | Micro nutrients in Cotton and groundnut can enhance the growth and increase production. |
| 4 | IDM in cumin reduce the pesticides consumption and reduce the cost of cultivation |
| 5 | Use of <i>Trichoderma</i> in groundnut is the best technology to control stem rot. |

Extension and Training activities under FLD

| Sl.No. | Activity | No. of activities organised | Date | Number of participants | Remarks |
|---------------|--------------------------------------|------------------------------------|-------------|-------------------------------|----------------|
| 1 | Field days | 10 | - | 260 | - |
| 2 | Farmers Training | 5 | - | 179 | - |
| 3 | Media coverage | - | - | - | - |
| 4 | Training for extension functionaries | - | - | - | - |

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

** BCR= GROSS RETURN/GROSS COST

Performance of Frontline demonstrations (2015-16)

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 | | | | | | | | | | | | | | | | | | |
| | INM | INM | GG-20 | 20 | 8.0 | 28.13 | 12.50 | 17.16 | 14.31 | 19.90 | 25250 | 60060 | 34810 | 2.38 | 28760 | 50085 | 21325 | 1.74 |
| | IDM | <i>Trichoderma</i> | GG-20 | 10 | 4 | 31.87 | 12.22 | 20.29 | 18.33 | 10.65 | 18965 | 41200 | 22235 | 2.17 | 21900 | 36400 | 14500 | 1.66 |

* 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 | | | | | | | | | | |
| Greengram | | | | | | | | | | | | | | | | | | |
| | Varietal Evaluation | Improved variety | GM-4 | 5 | 2 | | | | | | Results awaited | | | | | | | |
| Chickpea | | | | | | | | | | | | | | | | | | |
| | Varietal Evaluation | Improved variety | GG-3 | 8 | 20 | | | | | | Results awaited | | | | | | | |
| | IPM | NPV | GG-2 | 4 | 10 | | | | | | Results awaited | | | | | | | |

* 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 Other crops

| Category & Crop | Thematic Area | Name of the technology | No. of Farmers | Area (ha) | Yield (q/ha) | | | % Change in Yield | Other Parameters | | Economics of demonstration (Rs./ha) | | | | Economics of check (Rs./ha) | | | | |
|-------------------------|---------------------|--------------------------|----------------|-----------|--------------|-------|-------|-------------------|------------------|-------|-------------------------------------|--------------|------------|-----------|-----------------------------|--------------|------------|-----------|---------|
| | | | | | Demo | | Check | | Demo | Check | Gross Cost | Gross Return | Net Return | BCR (R/C) | Gross Cost | Gross Return | Net Return | BCR (R/C) | |
| | | | | | High | Low | | | | | | | | | | | | | Average |
| Cereals | | | | | | | | | | | | | | | | | | | |
| Wheat | | | | | | | | | | | | | | | | | | | |
| | INM | INM | 20 | 8 | | | | | | | | | | | | | | | |
| Cumin | | | | | | | | | | | | | | | | | | | |
| | IDM | IDM | 20 | 12 | | | | | | | | | | | | | | | |
| Commercial Crops | | | | | | | | | | | | | | | | | | | |
| Cotton | | | | | | | | | | | | | | | | | | | |
| | INM | INM with full package | 25 | 10 | 36.21 | 20.66 | 26.84 | 24.35 | 10.2 | - | - | 30300 | 107360 | 77060 | 3.54 | 32300 | 97400 | 65100 | 3.02 |
| Fodder Crops | | | | | | | | | | | | | | | | | | | |
| Lucern | | | | | | | | | | | | | | | | | | | |
| | Varietal Evaluation | Improved variety Anand-2 | 7 | 2.8 | | | | | | | | | | | | | | | |
| Berseem | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Oat (F) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

* 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: Nil

| 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) | | |
| Cattle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Buffalo | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Buffalo Calf | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dairy | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Poultry | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sheep & Goat | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vaccination | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

** BCR= GROSS RETURN/GROSS COST

| | | | | | | | | | | |
|--|----------|-----------|----------|-----------|----------|----------|----------|-----------|----------|------------|
| technology | | | | | | | | | | |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (e) | - | - | - | - | - | - | - | - | - | - |
| f) Spices | | | | | | | | | | |
| Production and Management technology | 1 | 21 | 0 | 21 | 4 | | 4 | 25 | 0 | 25 |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (f) | 1 | 21 | 0 | 21 | 4 | | 4 | 25 | 0 | 25 |
| g) Medicinal and Aromatic Plants | | | | | | | | | | |
| Nursery management | - | - | - | - | - | - | - | - | - | - |
| Production and management technology | - | - | - | - | - | - | - | - | - | - |
| Post harvest technology and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (g) | - | - | - | - | - | - | - | - | - | - |
| GT (a-g) | 4 | 80 | 0 | 80 | 6 | 0 | 6 | 86 | 0 | 86 |
| III Soil Health and Fertility Management | | | | | | | | | | |
| 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) | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | - | - | - | - | - | - | - |
| IV Livestock Production and Management | | | | | | | | | | |
| Dairy Management | 1 | 17 | 9 | 26 | 0 | | 0 | 17 | 9 | 26 |
| Poultry Management | - | - | - | - | - | - | - | - | - | - |
| Piggery Management | - | - | - | - | - | - | - | - | - | - |
| Rabbit Management | - | - | - | - | - | - | - | - | - | - |
| Animal Nutrition Management | 1 | 33 | 0 | 33 | 7 | 0 | 7 | 40 | 0 | 40 |
| Disease Management | | | | | | | | | | |
| Feed & fodder technology | 1 | 15 | 0 | 15 | 0 | 0 | 0 | 15 | 0 | 15 |
| Production of quality animal products | 1 | 23 | 0 | 23 | 2 | 0 | 2 | 25 | 0 | 25 |
| Others (pl specify) | | | | | | | | | | |
| Total | 4 | 88 | 9 | 97 | 9 | 0 | 9 | 97 | 9 | 106 |
| V Home Science/Women empowerment | | | | | | | | | | |
| Household food security by kitchen gardening and nutrition gardening | - | - | - | - | - | - | - | - | - | - |
| Design and development of low/minimum cost diet | - | - | - | - | - | - | - | - | - | - |
| Designing and development for high nutrient efficiency diet | 1 | 0 | 20 | 20 | 0 | 4 | 4 | 0 | 24 | 24 |
| Minimization of nutrient loss in processing | - | - | - | - | - | - | - | - | - | - |
| Processing and cooking | 1 | 0 | 18 | 18 | 0 | 6 | 6 | 0 | 24 | 24 |
| Gender mainstreaming through SHGs | - | - | - | - | - | - | - | - | - | - |
| Storage loss minimization techniques | - | - | - | - | - | - | - | - | - | - |
| Value addition | 1 | 0 | 29 | 29 | 0 | 3 | 3 | 0 | 32 | 32 |
| Women empowerment | 1 | 0 | 21 | 21 | 0 | 12 | 12 | 0 | 33 | 33 |

| | | | | | | | | | | |
|--|----------|------------|-----------|------------|-----------|-----------|-----------|------------|-----------|------------|
| Others: Fertilizer management in fruit crops | 1 | 23 | 0 | 23 | 3 | 0 | 3 | 26 | 0 | 26 |
| Total (b) | 2 | 49 | 0 | 49 | 5 | 0 | 5 | 54 | 0 | 54 |
| c) Ornamental Plants | | | | | | | | | | |
| Nursery Management | - | - | - | - | - | - | - | - | - | - |
| Management of potted plants | - | - | - | - | - | - | - | - | - | - |
| Export potential of ornamental plants | - | - | - | - | - | - | - | - | - | - |
| Propagation techniques of Ornamental Plants | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (c) | - | - | - | - | - | - | - | - | - | - |
| d) Plantation crops | | | | | | | | | | |
| Production and Management technology | - | - | - | - | - | - | - | - | - | - |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (d) | - | - | - | - | - | - | - | - | - | - |
| e) Tuber crops | | | | | | | | | | |
| Production and Management technology | - | - | - | - | - | - | - | - | - | - |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (e) | - | - | - | - | - | - | - | - | - | - |
| f) Spices | | | | | | | | | | |
| Production and Management technology | 1 | 23 | 0 | 23 | 4 | 0 | 4 | 27 | 0 | 27 |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (f) | 1 | 23 | 0 | 23 | 4 | 0 | 4 | 27 | 0 | 27 |
| g) Medicinal and Aromatic Plants | | | | | | | | | | |
| Nursery management | - | - | - | - | - | - | - | - | - | - |
| Production and management technology | - | - | - | - | - | - | - | - | - | - |
| Post harvest technology and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (g) | - | - | - | - | - | - | - | - | - | - |
| GT (a-g) | 6 | 131 | 37 | 168 | 28 | 0 | 28 | 159 | 37 | 196 |
| III Soil Health and Fertility Management | | | | | | | | | | |
| 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 | 1 | 20 | 0 | 20 | 3 | 0 | 3 | 23 | 0 | 23 |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total | 1 | 20 | 0 | 20 | 3 | 0 | 3 | 23 | 0 | 23 |
| IV Livestock Production and Management | | | | | | | | | | |
| Dairy Management | 3 | 71 | 0 | 71 | 5 | 0 | 5 | 76 | 0 | 76 |
| Poultry Management | - | - | - | - | - | - | - | - | - | - |
| Piggery Management | - | - | - | - | - | - | - | - | - | - |
| Rabbit Management | - | - | - | - | - | - | - | - | - | - |
| Animal Nutrition Management | 1 | 28 | 0 | 28 | 4 | 0 | 4 | 32 | 0 | 32 |
| Disease Management | 4 | 68 | 25 | 93 | 0 | 12 | 12 | 68 | 37 | 105 |
| Feed & fodder technology | - | - | - | - | - | - | - | - | - | - |
| Production of quality animal products | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total | 8 | 167 | 25 | 192 | 9 | 12 | 21 | 176 | 37 | 213 |
| V Home Science/Women empowerment | | | | | | | | | | |
| Household food security by kitchen gardening and nutrition gardening | 1 | 0 | 25 | 25 | 0 | 5 | 5 | 0 | 30 | 30 |

| | | | | | | | | | | |
|---|-----------|------------|-----------|------------|-----------|----------|-----------|------------|-----------|------------|
| plants/orchards | | | | | | | | | | |
| Rejuvenation of old orchards | - | - | - | - | - | - | - | - | - | - |
| Export potential fruits | - | - | - | - | - | - | - | - | - | - |
| Micro irrigation systems of orchards | - | - | - | - | - | - | - | - | - | - |
| Plant propagation techniques | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | 1 | 23 | 0 | 23 | 3 | 0 | 3 | 26 | 0 | 26 |
| Total (b) | 2 | 49 | 0 | 49 | 5 | 0 | 5 | 54 | 0 | 54 |
| c) Ornamental Plants | - | - | - | - | - | - | - | - | - | - |
| Nursery Management | - | - | - | - | - | - | - | - | - | - |
| Management of potted plants | - | - | - | - | - | - | - | - | - | - |
| Export potential of ornamental plants | - | - | - | - | - | - | - | - | - | - |
| Propagation techniques of Ornamental Plants | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (c) | | | | | | | | | | |
| d) Plantation crops | - | - | - | - | - | - | - | - | - | - |
| Production and Management technology | - | - | - | - | - | - | - | - | - | - |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (d) | | | | | | | | | | |
| e) Tuber crops | - | - | - | - | - | - | - | - | - | - |
| Production and Management technology | - | - | - | - | - | - | - | - | - | - |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (e) | | | | | | | | | | |
| f) Spices | - | - | - | - | - | - | - | - | - | - |
| Production and Management technology | 2 | 44 | 0 | 44 | 8 | 0 | 8 | 52 | 0 | 52 |
| Processing and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (f) | 2 | 44 | 0 | 44 | 8 | 0 | 8 | 52 | 0 | 52 |
| g) Medicinal and Aromatic Plants | - | - | - | - | - | - | - | - | - | - |
| Nursery management | - | - | - | - | - | - | - | - | - | - |
| Production and management technology | - | - | - | - | - | - | - | - | - | - |
| Post harvest technology and value addition | - | - | - | - | - | - | - | - | - | - |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total (g) | | | | | | | | | | |
| GT (a-g) | 10 | 211 | 37 | 248 | 34 | 0 | 34 | 245 | 37 | 282 |
| III Soil Health and Fertility Management | - | - | - | - | - | - | - | - | - | - |
| 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 | 1 | 20 | 0 | 20 | 3 | 0 | 3 | 23 | 0 | 23 |
| Others (pl specify) | - | - | - | - | - | - | - | - | - | - |
| Total | 1 | 20 | 0 | 20 | 3 | 0 | 3 | 23 | 0 | 23 |
| IV Livestock Production and Management | - | - | - | - | - | - | - | - | - | - |
| Dairy Management | 4 | 88 | 9 | 97 | 5 | 0 | 5 | 93 | 9 | 102 |
| Poultry Management | - | - | - | - | - | - | - | - | - | - |
| Piggery Management | - | - | - | - | - | - | - | - | - | - |
| Rabbit Management | - | - | - | - | - | - | - | - | - | - |
| Animal Nutrition Management | 2 | 61 | 0 | 61 | 11 | 0 | 11 | 72 | 0 | 72 |
| Disease Management | 4 | 68 | 25 | 93 | 0 | 12 | 12 | 68 | 37 | 105 |
| Feed & fodder technology | 1 | 15 | 0 | 15 | 0 | 0 | 0 | 15 | 0 | 15 |
| Production of quality animal products | 1 | 23 | 0 | 23 | 2 | 0 | 2 | 25 | 0 | 25 |

| | | | | | | | | | | |
|--|----------|------------|----------|------------|----------|----------|----------|------------|----------|------------|
| Any other: Sea weed cultivation, Fisheries status, conservation & orientation towards aquaculture and Natural enemies of pest | 3 | 91 | 0 | 91 | 0 | 0 | 0 | 91 | 0 | 91 |
| TOTAL | 5 | 138 | 0 | 138 | 7 | 0 | 7 | 145 | 0 | 145 |

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 | - | - | - | - | - | - | - | - | - | - |
| Training and pruning of orchards | - | - | - | - | - | - | - | - | - | - |
| Protected cultivation of vegetable crops | 1 | 23 | 0 | 23 | 4 | 0 | 4 | 27 | 0 | 27 |
| Commercial fruit production | - | - | - | - | - | - | - | - | - | - |
| Integrated farming | - | - | - | - | - | - | - | - | - | - |
| Seed production | - | - | - | - | - | - | - | - | - | - |
| Production of organic inputs | - | - | - | - | - | - | - | - | - | - |
| Planting material production | 1 | 24 | 0 | 24 | 3 | 0 | 3 | 27 | 0 | 27 |
| 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: Sea weed cultivation, Fisheries status, conservation & orientation towards aquaculture and Natural enemies of pest | 3 | 91 | 0 | 91 | 0 | 0 | 0 | 91 | 0 | 91 |
| TOTAL | 5 | 138 | 0 | 138 | 7 | 0 | 7 | 145 | 0 | 145 |

Training programmes for Extension Personnel 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 |
| Productivity enhancement in field crops | 2 | 85 | 4 | 89 | 0 | 0 | 0 | 85 | 4 | 89 |
| TOTAL | 2 | 85 | 4 | 89 | 0 | 0 | 0 | 85 | 4 | 89 |

| | | | | | | | | | | |
|--|----------|-----------|-----------|------------|----------|----------|----------|-----------|-----------|------------|
| Repair and maintenance of farm machinery | - | - | - | - | - | - | - | - | - | - |
| and implements | - | - | - | - | - | - | - | - | - | - |
| Rural Crafts | - | - | - | - | - | - | - | - | - | - |
| Seed production | - | - | - | - | - | - | - | - | - | - |
| Sericulture | - | - | - | - | - | - | - | - | - | - |
| Mushroom cultivation | - | - | - | - | - | - | - | - | - | - |
| Nursery, grafting etc. | 1 | 24 | 24 | 0 | 0 | 0 | 24 | 0 | 24 | 24 |
| Tailoring, stitching, embroidery, dying etc. | 1 | 0 | 25 | 25 | 0 | 0 | 0 | 0 | 25 | 25 |
| Agril. para-workers, para-vet training | - | - | - | - | - | - | - | - | - | - |
| Others: Preparation of different types of Masala and Seaweed cultivation | 2 | 31 | 25 | 56 | 0 | 0 | 0 | 31 | 25 | 56 |
| Total | 6 | 76 | 72 | 148 | 0 | 0 | 0 | 76 | 72 | 148 |
| Agricultural Extension | - | - | - | - | - | - | - | - | - | - |
| Capacity building and group dynamics | - | - | - | - | - | - | - | - | - | - |
| Others (pl. specify) | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | - | - | - | - | - | - | - |
| Grand Total | 6 | 76 | 72 | 148 | 0 | 0 | 0 | 76 | 72 | 148 |

IV. Extension Programmes

| Activities | No. of programmes | No. of farmers | No. of Extension Personnel | TOTAL |
|---|-------------------|----------------|----------------------------|-------------|
| Advisory Services | 2329 | 2329 | | 2329 |
| Diagnostic visits | 162 | 209 | | 209 |
| Field Day | 10 | 260 | | 260 |
| Group discussions | | | | |
| Kisan Ghosthi | 9 | 278 | 4 | 282 |
| Film Show | 22 | 740 | 5 | 745 |
| Self -help groups | | | | |
| Kisan Mela | | | | |
| Exhibition | 2 | 327 | 10 | 337 |
| Scientists' visit to farmers field | 512 | 573 | | 573 |
| Plant/animal health camps | | | | |
| Farm Science Club | | | | |
| Ex-trainees Sammelan | 3 | 96 | | 96 |
| Farmers' seminar/workshop | | | | |
| Method Demonstrations | | | | |
| Celebration of important days | 2 | 197 | | 197 |
| Special day celebration (Jay Kisan Jay Vignan & World Soil Health Day) | 2 | 342 | | 342 |
| Exposure visits | | | | |
| Others: lecture delivered as resource person (pl. specify) | 33 | 758 | | 758 |
| Total | 3086 | 6109 | 19 | 6128 |

Details of other extension programmes

| Particulars | Number |
|--|-----------|
| Electronic Media (CD./DVD) | |
| Extension Literature | 12 |
| News paper coverage | 1 |
| Popular articles | 2 |
| Radio Talks | |
| TV Talks | |
| Animal health amps (Number of animals treated) | |
| Others (pl. specify) | |
| Total | 15 |

| Name of KVK | Message Type | Type of Messages | | | | | | Total |
|-------------|---------------------------------|------------------|-----------|---------|-----------|-----------|------------------|-------|
| | | Crop | Livestock | Weather | Marketing | Awareness | Other enterprise | |
| | Text only | - | - | - | - | - | - | - |
| | Voice only | - | - | - | - | - | - | - |
| | Voice & Text both | - | - | - | - | - | - | - |
| | Total Messages | - | - | - | - | - | - | - |
| | Total farmers Benefitted | - | - | - | - | - | - | - |

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 | 5 | 523 | Groundnut Production Technologies |
| | Lectures organised | 24 | 523 | Production Technology, Pest & disease management, Value addition, Organic Farming, Micro irrigation, etc. |
| | Exhibition | 1 | 320 | Improved farm implements |
| | Film show | 5 | 523 | Value addition, pest & diseases management in groundnut |
| | Fair | - | - | - |
| | Farm Visit | 3 | 203 | - |
| | Diagnostic Practicals | - | - | - |
| | Distribution of Literature (No.) | 4 | 523 | - |
| | 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 | - | 523 | - |

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 | - | - | - | - | - | - |
| Oilseeds | Groundnut | GG-20 (Breeder) | - | 43.41 | | |
| | Groundnut | GJG-17(Breeder) | - | 11.32 | | |
| | Groundnut | GG-20 (Mega seed) | - | 8.36 | | |
| | Sesame | GT-1 (Breeder) | - | 1.50 | | |
| Pulses | - | - | - | - | - | - |
| Commercial crops | - | - | - | - | - | - |
| Vegetables | - | - | - | - | - | - |
| Flower crops | - | - | - | - | - | - |
| Spices | - | - | - | - | - | - |
| Fodder crop seeds | - | - | - | - | - | - |
| Fiber crops | - | - | - | - | - | - |
| Forest Species | - | - | - | - | - | - |
| Others | - | - | - | - | - | - |
| Total | - | - | - | 64.59 | - | - |

Production of planting materials by the KVKs

| Crop | Name of the crop | Name of the variety | Name of the hybrid | Number | Value (Rs.) | Number of farmers |
|------------------------|------------------|---------------------|--------------------|--------|-------------|-------------------|
| Commercial | - | - | - | - | - | - |
| Vegetable seedlings | - | - | - | - | - | - |
| Fruits | - | - | - | - | - | - |
| Ornamental plants | - | - | - | - | - | - |
| Medicinal and Aromatic | - | - | - | - | - | - |
| Plantation | - | - | - | - | - | - |
| Spices | - | - | - | - | - | - |
| Tuber | - | - | - | - | - | - |
| Fodder crop saplings | - | - | - | - | - | - |
| Forest Species | - | - | - | - | - | - |
| Others | - | - | - | - | - | - |
| Total | - | - | - | - | - | - |

Production of Bio-Products

| Bio Products | Name of the bio-product | Quantity | Value (Rs.) | No. of Farmers |
|-----------------|-------------------------|----------|-------------|----------------|
| | | Kg | | |
| Bio Fertilisers | - | - | - | - |
| Bio-pesticide | - | - | - | - |
| Bio-fungicide | - | - | - | - |
| Bio Agents | - | - | - | - |
| Others | - | - | - | - |
| Total | - | - | - | - |

Table: Production of livestock materials

| Particulars of Live stock | Name of the breed | Number | Value (Rs.) | No. of Farmers |
|---------------------------|-------------------|--------|-------------|----------------|
| Dairy animals | - | - | - | - |
| Cows | - | - | - | - |
| Buffaloes | - | - | - | - |
| Calves | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Poultry | - | - | - | - |
| Broilers | - | - | - | - |
| Layers | - | - | - | - |
| Duals (broiler and layer) | - | - | - | - |
| Japanese Quail | - | - | - | - |
| Turkey | - | - | - | - |
| Emu | - | - | - | - |
| Ducks | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Piggery | - | - | - | - |
| Piglet | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Fisheries | - | - | - | - |
| Indian carp | - | - | - | - |
| Exotic carp | - | - | - | - |
| Others (Pl. specify) | - | - | - | - |
| Total | - | - | - | - |

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

| Samples | No. of Samples | No. of Farmers | No. of Villages | Amount realized (Rs.) |
|----------------------|----------------|----------------|-----------------|-----------------------|
| Soil | 305 | 305 | 45 | 11000.00 |
| Water | 43 | 43 | 22 | 2150.00 |
| Plant | - | - | - | - |
| Manure | - | - | - | - |
| Others (pl. specify) | - | - | - | - |
| Total | 348 | 348 | 67 | 13150.00 |

VIII. SCIENTIFIC ADVISORY COMMITTEE

| Name of KVK | Number of SACs conducted |
|--|---|
| Krishi Vigyan Kendra, JAU, Porbandar (Gujarat) | One SAC Meeting conducted on 30/01/2016 |

IX. NEWSLETTER/MAGAZINE

| Name of News letter/Magazine | No. of Copies printed for distribution |
|------------------------------|--|
| - | - |

X. PUBLICATIONS

| Category | Number |
|----------------------|--------|
| Research Paper | 2 |
| Technical bulletins | - |
| Technical reports | 6 |
| Others (pl. specify) | - |

| | |
|---------------------|----|
| Extension pamphlets | 12 |
|---------------------|----|

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

| Activities conducted | | | | |
|----------------------------|-----------------------|---------------------------------|------------------------|--------------------------|
| No. of Training programmes | No. of Demonstrations | No. of plant materials produced | Visit by farmers (No.) | Visit by officials (No.) |
| 2 | 2 | - | 320 | - |

XII. INTERVENTIONS ON DISASTER MANAGEMENT/UNSEASONAL RAINFALL/HAILSTORM/COLD WAVES ETC

Introduction of alternate crops/varieties

| Crops/cultivars | Area (ha) | Extent of damage | Recovery of damage through KVK initiatives if any |
|-----------------|-----------|------------------|---|
| - | - | - | - |
| Total | - | - | - |

Major area coverage under alternate crops/varieties

| Crops | Area (ha) | Number of beneficiaries |
|-------------------------------|-------------|-------------------------|
| Oilseeds | - | - |
| Pulses | | |
| Chick pea GG-3 | 850 | 1400 |
| Green gram GM-4 | 300 | 1200 |
| Cereals | - | - |
| Vegetable crops | - | - |
| Tuber crops | - | - |
| Fodder crop Lucerne (Anand-2) | 20 | 80 |
| Total | 1170 | 2680 |

Farmers-scientists interaction on livestock management

| Livestock components | Number of interactions | No. of participants |
|----------------------------------|------------------------|---------------------|
| Disease Management in live stock | 1 | 26 |
| Total | 1 | 26 |

Animal health camps organised

| Number of camps | No. of animals | No. of farmers |
|-----------------|----------------|----------------|
| - | - | - |
| Total | - | - |

Seed distribution in drought hit states

| Crops | Quantity (qtl) | Coverage of area (ha) | Number of farmers |
|--------------|----------------|-----------------------|-------------------|
| - | - | - | - |
| Total | - | - | - |

Large scale adoption of resource conservation technologies

| Crops/cultivars and gist of resource conservation technologies introduced | Area (ha) | Number of farmers |
|---|------------|-------------------|
| Use of Bio fertilizers | 225 | 545 |
| Use of drip irrigation system | 175 | 200 |
| Total | 400 | 745 |

Awareness campaign

| | Meetings | | Gosthies | | Field days | | Farmers fair | | Exhibition | | Film show | |
|--------------|----------|----------------|----------|----------------|------------|----------------|--------------|----------------|------------|----------------|-----------|----------------|
| | No. | No. of farmers | No. | No. of farmers | No. | No. of farmers | No. | No. of farmers | No. | No. of farmers | No. | No. of farmers |
| | 1 | 92 | 5 | 523 | 10 | 260 | - | - | - | - | 22 | 745 |
| Total | 1 | 92 | 5 | 523 | 10 | 260 | - | - | - | - | 22 | 745 |

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 |
|---|--|------------------|---------------------|----------------------|
| Junagadh Agricultural University, Junagadh, Gujarat | New Frontiers of Agricultural Technologies | 1 | 24 | 6 |
| Total | | 1 | 24 | 6 |

B. HRD activities organized in identified areas for KVK staff by ATARI

| Title of the training programmes | No of programmes | No. of Participants | No. of KVKs involved |
|----------------------------------|------------------|---------------------|----------------------|
| - | - | - | - |
| Total | - | - | - |

XIV. CASE STUDIES (CASE STUDIES MAY BE GIVEN IN DETAIL AS PER THE FOLLOWING FORMAT)**Success Story/ Case study: 1****Name of KVK: KVK, Porbandar****Title: Successful cultivation of Gerbera in poly house in Porbandar district.****Introduction:**

Name of Farmer : Shri Devabhai Karabhai Bhutiya

Village : Adityana Tal. Ranavav, Dist.: Porbandar, Gujarat

Education : B. Sc.

Age : 48 years

Land : 2 ha.

KVK Intervention:

Shri Devabhai is a educated farmer of Adityana village and always ready to adopt latest technology in his field. He was inspired for establishment of green/poly house by KVK during his visits to KVK.

Shri Devabhai has established a high tech ploy house in one acre area with cost of Rs. 45 lakhs. In addition, he has filled good quality soil with organic matter and groundnut shell in his poly house at costing of Rs. 4-5 lakhs. He is growing Gerbera in his ploy house successfully. He has grown 6 different varieties of gerbera with different colours like red, white, yellow, dark pink, orange and light pink. He is adopting drip irrigation and fertigation techniques in his poly house.

Output:

He mentioned that he is harvesting approximately 2500-3000 high quality gerbera flowers every alternate days. He is exporting the gerbera in big cities like Delhi, Lakhnow, Hyderabad and Banglore. His gerbera is being sold at Rs. 3 per flower in season. While in off season the rate is up to Rs. 6-7 per flower. Thus he is earning approximately Rs. 9000 every alternate day.

Impact:

Shri Devabhai has set an example for other farmers of the district to adopt the high tech technology in agriculture for getting higher income.

Success Story/ Case study: 2

Name of KVK: KVK, Porbandar

Title: Additional income by mixed cropping of groundnut with cluster bean

Introduction:

| | |
|----------------|---|
| Name of Farmer | : Shri Maldebhai Thebabhai Kuchhadia |
| Village | : Kuchhadi Tal. & Dist.: Porbandar, Gujarat |
| Education | : 10 Std. |
| Age | : 52 years |
| Land | : 1.5 hectare |

KVK Intervention:

Shri Maldebhai of Kuchhadi village of Porbandar district is a very progressive farmer cultivating crops like groundnut, cumin, coriander and vegetables. He is a regular participant of KVK activities.

During kharif season, generally he is growing sole groundnut in his field but during last year he has done mixed cropping of groundnut with cluster bean (Pusa Navbahar) in 1.0 ha. area. He got idea of mixed cropping from trainings of the KVK and inspired to adopt for fetching extra income.

Output:

Thus due to mixed cropping groundnut with cluster bean, he earned additional income approximately of Rs. 50000 from cluster bean other than groundnut. According to his opinion, mixed cropping is profitable and risk minimizing technology. Last year as rainfall in Porbandar district was very less or near to negligible, groundnut production was severely affected due to low rainfall. In this situation income can be compensated with mixed cropping.

Impact:

Shri Maldebhai also inspired other farmers to adopt such kind of practices for getting extra income.

Success Story/ Case study: 3**Name of KVK: KVK, Porbandar****Title: Value Addition in wheat through cleaning and grading**

| | |
|----------------|--|
| Name of Farmer | : Smt. Hansaben Ramjibhai Dhokia |
| Village | : Choliyana Tal. Kutiyana, Dist.: Porbandar, Gujarat |
| Education | : 6 Std. |
| Age | : 45 years |
| Land | : 5 hectare |

KVK Intervention:

Smt. Hansaben is a progressive farm woman of Choliyana village of Porbandar district. Her husband Shri Ramjibhai Dhokia is also a highly motivated and progressive farmer of the district and received many recognition as a progressive farmer. Smt. Hansaben regularly participated in the farm women training programmes and other activities conducted by KVK, Khapat.

She motivated for value addition in agricultural products for securing higher profit by home scientist of KVK.

Output:

Last year she started the activity of value addition in wheat by cleaning & grading. Last year Smt. Hansaben and her husband Shri Ramjibhai procured 150 quintal wheat from other farmers of the surrounding area @ Rs. 1550 per quintal including transportation cost. Smt. Hansaben has owned grading machine for cleaning and grading of seeds. This quantity of wheat were cleaned and graded at her farm and packed. She sold the value added what at APMC, Gondal. The additional cost of cleaning, grading and transportation was Rs. 200 per quintal. Thus average cost of value added wheat with all the expenses was Rs. 1750 per quintal. She has sold the value added wheat @ Rs. 2125 per quintal at APMC, Gondal. Thus she earned a profit of Rs. 375 per quintal. Her total Profit was approximately Rs. 56000.

Impact:

Smt. Hansaben inspired other farm women to start the value addition in different agricultural produces for maximizing income.

Success Story/ Case study: 4**Name of KVK: KVK, Porbandar****Title: Collection and Marketing of Live Black Tiger Shrimp *P. monodon* brooders for extra income generation**

| | |
|-----------------------|------------------------------------|
| Name of Farmer | : Shri Rameshbhai Hirjibhai Parmar |
| Village | : Miyani, Ta. & Dist. Porbandar |
| Education | : 3 rd STD |
| Age | : 40 yrs |

Introduction:

The valuable fishery resources of Black Tiger Shrimp *P. monodon* are restricted to certain pockets of backwater areas in the district like Miyani and Navibandar. This shrimp generally fished and marketed in dead condition fetching very low price approximately Rs. 25/- per piece. The adult shrimp of +/- 100 gm body weight is very much useful for larvae

production in shrimp hatchery if harvested in live and acclimatized at shore with very little effort. This shrimp being prime product for shrimp hatchery invites very high and encouraging price approximately Rs. 150/- to 200/- per piece. Thus, the fisherman can earn extra income approximately Rs. 125/- to 175/- per piece.

KVK Intervention:

Shri Rameshbhai Hargibhai Parmar a resident of Miyani village is very much enthusiastic and interested in such activities. He understood and adopted the value of this useful resources and requirement of hatchery. He received guidance and encouragement from fisheries scientist of the KVK Porbandar.

Output:

He adopted and started collecting live shrimp brooders and marketed as brooders. The simple technique of keeping shrimp live and marketed as such generated extra income approximately Rs. 32500/- to 45000/- per annum.

Impact:

Shri Rameshbhai sets an example of better resource utilization converting same in extra income generation in the district. Other fisherman of the place got encouragement and also adopted same practice.

XV. IMPACT STUDY

Impact of KVK activities:

Impact analysis of different extension activities like trainings, FLDs, OFTs, Other extension activities etc. conducted by KVK, Khapat in adopted villages was done in the Porbandar district. The information was collected from the beneficiary farmers in adopted villages by an interview schedule prepared. The study was conducted with a view to measure the knowledge, adoption level, behavioral changes etc about latest agricultural technologies and yield & profit enhancement in major crops. 100 beneficiary farmers were selected randomly from the adopted villages for the study. Interview schedule was prepared in local language. The objectives of the study are as follows.

1. To study the farmer's profile.
2. To identify the source of agricultural information before and after KVK interventions.
3. To evaluate the knowledge and adoption level of improved technologies in major crops before and after KVK interventions.
4. To measure the change in production and productivity of major crops.
- 5.

1. Farmer's Profile

A. Age of the beneficiary farmers

| Sr. No. | Category | Percentage |
|----------------|--------------------|-------------------|
| 1 | Up to 35 years | 40 |
| 2 | 36 to 50 years | 48 |
| 3 | More than 50 years | 12 |

The data reveals that 40 percent of the farmers are of young age group while 48 percent are in the age group of 36-50 years. Only 12 percent farmers are more than 50 years of age. This shows that more emphasis was given to young farmers for different KVK activities.

B. Educational level of the participants

| Sr. No. | Category | Percentage |
|---------|-----------------------|------------|
| 1. | Illiterate | 12 |
| 2. | Primary level | 34 |
| 3. | S.S.C. / H.S.C. level | 52 |
| 4. | Graduate and above | 2 |

Above figures indicates that majority of the respondents are of either primary level or having high school education. Only 2 percent beneficiaries were graduate. The farmers having higher education have lands but they are either in some other business or in service.

C. Land Holdings

| Sr. No. | Category | Percentage |
|---------|-----------------|------------|
| 1. | Less than 1 ha. | 7 |
| 2. | 1 to 2 ha. | 22 |
| 3. | 2 to 4 ha. | 28 |
| 4. | More than 4 ha. | 43 |

Data shows that 50 percent farmers have 1-4 ha. land while 43 percent have more than 4 ha. land and 7% have less than 1 ha. land.

D. Annual income

| Sr. No. | Category | Percentage | |
|---------|------------------|------------|-----------|
| | | Before KVK | After KVK |
| 1. | 10000 to 50000 | 20 | 5 |
| 2. | 50001 to 100000 | 18 | 22 |
| 3. | 100001 to 200000 | 32 | 40 |
| 4. | More than 200000 | 30 | 33 |

The figures of annual income before and after KVK interventions indicate that before KVK interventions the farmers having annual income of Rs. 10,000 to 50,000 were 20% while after KVK it changes to 5% it means that 15% farmers are shifted to higher income slab. Farmers who were getting income of Rs. 50001 to 1,00,000, 1,00,001 to 2,00,000 and more than 2,00,000 before KVK were increased after KVK interventions in the tune of 4%, 8% and 3% respectively.

1. Sources of agricultural information before KVK and at present

| Sr. No. | Sources of agril. Information | Percentage | |
|---------|-------------------------------|------------|-----------|
| | | Before KVK | After KVK |
| 1. | Radio | 20 | 10 |
| 2. | Television | 42 | 82 |
| 3. | Telephone | 28 | 72 |
| 4. | News paper | 58 | 65 |
| 5. | Agri. Literature | 18 | 54 |
| 6. | KVK scientists | - | 100 |
| 7. | Agro input dealers | 80 | 47 |
| 8. | Internet | 5 | 18 |

The data on source of agricultural information indicates that number of farmers seeking agricultural information from different sources has increased. The farmers who were taking information from agro input dealers are shifted to KVK and other authentic sources. Numbers of farmers taking

telephonic helpline have considerably increased due to pocket cards of KVK. Young farmers have also started using social media like WhatsApp, facebook and other internet sources.

2. Knowledge and adoption level of improved technologies by the beneficiaries before and after KVK interventions.

A. Knowledge and adoption level of groundnut production technology

| Sr. No. | Particular | Before KVK | | At Present | |
|---------|--|---------------|--------------|---------------|--------------|
| | | Knowledge (%) | Adoption (%) | Knowledge (%) | Adoption (%) |
| 1. | High yielding varieties | | | | |
| | a. Spreading: GG-11,12,13 | 45 | 32 | 90 | 48 |
| | b. Semi spreading: GG-20 | 90 | 80 | 100 | 95 |
| | c. Bunch: GG-2,4,6,7, TPG-41, TG-37A | 65 | 52 | 92 | 70 |
| 2. | Sowing time | 85 | 90 | 100 | 100 |
| 3. | Seed rate | 80 | 63 | 90 | 87 |
| 4. | Seed treatment | 62 | 43 | 92 | 90 |
| 5. | Row spacing | 57 | 42 | 89 | 78 |
| 6. | Application of FYM | 80 | 63 | 100 | 72 |
| 7. | Integrated Nutrient Management | 36 | 30 | 92 | 86 |
| 8. | Use of Biofertilizers | 21 | 15 | 54 | 48 |
| 9. | Use of micronutrients | 19 | 14 | 48 | 40 |
| 10. | Irrigation (MIS) | 62 | 60 | 85 | 92 |
| 11. | Integrated disease management | 18 | 16 | 80 | 75 |
| 12. | Use of <i>Trichoderma</i> for stem rot control | 15 | 13 | 88 | 84 |
| 13. | Integrated pest management | 22 | 19 | 77 | 71 |

B. Knowledge and adoption level of cotton production technology

| Sr. No. | Particular | Before KVK | | At Present | |
|---------|--------------------------------------|---------------|--------------|---------------|--------------|
| | | Knowledge (%) | Adoption (%) | Knowledge (%) | Adoption (%) |
| 1. | High yielding varieties (Bt. Cotton) | 52 | 52 | 100 | 100 |
| 2. | Sowing time | 87 | 85 | 95 | 88 |
| 3. | Seed rate | 32 | 26 | 92 | 79 |
| 4. | Seed treatment | 80 | 67 | 100 | 100 |
| 5. | Row spacing | 40 | 38 | 95 | 73 |
| 6. | Application of FYM | 60 | 32 | 85 | 72 |
| 7. | Integrated Nutrient Management | 24 | 17 | 82 | 73 |
| 8. | Irrigation (MIS) | 35 | 24 | 87 | 75 |
| 9. | Integrated disease management | 25 | 14 | 80 | 72 |
| 10. | Integrated pest management | 28 | 22 | 87 | 85 |

C. Knowledge and adoption level of cumin production technology

| Sr. No. | Particular | Before KVK | | At Present | |
|---------|--------------------------------|---------------|--------------|---------------|--------------|
| | | Knowledge (%) | Adoption (%) | Knowledge (%) | Adoption (%) |
| 1. | High yielding varieties (GC-4) | 38 | 32 | 98 | 98 |
| 2. | Sowing time | 73 | 67 | 95 | 92 |
| 3. | Seed rate | 51 | 42 | 85 | 83 |
| 4. | Seed treatment | 43 | 38 | 96 | 84 |
| 5. | Line sowing at 30 cm | 48 | 42 | 87 | 85 |
| 6. | Application of FYM | 43 | 40 | 84 | 77 |
| 7. | Integrated Nutrient Management | 32 | 28 | 96 | 92 |

| | | | | | |
|-----|-------------------------------|----|----|----|----|
| 8. | Irrigation | 68 | 59 | 95 | 90 |
| 9. | Integrated disease management | 30 | 26 | 93 | 89 |
| 10. | Use of <i>Trichoderma</i> | 27 | 22 | 78 | 70 |
| 11. | Integrated pest management | 37 | 32 | 97 | 94 |

D. Knowledge and adoption level of cumin production technology

| Sr. No. | Particular | Before KVK | | At Present | |
|---------|--|---------------|--------------|---------------|--------------|
| | | Knowledge (%) | Adoption (%) | Knowledge (%) | Adoption (%) |
| 1. | High yielding varieties GW - 496,322,366 | 35 | 25 | 98 | 75 |
| 2. | Sowing time | 82 | 76 | 87 | 76 |
| 3. | Seed rate | 75 | 62 | 95 | 87 |
| 4. | Row spacing | 56 | 42 | 85 | 76 |
| 5. | Application of FYM | 68 | 59 | 87 | 60 |
| 6. | Integrated Nutrient Management | 32 | 27 | 97 | 82 |
| 7. | Irrigation | 82 | 73 | 98 | 92 |

E. Knowledge and adoption level of Chickpea production technology

| Sr. No. | Particular | Before KVK | | At Present | |
|---------|---------------------------------------|---------------|--------------|---------------|--------------|
| | | Knowledge (%) | Adoption (%) | Knowledge (%) | Adoption (%) |
| 1. | High yielding varieties Guj.Gram-2, 3 | 18 | 13 | 83 | 72 |
| 2. | Seed rate | 56 | 42 | 92 | 83 |
| 3. | Row spacing | 72 | 48 | 95 | 82 |
| 4. | Seed treatment | 22 | 18 | 95 | 78 |
| 5. | Irrigation | 21 | 14 | 86 | 75 |
| 6. | Plant Protection | 32 | 28 | 94 | 87 |

4. Productivity of major crops before and after KVK interventions

| Sr. No. | Name of crop | Yield (qt. / ha.) | | Yield increased in % |
|---------|--------------|-------------------|------------|----------------------|
| | | Before KVK | At present | |
| 1. | Groundnut | 18.00 | 22.50 | 25.00 |
| 2. | Cotton | 18.75 | 28.00 | 49.33 |
| 3. | Cumin | 5.50 | 8.00 | 45.40 |
| 4. | Chickpea | 14.50 | 19.00 | 27.27 |
| 5. | Wheat | 35.00 | 41.00 | 17.14 |

Data of the productivity of major crops in the district indicates that after KVK interventions, productivity of major crops increased in the range of 17 % to 49%. This enhancement may be due to the adoption of improved agricultural technologies including production technologies, INM, IPM, IDM, irrigation management, use of improved farm implements etc. disseminated by KVK scientists through trainings, FLDs, OFTs, field days, field visits, technology week, telephonic helpline and other many extension activities.

5. Impact of farm women activities conducted by KVK, Khapat

Farm women of the adopted villages were imparted the trainings on value addition, income generation activities, preparation of bakery products, embroidery, tailoring and handicrafts etc. by home scientist of KVK, Khapat. FLDs on solar cooker as well as OFTs on food and nutrition, preparation of different items in solar cooker were also conducted.

- Farm women were made aware about importance of high calorie healthy diet during trainings and they started preparing healthy diet at home for them and their family.

- Solar cooking was popularized by trainings, FLDs and OFTs among the farm women. As it saves time, energy and cost, many of the farm women purchased solar cooker and preparing different routine items cost effectively, with less time and energy.
- A SHG of farm women named "*Radhe Krishna Group*" of Gokran village of Kutiyana Taluka was inspired to do income generation activities. They started the vocation of Vat making from cotton and earned additional income of approximately Rs. 1000 per month.
- Smt. Rambhiben Maru of Bakharla village started vocation of preparation of handicrafts items and earned Rs 2000 per month additional income.
- Tejalben Keshvala of Khapat village started embroidery work and earned Rs. 1500-2000 per month.
- Smt. Pravinaben Savaniya of Adityana village started preparation of mango pickle in bulk in solar cooker and selling. She earned Rs. 2000 per month additional income.

6. Impact of fisheries activities conducted by KVK, Khapat

The fisherman of the district were imparted training on various aspects of fisheries, Mariculture and aquaculture with emphasis on efficient use of natural resources and its conservation etc. by KVK scientist. FLDs on cultivation of seaweed- "*Kappaphycus*" using bamboo raft was conducted.

- The fisherman started functioning in associations, forming groups and become more adoptive towards latest technologies.
- The culture of giant fresh water prawn – Scampi is adopted by fisherman as well as non fisherman also and shown encouraging results first time in the district.
- The seaweed cultivation of *Kappaphycus* using bamboo raft was successfully done.
- Tiger shrimp (*P. monodon*) harvested during the fishery are successfully collected in live conditions and supplied to the shrimp hatchery for raising shrimp larvae. This generated extra income to the fisherman.