

ICAR-ATARI, Pune
DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2024
(January 2024 to December 2024)

1. GENERAL INFORMATION ABOUT THE KVK

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

| Address with PIN code | Telephone | | E mail | Website address & No. of visitors (hits) |
|---|--------------------------|-----------------------|--|--|
| Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia-360 023, Rajkot-I, Dist.: Rajkot, Gujarat State | Office (0281) 2784170 | FAX (0281) 2784170 | kvkrajkot@gmail.com kvktarghadia@jau.in | www.jau.in |

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

| Address | Telephone | | E mail | Website address |
|---|-------------------|-------------------|--|--|
| | Office | FAX | | |
| Junagadh Agricultural University, Junagadh (Gujarat) | (0285) 2672080 | (0285) 2672653 | dee@jau.in | www.jau.in |

1.3. Name of the Senior Scientist and Head with phone & mobile No.

| Name | Telephone / Contact | | |
|-------------------|---------------------|------------|--|
| Dr. M. M. Talpada | Office | Mobile | Email |
| | (0281) 2784170 | 7984475025 | mmtalapada@jau.in |

1.4. Date and Year of sanction: September – 2004

1.5. Staff Position (as on December, 2024)

| Sl. No. | Sanctioned post | Name of the incumbent | Mobile No. | Discipline | If Permanent, please indicate | | Date of joining | If Temporary, pl. indicates the consolidated amount paid (Rs. /month) |
|---------|---------------------------|-----------------------|------------|---------------------------|-------------------------------|-------------------|-----------------|---|
| | | | | | Current Pay Band | Current Grade Pay | | |
| 1. | Senior Scientist and Head | Dr. M. M. Talpada | 7984475025 | Genetics & Plant Breeding | 131400-217100 (UL-13A) | 147900/- | 5-3-2025 | |
| 2. | Subject Matter Specialist | Dr. M. M. Tajpara | 9427667135 | Animal Science | 68900-205500 (UL-11) | 101200/- | 4-8-2015 | |

| | | | | | | | | |
|-----|-------------------------------|--------------------------|------------|------------------|-------------------------|----------|-----------|--|
| 3. | Subject Matter Specialist | Dr. J. H. Chaudhary | 9978303111 | Agronomy | 57700-182400 (UL-10) | 70900/- | 1-8-2017 | |
| 4. | Subject Matter Specialist | Vacant | - | Plant Protection | - | - | - | |
| 5. | Subject Matter Specialist | Dr. J. N. Thaker | 9824224247 | Horti-culture | 79800-211500 (UL-12) | 104100/- | 1-04-2023 | |
| 6. | Subject Matter Specialist | Shri D. P. Sanepara | 9426449712 | Agril. Engg. | 68900-205500 (UL-11) | 110500/- | 1-11-2016 | |
| 7. | Subject Matter Specialist | Smt. H. H. Padsumbiya | 9979673732 | Home Science | 68900-205500 (UL-11) | 101200/- | 17-2-2022 | |
| 8. | Programme Assistant | A.B.Dabhi | 7990446090 | B.Sc. Agri | 39900-126600 (L-7) | 49000/- | 1-5-2024 | |
| 9. | Computer Programmer | Miss. R. T. Padaliya | 9979027064 | Computer | 44900-142400 (L-8) | 55200/- | 3-1-2009 | |
| 10. | Farm Manager | S. R. Rathva | 9712313538 | Plant Breeding | 39900-126600 (L-7) | 41100/- | 30-7-2018 | |
| 11. | Accountant/ Superintendent | M. D. Vachhani | 9825066876 | - | - | - | - | |
| 12. | Stenographer | Vacant | - | - | - | - | - | |
| 13. | Driver 1 | Vacant | - | - | - | - | - | |
| 14. | Driver 2 | Vacant | - | - | - | - | - | |
| 15. | Supporting staff 1 | Vacant | - | - | - | - | - | |
| 16. | Supporting staff 2 | Vacant | - | - | - | - | - | |

1.6. Total land with KVK (in ha):

| S. No. | Item | Area (ha) |
|--------------|---------------------------|--------------|
| 1 | Under Buildings | 2.87 |
| 2. | Under Demonstration Units | 0.50 |
| 3. | Under Crops | 13.80 |
| 4. | Horticulture | 0.50 |
| 5. | Pond | 0.48 |
| 6. | Others if any (Specify) | 1.85 |
| Total | | 20.00 |

1.7. Infrastructural Development:
A) Buildings

| S. No. | Name of building | Source of funding | Stage | | | | | |
|--------|-----------------------------------|-------------------|-------------------------------|---|-------------------|---|---------------------|------------------------|
| | | | Complete | | | Incomplete | | |
| | | | Completion Year | Plinth area (Sq. m) | Expenditure (Rs.) | Starting year | Plinth area (Sq. m) | Status of construction |
| 1. | Administrative Building | KVK | 23-11-2012 | 550 | 4092414 | - | - | - |
| 2. | Farmers Hostel | KVK | 23-11-2012 | 305 | 2314032 | - | - | - |
| 3. | Staff Quarters (6) | KVK | 23-11-2012 | 400.27 | 3264497 | - | - | - |
| 4. | Fencing/ Farm wall | | | | | - | - | - |
| 5. | Rain Water harvesting system: (5) | | | | | | | |
| | Farm pond-1 | KVK | 2012 | 9000 cu.m capacity | 105000 | Runoff is collecting from 12 ha agricultural land | | |
| | Farm pond-2 | KVK | 2010 | 850 cu.m capacity | - | Runoff is collecting from 2 ha agricultural land and 3 ha building area | | |
| | Roof water harvesting tank | KVK | 2017 | Size: L: 6.10 m W: 3.10 m H: 2.50 m | 204285 | Rain water harvesting in underground tank (Cap: 50000 lt.) from 300 sq.m office roof area | | |
| | Open well recharging structure | KVK | 2013 | Size: L: 2.0 m W: 2.0 m H: 1.5 m | 9500 | Runoff from 5 ha area for open well recharging | | |
| | Bore well recharging structure | KVK | 2018 | Size: L: 1.5 m W: 1.0 m H: 1.0 m | 12500 | Rain water harvesting from 190 sq.m roof area for bore well recharging | | |
| 6. | Threshing floor | - | - | - | - | - | - | - |
| 7. | Farm godown | KVK | 2012 | - | 400000 | - | - | - |
| 8. | Soil and water testing lab | KVK | Under Administrative Building | | | | | |
| 9. | Mini soil testing Kit | KVK | | | | | | |
| 10. | Sell Contour | - | - | - | - | - | - | - |
| 11. | Demonstration Units: (8) | | | | | | | |
| | Solar water pumping system | ATIC | 2019 | 7.5 HP | 262500 | - | - | - |
| | Bio gas plant | RKVY | 2007 | 10 cu.m | 42000 | - | - | - |
| | Farm implement demo. | RKVY | 2009 | Diff. farm implements | - | - | - | - |

| | | | | | | | | |
|-----|-----------------------|------|---------|-----------|---------|---|---|---|
| | Vermi-compost unit | KVK | 2018 | - | - | - | - | - |
| | Farm waste composting | KVK | 2019 | 7 m x 5 m | - | - | - | - |
| | Entomophagous park | KVK | 2018 | 0.10 ha | - | - | - | - |
| | Crop cafeteria | KVK | 2012 | 0.10 ha | - | - | - | - |
| | Kitchen garden | KVK | 2018 | 0.05 ha | - | - | - | - |
| 12. | Seed hub godown | ICAR | 2019 | 196.80 | 3500000 | - | - | - |
| 13. | ICT lab | - | - | - | - | - | - | - |
| 14. | Solar Panel | | | | | | | |
| 15. | Counter seal | - | - | - | - | - | - | - |
| 16. | Other | | | | | | | |
| | Store room | RKVY | 9-2-10 | 70.61 | 454500 | - | - | - |
| | Training hall | RKVY | 11-2-10 | 190.99 | 1395800 | - | - | - |
| | Processing unit | RKVY | 11-2-10 | 197.31 | 1536400 | - | - | - |
| | Implement shed | RKVY | 9-2-10 | 77.33 | 297800 | - | - | - |

B) Vehicles

| Type of vehicle | Year of purchase | Cost (Rs.) | Total kms. Running | Present status |
|--|------------------|------------|--------------------|----------------|
| Jeep (Bolero Neo) (GJ-3GA-1805) | 2022 | 830000 | 76670 | Working |
| Motorcycle (GJ-3DF-5781) | 2010 | 50000 | 58539 | Working |
| Tractor (Mahindra 39 HP) (GJ-3CL-7668) | 2011 | 440000 | - | Working |

C) Equipment & AV aids

| Name of the equipment / Implements | Year of purchase | Cost (Rs.) | Present status |
|--|------------------|------------|----------------|
| Generator set | 2002 | 24900 | Working |
| Color TV (Akai) | 2002 | 13850 | Working |
| LCD Project (Panasonic PT LC 50) | 2002 | 164368 | Working |
| PA Audio Vision System | 2002 | 20000 | Working |
| Computer System (Intel Pentium IV) | 2003 | 32000 | Working |
| Computer Genius Desktop (Wipro Super) | 2006 | - | Working |
| Refrigerator (Electronic Kelvinator) | 2006 | 10,500 | Working |
| Solar steel digital water plant | 2006 | 45000 | Working |
| Balaji Bio Gas Plant | 2007 | 32000 | Working |
| Tractor Mounted Sprayer (Aspee) | 2007 | 32000 | Working |
| Laptop Computer (HCL) | 2008 | 47500 | Working |
| Air Assisted Blower type Sprayer | 2009 | 98750 | Working |
| Photo Copier Machine (Richo) | 2009 | 115300 | Working |
| LCD Projector (PT-CB50NTE-2GA - Panasonic) | 2009 | 92155 | Working |
| DVD Home theater system with Speaker (HCL) | 2009 | 28000 | Working |

| | | | |
|--|------|---------|---------|
| LCD TV 22” (Model- 22LG30 - L. G.) | 2009 | 27287 | Working |
| Cotton Stalk Shredder | 2009 | 121000 | Working |
| Groundnut Digger-Tractor Operated | 2009 | 78500 | Working |
| Cultivator cum Rotavator | 2009 | 90000 | Working |
| Groundnut Decorticator | 2009 | 95850 | Working |
| Multi Crop Thresher | 2009 | 114000 | Working |
| Processing Unit | 2009 | 1685000 | Working |
| Plantar – Tractor operator | 2009 | 44000 | Working |
| Digital Camera (Nikon) P- 90 12.1 | 2010 | 24300 | Working |
| Desktop Veriten PC (Acer) | 2016 | 46032 | Working |
| Digital Xerox Machine with Printer | 2016 | 144391 | Working |
| K-yan Pro standerd | 2016 | 110644 | Working |
| Home UPS inverters system | 2016 | 79000 | Working |
| Smart Television (LG) | 2021 | 189975 | Working |
| Portable Sound System (AHUJA) | 2022 | 17000 | Working |
| Desktop computer (Dell) | 2022 | 25000 | Working |
| Laptop (HP) | 2022 | 40000 | Working |
| Air Conditioner -1.5 ton (Haier) | 2022 | 37500 | Working |
| Air Conditioner -1.5 ton (Haier) | 2022 | 37500 | Working |
| Air Conditioner -1.5 ton (Haier) | 2022 | 37500 | Working |
| Air Conditioner -1.5 ton (Haier) | 2022 | 37500 | Working |
| Desktop computer (Lenovo) | 2022 | 63690 | Working |
| Desktop computer (Lenovo) | 2022 | 63690 | Working |
| Desktop computer (Lenovo) | 2022 | 63690 | Working |
| Power Generator DG set of 45 kVA | 2023 | 485000 | Working |
| Tokary type Multi-crop Thresher | 2023 | 300000 | Working |
| Erecting 15 kW Solar Roof Top System (2 No.) | 2023 | 1294431 | Working |

1.8. Details of SAC meeting conducted in the year: 2024

| Date | Name and Designation of Participants | Salient Recommendations | Action taken |
|-------------|--|--|---------------------------------------|
| 31/01/ 2024 | Dr. V. P. Chovatia, Hon'ble Vice Chancellor, JAU, Junagadh. | 1. Mention the number of participants in other extension activities carried out at the centre. 2. Efforts should be made to increase the number of press release of different event organized at KVK. 3. To carried out baseline survey and identify thrust area of newly selected village. 4. Seed production should be planned for other pulse crop in summer along with chickpea under Seed-hub project. | All Suggestion Accepted & implemented |
| | Dr. N. B. Jadav, Director of Extension Education JAU, Junagadh | | |
| | Dr. D. S. Hirpara, ADR & Research Scientist (DF), MDFRS, JAU, Targhadia | | |
| | Dr. R. M. Satasiya, Principal, Polytechnic in Agril. Engg., JAU, Targhadia | | |
| | Dr. A. J. Bhatt, Senior Scientist & Head, KVK, JAU, Pipalia (Dhoraji) | | |

| | |
|--|---|
| Prof. M. F. Bhorania, Senior Scientist & Head, KVK, Gorkhijadiya, (Morbi) | 5. Dragon fruit and custard apple should be included in “Value addition in Guava” training. |
| Dr. K. P. Baraiya, Senior Scientist & Head, KVK, Jamnagar | 6. Provide <i>Trichoderma</i> as critical input along with Mencozeb in FLD on cumin (GC-4) for IDM. |
| Shri N. G. Ramoliya, Asstt. Director of Agriculture, District Panchayat, Rajkot | 7. Include lure as critical inputs along with pheromone trap in FLD on IPM in cotton for pink boll worm management. |
| Shri H. T. Bhimani, Asstt. Director of Horticulture, Horti., Rajkot | 8. Conduct FLD on MDP for eco-friendly management of pink boll worm in cotton instead of OFT and frame a new OFT in plant protection discipline. |
| Shri Ramesh M. Dangar, Field Executive, GGRC, Rajkot | 9. Total number of trainings should be increased in Animal Science discipline. |
| Shri Hardik B. Dobariya, GGRC, Rajkot | 10. Prepare one new OFT in Animal Science discipline. |
| Dr. H. C. Chhodvadia, Associate Extension Educationist, JAU, Junagadh | 11. Mentioned check variety, state and district average yield in FLD results. |
| Dr. Amit H. Tilala, Dy. Manager, Rajkot Dairy (Gopal Dairy), Rajkot | 12. Emphasis on “Natural Farming” in every training programmes organize by KVK. |
| Shri Sudhir Datta, AIR (Akashwani), Rajkot | 13. In presentation of Senior Scientist and Head, include overall general activities of KVK and SMS have strictly followed the common Performa of presentation. |
| Dr. R. B. Singh, Deputy Director, NHRDF, Naranka, Rajkot | 14. Document more number of success stories and prepare video/documentary film of success stories of KVK progressive farmers with the help of AGRISNET Studio. |
| Shri. S. K. Tiwari, Technical Officer, NHRDF, Naranka, Rajkot | 15. Impact study should be carried out of completion of three years of cluster villages. |
| Kajalben S. Zala, Centre for Environment Education, Jasdan, Dist: Rajkot | 16. Every presentation of scientist, include last year <i>Rabi</i> season result and current year <i>summer</i> and <i>kharif</i> season results as well current year Rabi season result as awaiting in the presentation. |
| Hiteshbhai P. Kiyada, Village: Rafala, Ta: Rajkot, Dist: Rajkot | 17. Pooled statistical analysis should be made of completion of three years of OFT and presented in the meeting. |
| Vipulbhai B. Kiyada, Village: Rafala, Ta: Rajkot, Dist: Rajkot | |
| Sureshbhai B. Makwana, Village: Bhoyra, Ta: Vinchhiya, Dist: Rajkot | |
| Lilaben Chhaganbhai Lakhatariya, Village: Lalavadar, Ta: Vinchhiya, Dist: Rajkot | |
| Jamnaben Mohanbhai Dabhi, Village: Barvala, Ta: Jasdan, Dist: Rajkot | |
| Dr. G. V. Marviya, Senior Scientist & Head, KVK, JAU, Targhadia, Dist: Rajkot | |

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

2.1. Major farming systems/enterprises

| S. No | Farming system/enterprise |
|-------|--|
| 1 | Groundnut – Wheat/ Cumin/ Chick pea, Cotton – Summer Groundnut/ Sesame/ Pulses |
| 2 | Dairy product |

| | |
|---|--|
| 3 | Farm waste management specially for cotton stalk |
| 4 | Fruit and vegetable preservation |
| 5 | Value addition in groundnut, sesame, gram, etc. |

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

| S. No. | Agro-climatic Zone (Planning Commission) | Characteristics |
|--------|--|---|
| 1 | North Saurashtra Agro Climatic Zone (VI) | The total geographical area of North Saurashtra Agro Climatic Zone is 35.2 Lacs ha. Out of total area, 73.40 per cent area falls under arid and semi-arid region. The soils of this zone are shallow to moderately deep. The soils of Rajkot district are low in their availability of nitrogen while medium in phosphorus and high in available potash except the available phosphorus and potash is in medium category in adopted villages. Monsoon commences usually by the end of June and withdraws by middle of September. Average annual rainfall of district is 648 mm while 1318.5 mm during 2024. |

a) Topography

| S. No. | Agro ecological situation | Characteristics |
|--------|---------------------------|---|
| 1 | Situation No. 4 | Shallow black soil with 500-600 mm Rainfall |
| 2 | Situation No. 14 | Hilly Soils with 500-600 mm Rainfall |

2.3 Soil Types

| S. No | Soil type | Characteristics |
|-------|---------------------------------------|---|
| 1 | Clay to clay loam | Medium black calcareous soil |
| 2 | Sandy Clay Loam to Clayey | Well drained soil with rapid permeability |
| 3 | Sandy to Sandy loam 10 cm, Calcareous | Well drained soils |

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2023-24)

| S. No | Crop | Area (ha) | Production (000 T) | Productivity (Kg/ha) |
|-------|--------------------------|-----------|--------------------|----------------------|
| | Major Field crops | | | |
| 1 | Groundnut | 226066 | 586975 | 2596 |
| 2 | Cotton | 244803 | 391800 | 1600 |
| 3 | Sesamum | 1152 | 1007 | 874 |
| 4 | Castor | 6029 | 16712 | 2772 |
| 5 | Pearl millet | 437 | 760 | 1738 |
| 6 | Green gram | 1672 | 1612 | 964 |
| 7 | Black gram | 892 | 932 | 1045 |
| 8 | Pigeon pea | 3277 | 5865 | 1790 |
| 9 | Wheat | 85784 | 370242 | 4316 |
| 10 | Chick pea | 59743 | 135892 | 2275 |

| | | | | |
|----|-----------------------|-------|-------|------|
| 11 | Cumin | 41748 | 35758 | 857 |
| 12 | Groundnut (Summer) | 1801 | 4300 | 2388 |
| 13 | Pearl millet (Summer) | 1006 | 3417 | 3396 |
| 14 | Green gram (Summer) | 1775 | 2457 | 1384 |
| 15 | Sesamum (Summer) | 4995 | 7612 | 1524 |

Source: District agriculture department

2.5. Weather data (2024)

| Month | Average RF (mm) | Normal RF (mm) | Normal Rainy days (number) | Temperature (° C) | | Relative Humidity (%) | |
|-------------------|-----------------|----------------|----------------------------|-------------------|-------------|-----------------------|-------------|
| | | | | Maximum | Minimum | Maximum | Minimum |
| January | 0.0 | 0.0 | 0 | 28.1 | 11.8 | 68 | 33 |
| February | 0.0 | 0.0 | 0 | 31.0 | 14.8 | 63 | 32 |
| March | 0.2 | 7.4 | 0 | 35.2 | 16.8 | 63 | 30 |
| April | 0.0 | 0.0 | 0 | 38.5 | 21.7 | 72 | 29 |
| May | 0.0 | 0.0 | 0 | 41.5 | 25.8 | 70 | 28 |
| June | 2.5 | 75.3 | 3 | 39.1 | 27.2 | 78 | 50 |
| July | 8.2 | 254.5 | 15 | 32.8 | 25.8 | 87 | 71 |
| August | 27.3 | 847.7 | 14 | 30.8 | 24.3 | 90 | 77 |
| September | 2.8 | 82.6 | 7 | 32.1 | 23.9 | 88 | 65 |
| October | 1.6 | 51.0 | 4 | 34.4 | 23.5 | 84 | 53 |
| November | 0.0 | 0.0 | 0 | 33.2 | 17.1 | 64 | 34 |
| December | 0.0 | 0.0 | 0 | 27.4 | 11.4 | 65 | 36 |
| Total/Ave. | | 1318.5 | 43 | 33.7 | 20.3 | 74.3 | 44.8 |

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

| Category | Population (No) | Production (tonne) | Productivity |
|---|-----------------|--------------------|--------------|
| Cattle | | | |
| Crossbred | 4,52,000 | 33,26,900 (Milk) | - |
| Indigenous | - | - | - |
| Buffalo | 3,62,000 | 52,84,700 (Milk) | - |
| Sheep | 2,63,400 | 2,66,810 (Wool) | - |
| Goats | 1,97,000 | 2,31,240 (Milk) | - |
| Pigs | 1,000 | - | - |
| Crossbred | - | - | - |
| Indigenous | - | - | - |
| Poultry Production of eggs (No.) | | | |
| Hens (Crossbred) | 13,400 | 32,52,000 (Egg) | - |
| Desi | 7,800 | 3,92,000 (Egg) | - |

| Category | | Production (Q.) | Productivity |
|------------------|---|-----------------|--------------|
| Fish (Reservoir) | - | - | - |

2.7. Details of Operational area / Villages

| Taluka / Block | Name of the village | Major crops & enterprises | Major problem identified | Identified Thrust Areas |
|----------------|---------------------|--|--|--|
| Rajkot | Gunda | Groundnut, Cotton, Sesame, Wheat, Cumin, Chickpea, Garlic, Onion. * Enterprises are dairy business, Vermi composting, Preparation of roasted groundnut and chikki from groundnut and sesame | Pink ball worm in cotton, Heavy infestation of sucking pest in cotton, Phytophthora disease in sesame and White grub infestation in groundnut, long inter-calving period in buffalo, Nutritional deficiency in animal feed and fodder, Less area under horticultural crops, Anemia problem in adolescent girls | <ul style="list-style-type: none"> • IPM and INM in major crops of this area • Increase drainage of soil • Reducing the inter-calving period in buffalo • Motivate the farmers for arid horticultural crops • Efficient use of irrigation water • To create the awareness for grading, processing and marketing (value addition) |
| | Maliyasan | | | |
| | Sanosara | | | |
| | Kuvadava | | | |
| | Lakhapar | | | |
| Jasdan | Madava | | | |
| | Sitaliya | | | |
| | Kanesara | | | |
| | Kothi | | | |
| Vinchhiya | Rajavadla Jam | | | |
| | Sanali | | | |
| | Kandhevaliya | | | |
| | Revaniya | | | |
| | Thoriyali | | | |
| | Hathsani | | | |

2.8. Priority thrust areas:

| Sl. No | Crop/ Enterprise | Thrust area |
|--------|------------------------|---|
| 1 | Groundnut, Sesame etc. | Increasing the productivity of the major crops by adopting the recommended dry farming technologies and to create awareness for value addition. |
| 2 | Water conservation | <i>In situ</i> soil moisture conservation and rainwater harvesting. Use of cotton stalk for organic manure. |
| 3 | Cotton | Motivating cotton growers to adopt IPM and INM practices for reducing the cost of production. |
| 4 | Arid Fruits | Promoting the arid horticulture. |
| 5 | Micro irrigation | Efficient use of water by MIS, water harvesting structure and water conservation techniques. |
| 6 | Organic farming | Enhancement of organic farming through improved technologies. |
| 7 | Livestock production | Enhancing productivity of milch animals by proper feeding and breeding management. |
| 8 | Women empowerment | Providing self-employment through skill-oriented income generating activities |
| 9 | Agriculture | Developing interest among youth for agriculture as a profession. |
| 10 | Horticulture | Value addition in agriculture produces through proper grading, processing, marketing and information technology. |

| | | |
|----|------------------------------|--|
| 11 | PHT | Minimizing the post-harvest losses and to create the awareness for proper storage. |
| 12 | Income generating activities | Self-employment among rural youth and skill-oriented income generating activities. |
| 13 | Nutrition management | Care and importance of nutrition in children & pregnant women. |

3. TECHNICAL ACHIEVEMENTS

3.1. A. Details of target and achievements of mandatory activities

| OFT | | | | FLD | | | |
|----------------|-------------|-------------------|-------------|----------------|-------------|-------------------|-------------|
| 1 | | | | 2 | | | |
| Number of OFTs | | Number of farmers | | Number of FLDs | | Number of farmers | |
| Targets | Achievement | Targets | Achievement | Targets | Achievement | Targets | Achievement |
| 8 | 7 | 20 | 17 | 15 | 15 | 185 | 161 |

| Training | | | | Extension Programmes | | | |
|-------------------|-------------|------------------------|-------------|----------------------|-------------|------------------------|-------------|
| 3 | | | | 4 | | | |
| Number of Courses | | Number of Participants | | Number of Programmes | | Number of participants | |
| Targets | Achievement | Targets | Achievement | Targets | Achievement | Targets | Achievement |
| 80 | 85 | 2000 | 2273 | - | 1119 | - | 12760 |

| Seed Production (Qtl.) | | | | Planting materials (Nos.) | | | |
|------------------------|--|-------------|--|---------------------------|--|-------------|--|
| 5 | | | | 6 | | | |
| Target | | Achievement | | Target | | Achievement | |
| - | | 220 | | - | | 10 | |

| Livestock, poultry strains and fingerlings (No.) | | | | Bio-products (Kg) | | | |
|--|--|-------------|--|-------------------|--|-------------|--|
| 7 | | | | 8 | | | |
| Target | | Achievement | | Target | | Achievement | |
| - | | - | | - | | - | |

3.1. B. Operational areas details during 2024

| S.No. | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise | Extent of area (ha/No.) affected by the problem in the district | Names of Cluster Villages identified for intervention | Intervention (OFT, FLD, Training, extension activity etc.) * |
|-------|---|---|---|---|--|
| 1 | Cotton | Low yield of cotton | - | All cluster | OFT, FLD, Training |
| | | Pink bollworm | - | All cluster | FLD and Training |
| 2 | Groundnut | Variety | - | All cluster | FLD |
| | | White grub | - | All cluster | Training |
| | | Rust and Tikka | - | All cluster | FLD and Training |

| | | | | | |
|---|--------------|---|---|-------------|-----------------------|
| 3 | Cumin | Wilt in cumin | - | All cluster | FLD, OFT and Training |
| | | Sowing method and over irrigation | - | All cluster | FLD and Training |
| 4 | Gram | Variety | - | All cluster | FLD and Training |
| 5 | Tomato | Variety & Leaf curl | - | All cluster | OFT |
| 6 | Brinjal | Variety | - | All cluster | FLD and Training |
| 7 | Pearl millet | Variety | - | All cluster | FLD and Training |
| 8 | Farm women | Concept of nutritional gardening to combat nutritional issues | - | All cluster | FLD and Training |

3.2. Technology Assessment/ refined (Kharif 2024, Rabi 2023-24, Summer 2024)

A1. Abstract on the number of technologies assessed/ refined in respect of crops

| Thematic areas | Cereals | Oilseeds | Pulses | Commercial Crops | Vegetables | Fruits | Flower | Plantation crops | Tuber Crops | Other | TOTAL |
|---|---------|----------|--------|------------------|------------|--------|--------|------------------|-------------|-------|----------|
| Integrated Nutrient Management | | | | | | | | | | | |
| Varietal Evaluation | | | | | 1 | | | | | | 1 |
| Integrated Pest Management | | | | | | | | | | | |
| Integrated Crop Management | | | | | | | | | | | |
| Integrated Disease Management | | | | 1 | | | | | | | 1 |
| Small Scale Income Generation Enterprises | | | | | | | | | | | |
| Weed Management | | | | | | | | | | | |
| Resource Conservation Technology | | | | 1 | | | | | | | 1 |
| Farm Machineries | | | | | | | | | | | |
| Integrated Farming System | | | | 1 | | | | | | | 1 |
| Seed / Plant production | | | | | | | | | | | |
| Value addition | | | | | | | | | | | |
| Drudgery Reduction | | | | | | | | | | | |
| Storage Technique | | | | | | | | | | | |
| Mushroom cultivation | | | | | | | | | | | |
| Natural Farming | | 1 | | | | | | | | | 1 |
| Total | | 1 | | 3 | 1 | | | | | | 5 |

A2. Abstract on the number of technologies assessed/ refined in respect of livestock enterprises

| Thematic areas | Cattle | Poultry | Piggery | Rabbitry | Fisheries | TOTAL |
|---|----------|---------|---------|----------|-----------|----------|
| Evaluation of Breeds | | | | | | |
| Nutrition Management | 1 | | | | | 1 |
| Disease of Management | | | | | | |
| Value Addition | | | | | | |
| Production and Management | 1 | | | | | 1 |
| Feed and Fodder | | | | | | |
| Small Scale income generating enterprises | | | | | | |
| TOTAL | 2 | | | | | 2 |

B. Achievements on technologies Assessed/ refined

B.1. Technologies Assessed/ refined under various Crops

| Thematic areas | Crop | Name of the technology assessed | No. of trials | Number of farmers | Area in ha (Per trial covering all the Technological Options) |
|---|-----------|--|---------------|-------------------|---|
| Integrated Nutrient Management | | | | | |
| Varietal Evaluation | Tomato | Response of new release variety of Tomato GT-6 on leaf curl occurrence and yield | 1 | 3 | 0.4 |
| Integrated Disease Management | Cumin | Use of <i>Trichoderma</i> for wilt disease management in cumin | 1 | 3 | 0.4 |
| Small Scale Income Generation Enterprises | | | | | |
| Resource Conservation Technology | Cumin | Performance of drip irrigation with line sowing method in cumin | 1 | 3 | 0.4 |
| Integrated Farming System | Cotton | De-topping in Cotton | 1 | 3 | 0.4 |
| Natural Farming | Groundnut | Natural farming in <i>Kharif</i> Groundnut | 1 | 1 | 0.4 |
| Total | | | 5 | 13 | 2.0 |

B. 2. Technologies assessed/ refined under Livestock & fishery assessment

| Thematic areas | Name of the livestock enterprise | Name of the technology assessed | No. of trials | No. of farmers |
|---|----------------------------------|---|---------------|----------------|
| Evaluation of breeds | | | | |
| Health Management | | | | |
| Dairy Management ² | | | | |
| Nutrition management | Buffalo | Chelated Mineral mixture, By pass protein, & By pass fat for enhancing milk production in buffalo | 2 | 2 |
| Disease management | | | | |
| Feed and fodder management | | | | |
| Processing & Value addition | | | | |
| Production and management | Crossbreed | Effect of health management on performance of crossbreed cow | 2 | 2 |
| Composting fish culture | | | | |
| Small scale income generating enterprises | | | | |
| Fish production | | | | |
| Other | | | | |
| Total | | | 4 | 4 |

B.3 Technologies assessed under other enterprises: Nil

B 4. Technologies assessed under Women empowerment assessment: Nil

C. 1. Results of Technologies Assessed/ refined

Results of On Farm Trial

| Crop/ enterprise | Farming situation | Problem definition | Title of OFT | No. of trials | Technology Assessed/Refined | Parameters of assessment | Data on the parameter | Results of assessment | Feedback from the farmer | Any refinement needed | Justification for refinement |
|------------------|-------------------|---|--------------------|---------------|---|------------------------------------|-----------------------|-----------------------|--------------------------|-----------------------|------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Groundnut | Rainfed | Deteriorate in yield and quality of groundnut | Natural farming in | 1 | T1: Seed treatment through fungicides, Use of chemical fertilizers, Use of Insecticides-Pesticides (Farmers Practices) | Yield (Kg/ha), Cost of cultivation | | | | | |

| | | | | | | | | | | | |
|--------|-----------|--|--|---|--|--|--|--|--|--|--|
| | | due to higher use of chemical fertilizers & Pesticides | Khariif Groundnut | | <p>T2: FYM@ 10 t/ha, Use of PSB @ 8g/kg seeds, Use of <i>Trichoderma viride</i> @ 2.5 kg/ha, Use of <i>Beauveria bassiana</i> @ 80 ml per pump, <i>Metarhizium anisopliae</i> @ 5 kg/ha, <i>Pseudomonas fluorescens</i> @ 2.5 kg/ha (Recommended Practices)</p> <p>T3: Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (Interventions)</p> | and pest infestation (%) | | | | | |
| Cotton | Rainfed | Low Yield of Cotton | De-topping in Cotton | 3 | T1: Farmers practices | Seed cotton yield (kg/ha) and No. of bolls/plant | | | | | |
| | | | | | T2: De-topping at 75 DAS | | | | | | |
| | | | | | T3: De-topping of monopodial branches at 75 DAS & 90 DAS | | | | | | |
| Tomato | Irrigated | To increase yield of Tomato by decreasing sucking pest infestation | Response of New Release Variety of Tomato GT-6 on leaf curl occurrence and yield | 3 | T1: Sowing of Local Variety + any Pesticides | Yield Kg/ha and infestation (%) | | | | | |
| | | | | | T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15-liter 40 DAT | | | | | | |

| | | | | | | | | | | | |
|----------------|-----------|---|---|---|---|---|--|--|--|--|--|
| | | by sowing tolerant variety | | | T3: Sowing of Local variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT | | | | | | |
| Cumin | Irrigated | Heavy incidence of wilt disease in cumin | Use of <i>Trichoderma</i> for wilt disease management in cumin | 3 | T1: No use of Trichoderma or fungicide at the time of sowing | Yield Kg/ha and infestation (%) | | | | | |
| | | | | | T2: Trichoderma @ 5 kg /ha with organic manure @ 500 kg / ha at the time of sowing | | | | | | |
| | | | | | T3: Application of Trichoderma @ 5 kg /ha along with organic manure @ 500 kg / ha at the time of sowing and second application of Trichoderma @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination | | | | Very effective against the wilt disease. Germination percentage was increased. | | |
| Cumin | Irrigated | Low yield due to sowing method and over irrigation | Performance of drip irrigation with line sowing method in cumin | 3 | T1: Broad casting method without drip irrigation (Farmer's practices) | Yield Kg/ha and B:C Ratio | | | | | |
| | | | | | T2: Line sowing (20 cm) with drip irrigation (Recommended technology) | | | | | | |
| Buffalo | | Low milk production & infertility problems in dairy Buffalo | Chelated Mineral mixture, By pass protein, & By pass fat for | 2 | T1: Farmers practices (Control) | Milk Yield (Lit/day), Milk fat (%) and Estrus after | | | | | |
| | | | | | T2: Buffalo Fed with 50 gm/day chelated mineral mixture supplementation | | | | | | |
| | | | | | T3: T2 + by pass protein (5 kg/day) | | | | | | |

| | | | | | | | | | | | |
|-----------------------|--|--|--|----------|--|--|--|--|--|--|--|
| | | | enhancing milk production in buffalo | | T4: T3 + by pass fat (100 gm/day) | calving (days) | | | | | |
| Crossbreed cow | | Low milk production & infertility problems in crossbreed cow | Effect of health management on performance of crossbreed cow | 2 | T1: Farmers practices (Control) | Milk Yield (Lit/day), Milk fat (%) and Estrus after calving (days) | | | | | |
| | | | | | T2: Crossbreed cow give anthelmintic 10 mg/kg | | | | | | |
| | | | | | T3: T2+ Vaccination FMD & HS | | | | | | |
| | | | | | T4: T3 + Chelated mineral mixture 50 gm/day | | | | | | |

Contd...

Contd....

| Technology Assessed | Source of Technology | Production | Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year) | Net Return (Profit) in Rs. / Unit | BC Ratio |
|--|--|------------|---|-----------------------------------|----------|
| 13 | 14 | 15 | 16 | 17 | 18 |
| Natural farming in Kharif Groundnut | | | | | |
| T1: Seed treatment through fungicides, Use of chemical fertilizers, Use of Insecticides-Pesticides (Farmers Practices) | Prakrutik Krushi Book by Acharya Devvrat, Hon'ble Governor of Gujarat and Junagadh Agricultural University | 1900 (20) | Kg/ha (% Infestation of white grub) | 87250 | 3.13 |
| T2:FYM @ 10 ton/ha, Use of PSB @ 8g/kg seeds, Use of Trichoderma viride @ 2.5 kg/ha, Use of Beauveria bassiana @ 80 mi per pump, Metarhyzium anisopliae @ 5 kg/ha, Pseudomonas fluorescens @ 2.5 kg/ha (Recommended Practices) | | 1600 (33) | Kg/ha (% Infestation of white grub) | 73480 | 3.09 |
| T3:Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (Interventions) | | 1225 (45) | Kg/ha (% Infestation of white grub) | 52687 | 2.75 |
| De-topping in Cotton | | | | | |

| | | | | | |
|---|--|---------------------|---|----------|------|
| T1: Farmers Practices | Junagadh Agricultural University, Junagadh | 3450 (33.00) | Kg/ha (No. of bolls/plant (10 plants)) | 174174 | 3.43 |
| T2: De-topping at 75 DAS | | 3700 (37.00) | Kg/ha (No. of bolls/plant (10 plants)) | 190477 | 3.60 |
| T3: De-topping of monopodial branches at 75 DAS & 90 DAS | | 3950 (40.00) | Kg/ha (No. of bolls/plant (10 plants)) | 205279 | 3.70 |
| Response of New Release Variety of Tomato GT-6 on leaf curl occurrence and yield | | | | | |
| T1: Sowing of Local Variety + any Pesticides. | Junagadh Agricultural University, Junagadh | 21813 (12 to 15) | Kg/ha (% plant infestation) | 100007 | 2.34 |
| T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after | | 25840 (3 to 5) | | 129487 | 2.68 |
| T3: Sowing of Local Variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT | | 24157 (7 to 8) | | 114253 | 2.45 |
| Use of Trichoderma for wilt disease management in cumin | | | | | |
| T1: No use of Trichoderma or fungicide at the time of sowing | Junagadh Agricultural University, Junagadh | 905.3 (12 to 17) | Kg/ha (% plant infestation) | 90,300 | 2.98 |
| T2: Application of Trichoderma @ 5 kg /ha with organic manure @ 500 kg / ha at the time of sowing | | 980.0 (9 to 12) | Kg/ha (% plant infestation) | 1,03,333 | 3.37 |
| T3: Application of Trichoderma @ 5 kg /ha along with organic manure @ 500 kg / ha at the time of sowing and second application of Trichoderma @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination. | | 1008.0 (6 to 10) | Kg/ha (% plant infestation) | 1,06,633 | 3.39 |
| Performance of drip irrigation with line sowing method in cumin | | | | | |
| T1: Broad casting method without drip irrigation (Farmer’s practices) | RTTC, JAU, Junagadh | 980 | Kg/ha | 180500 | 4.51 |
| T2: Line sowing (20 cm) with drip irrigation (Recommended technology) | | 1240 | Kg/ha | 234000 | 5.20 |

| Chelated Mineral mixture, By pass protein, & By pass fat for enhancing milk production in buffalo | | | | | |
|--|------------------------|-----------------------------|--|---|---|
| T1: Farmers practices (Control) | NDRI, Kernal, Hariyana | 8.0lit, 6.6% and 140 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T2: Buffalo fed with 50 gm/day chelated mineral mixture supplementation | | 9.8 lit, 7.1% and 118 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T3: T2 + By pass protein (5 kg/day) | | 10.9 lit, 8.0% and 99 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T4: T3 + By pass fat (100 gm/day) | | 11.8 lit, 8.9% and 90 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| Effect of health management on performance of crossbreed cow | | | | | |
| T1: Farmers practices (Control) | IVRI, Izzatnagar | 11.9lit, 3.8% and 136 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T2: Crossbreed cow give anthelmintic 10 mg/kg | | 12.8 lit, 4.2% and 121 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T3: T2+ Vaccination FMD & HS | | 13.9 lit, 4.9% and 109 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |
| T4: T3 + Chelated mineral mixture 50 gm/day | | 15.6 lit, 5.3% and 97 days | Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days) | - | - |

C. 2. Details of each On Farm Trial for assessment/ refine to be furnished in the following format separately as per the following details:

OFT-1

1. Title of Technology Assessed: **Natural farming in Kharif Groundnut**
2. Problem Definition: Deteriorate in yield and quality of groundnut
3. Details of technologies selected for assessment:
 1. Seed treatment through fungicides, Use of chemical fertilizers, Use of

Insecticides-Pesticides (**Farmers Practices**)

2. FYM@ 10 t/ha, Use of PSB @ 8g/kg seeds, Use of *Trichoderma viride* @ 2.5 kg/ha, Use of *Beauveria bassiana* @ 80 ml per pump, *Metarhizium anisopliae* @ 5 kg/ha, *Pseudomonas fluorescens* @ 2.5 kg/ha (**Recommended Practices**)

3. Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (**Interventions**)

4. Source of technology: *Prakrutik Krushi* Book by Acharya Devvrat, Hon'ble Governor of Gujarat and JAU, Junagadh

5. Production system and thematic area: NRM

6. Performance of the Technology with performance indicators:

| Treatments | Source of Technology | 3 rd Year Result | | | Pooled of 3 Years | | |
|------------------------------------|--|-----------------------------|-------------------------------|----------------------------------|--------------------|---------------------|-----------|
| | | Production (kg/ha) | Net Return (Profit) in Rs./ha | B:C Ratio (3 rd Year) | Production (kg/ha) | Net Return (Rs./ha) | B:C Ratio |
| T1 Farmers Practices | Junagadh Agricultural University and H.E. Governor of Gujarat's NF Book | 1900 | 87250 | 3.13 | 1675 | 46616 | 3.07 |
| T2 Recommended Practices | | 1600 | 73480 | 3.09 | 1483 | 39926 | 2.73 |
| T3 Intervention | | 1225 | 52687 | 2.75 | 1258 | 31229 | 2.35 |

Conclusion: Data Collected During Last 3 Years Shows that **T1** Treatment Shows Better Result than **T2 & T3** Treatments

- Feedback, matrix scoring of various technology parameters recorded through farmer's participation / other scoring techniques: Farmers practices has given higher production as compare to recommended practices and interventions.
- Final recommendation for micro level situation: Yield can be increased and stem rot infestation can be reduced with use of *Trichoderma* in mixture with castor cake.
- Constraints identified and feedback for research: - White grub infestation was observed more in recommended practices and interventions treatment.
- Process of farmers participation and their reaction: The farmers participation in natural farming awareness and training programme enhanced day by day and they are adopting natural farming on their fields also.

OFT-2

1. Title of Technology Assessed: **De-topping in Cotton**
2. Problem Definition: Low Yield of Cotton
3. Details of technologies selected for assessment:
 1. Farmers Practices
 2. De-topping at 75 DAS
 3. De-topping of monopodial branches at 75 DAS & 90 DAS
4. Source of technology: JAU
5. Production system and thematic area: NCM
6. Performance of the Technology with performance indicators:

| Treatments | Source of Technology | 3 rd Year Result | | | Pooled of 3 Years | | |
|--|--|-----------------------------|---------------------|----------------------------------|---------------------------|---------------------|-------------|
| | | Seed cotton yield (kg/ha) | Net Return (Rs./ha) | B:C Ratio (3 rd Year) | Seed cotton yield (kg/ha) | Net Return (Rs./ha) | B:C Ratio |
| T1 Farmers Practices | Junagadh Agricultural University, Junagadh | 3450 | 174174 | 3.43 | 3450 | 241951 | 3.49 |
| T2 De-topping at 75 DAS | | 3700 | 190477 | 3.60 | 3617 | 276562 | 4.10 |
| T3 De-topping at 75 DAS & 90 DAS | | 3950 | 205279 | 3.70 | 3883 | 294346 | 4.33 |

Conclusion: Data Collected During Last 3 Years Shows that **T3** Treatment Shows Better Result than **T1 & T2** Treatments

7. Feedback, matrix scoring of various technology parameters recorded through farmer's participation / other scoring techniques: Interventions treatment has given higher production as compare to farmers practice and recommended treatment.
8. Final recommendation for micro level situation: Yield can be increased through De-topping of monopodial branches at 75 DAS & 90 DAS
9. Constraints identified and feedback for research: - De-topping is much laborious work and taking time for operation.
10. Process of farmers participation and their reaction: Farmers are aware about de-topping in cotton and adopting this technology in their fields.

OFT-3

1. Title of Technology Assessed: **Response of new release variety of Tomato GT-6 on leaf curl occurrence and yield**
2. Problem Definition: Low yield of Tomato and Heavy Infestation of leaf Curl Virus
3. Details of technologies selected for assessment:
 - T1: Sowing of Local Variety + any Pesticides.
 - T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
 - T3: Sowing of Local variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
4. Source of technology: JAU
5. Production system and thematic area: IPM
- 6 Performance of the Technology with performance indicators:

| No | Name of the farmer | Name of the Village | Unit | Result | | |
|-----------------------|---------------------------------|---------------------|------------------|----------|--------|--------|
| | | | | T1 | T2 | T3 |
| 1 | Devrajbhai Laljibhai Kakadiya | Lilapur | Yield (Kg/ha) | 21470 | 24990 | 23860 |
| 2 | Damjibhai Velabhai Ramani | Lilapur | | 21750 | 26800 | 24610 |
| 3 | Rajeshbhai Vallabhbhai Kakadiya | Lilapur | | 22220 | 25730 | 24000 |
| Average yield | | | | 21813 | 25840 | 24157 |
| (% plant infestation) | | | | 12 to 15 | 3 to 5 | 7 to 8 |

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Interventions (GT-6 variety) has given higher production as compare to Farmers practices and recommended practices.
8. Final recommendation for micro level situation: Farmers should grow latest variety of Tomato GT-6 and carried out foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
9. Constraints identified and feedback for research: Farmers are less aware about latest technologies.
10. Process of farmers participation and their reaction: Farmers getting trainings and knowledge for latest technologies for better production in tomato.

OFT-4

1. Title of Technology Assessed: **Use of *Trichoderma* for wilt disease management in cumin**
2. Problem Definition: Heavy incidence of wilt disease in cumin
3. Details of technologies selected for assessment:
 - T1: No use of *Trichoderma* or fungicide at the time of sowing
 - T2: Application of *Trichoderma* @ 5 kg /ha with organic manure @500 kg / ha at the time of sowing.
 - T3: Application of *Trichoderma* @ 5 kg /ha along with organic manure @500 kg / ha at the time of sowing and second application of *Trichoderma* @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination.
4. Source of technology: JAU
5. Production system and thematic area: IDM
6. Performance of the Technology with performance indicators:

| No | Name of the farmer | Name of the Village | Unit | Result | | |
|-----------------------|--------------------------------|---------------------|---------------|--------|-------|--------|
| | | | | T1 | T2 | T3 |
| 1 | Jentibhai Dhanjibhai Jatapara | Madava | Yield (Kg/ha) | 901 | 965 | 997 |
| 2 | Ashwinbhai Ranchhodbhai Berani | | | 918 | 1000 | 1018 |
| 3 | Mansukhbhai Karamsibhai Berani | | | 897 | 975 | 1009 |
| Average yield | | | | 905.3 | 980.0 | 1008.0 |
| (% plant infestation) | | | | 12-17 | 9-12 | 6-10 |

Pooled of 3 Years

| Technology options | Yield (Kg/ha) | % Plant infestation | Yield (q/ha) | B:C Ratio (3 rd year) | B:C Ratio (1 st year) | B:C Ratio (2 nd year) |
|------------------------|---------------|---------------------|--------------|----------------------------------|----------------------------------|----------------------------------|
| Farmers Practice (T1) | 905.3 | 12 to 17 | 90.53 | 2.98 | 2.72 | 3.90 |
| Assessed Practice (T2) | 980 | 9 to 12 | 98.0 | 3.37 | 3.37 | 4.66 |
| Assessed Practice (T3) | 1008 | 6 to 10 | 100.8 | 3.39 | 3.80 | 4.79 |

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T3 has given higher production as compare to T1 & T2
8. Final recommendation for micro level situation: Application of *Trichoderma* @ 5 kg /ha along with organic manure @500 kg / ha at the time of sowing and second application of *Trichoderma* @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination gave higher yield and lower plant infestation % as compared to T1 and T2.
9. Constraints identified and feedback for research: T3 has given higher production as compare to T1& T2

10. Process of farmers participation and their reaction: From the selected villages of KVK, Rajkot-I, progressive farmers who willing to adopt the new technologies were identified and selected to perform the OFT on their field. During the season guidance provided to them and data collected by the KVK scientist. Farmers are happy and agreed with the result found after completion of the OFT and ready to adopt the technology in whole farm in next season.

OFT-5

1. Title of Technology Assessed: **Performance of drip irrigation with line sowing method in cumin**
2. Problem Definition: Low yield due to sowing method and over irrigation
3. Details of technologies selected for assessment:
T1: Broad casting method without drip irrigation (Farmer's practices)
T2: Line sowing (20 cm) with drip irrigation (Recommended technology)
4. Source of technology: RTTC, JAU, Junagadh
5. Production system and thematic area: Resource Conservation Technology
6. Performance of the Technology with performance indicators:

| Treatments | Source of Technology | 3 rd Year Result | | | Pooled of 3 Years | | |
|------------------------------------|--|-----------------------------|-------------------------------|----------------------------------|--------------------|---------------------|-----------|
| | | Production (kg/ha) | Net Return (Profit) in Rs./ha | B:C Ratio (3 rd Year) | Production (kg/ha) | Net Return (Rs./ha) | B:C Ratio |
| T1 Farmers Practices | RTTC, Junagadh Agricultural University Junagadh | 980 | 180500 | 4.51 | 958 | 175550 | 4.39 |
| T2 Recommended Practices | | 1240 | 234000 | 5.20 | 1180 | 220500 | 4.90 |

Conclusion: Data Collected During Last 3 Years Shows that **T2** Treatment Shows Better Result than **T1**

Rabi, 2023-24 (Third year result)

| No | Name of the farmer | Name of the Village | Yield (kg/ha) | |
|----------------|----------------------------------|-----------------------|---------------|-------------|
| | | | T1 | T2 |
| 1 | Parshotambhai Harjibhai Kagadiya | Kanesara (Ta: Jasdan) | 900 | 1180 |
| 2 | Mansukhbhai Popatbhai Handa | Kanesara (Ta: Jasdan) | 1025 | 1265 |
| 3 | Babubhai Devabhai Ramani | Khorana (Ta: Rajkot) | 1015 | 1275 |
| Average | | | 980 | 1240 |

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Line sowing with drip irrigation gave higher production of cumin as compare to broad casting method with flood irrigation.
8. Final recommendation for micro level situation: Yield can be increased and disease infestation can be reduced with use of drip irrigation in line sowing of cumin.
9. Constraints identified and feedback for research: -
10. Process of farmers participation and their reaction: Low disease infestation and increased yield in line sowing cumin crop with controlled irrigation (i.e. drip irrigation)

OFT-6

1. Title of Technology Assessed: **Chelated mineral mixture, by pass protein and by pass fat for enhancing milk production in dairy buffalo**
2. Problem Definition: Low milk production & infertility problems in dairy cow
3. Details of technologies selected for assessment:
 1. Farmers practices (Control)
 2. Buffalo Fed with 50 gms/day chelated mineral mixture supplementation
 3. Buffalo fed with 50 gms/day chelated mineral mixture, 5 kg by pass protein
 4. Buffalo fed with 50 gms/day chelated mineral mixture, 5 kg by pass protein, 100 gm by pass fat
4. Source of technology: NDRI, Kernal, Hariyana
5. Production system and thematic area: Nutrition Management
6. Performance of the Technology with performance indicators:

| No | Name of the farmer | Name of the Village | Unit | Result | | | |
|----|--------------------------------|---------------------|-----------------------------|--------|-----|------|------|
| | | | | T1 | T2 | T3 | T4 |
| 1 | Jigneshbhai Karsanbhai Kakdiya | Kuvadva | Milk Yield (Lit/day) | 8.0 | 9.8 | 10.9 | 11.8 |
| 2 | Bhupatbhai Narsibhai Kisala | Kuvadva | Milk Fat (%) | 6.6 | 7.1 | 8.0 | 8.9 |
| | | | Estrus after calving (days) | 140 | 118 | 99 | 90 |

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T4 treatment has given higher production as compare to T1, T2& T3
8. Final recommendation for micro level situation: This is second year of trial, final result will be obtained after three-year trial

9. Constraints identified and feedback for research: - Milk Yield, Milk fat can be increased and estrus after calving can be reduced with use of chelated mineral mixture, bypass protein and bypass fat
10. Process of farmers participation and their reaction: This was second year of trial for experimentation and it will be improved and repeated next year.

OFT-7

1. Title of Technology Assessed: **Effect of health management on performance of crossbred cow**
2. Problem Definition: Low milk production & infertility problems in crossbred cow
3. Details of technologies selected for assessment:
 - T1: Farmers practices (Control)
 - T2: Crossbred cow give anthelmintic 10mg/kg body wt
 - T3: Crossbred cow give anthelmintic 10mg/kg body wt + Vaccination FMD & HS
 - T4: Crossbred cow give anthelmintic 10mg/kg body wt + Vaccination FMD & HS + Chelated Mineral Mix 50 gm/day
4. Source of technology: IVRI, Izzatnagar
5. Production system and thematic area: Health Management
6. Performance of the Technology with performance indicators:

| No | Name of the farmer | Name of the Village | Unit | Result | | | |
|----|----------------------------------|---------------------|-----------------------------|--------|------|------|------|
| | | | | T1 | T2 | T3 | T4 |
| 1 | Arjanbhai Narsibhai kisala | Maliyasan | Milk Yield (Lit/day) | 11.9 | 12.8 | 13.9 | 15.6 |
| 2 | Bhaveshbhai Hanshrajbhai Parsana | Sanosara | Milk Fat (%) | 3.8 | 4.2 | 4.9 | 5.3 |
| | | | Estrus after calving (days) | 136 | 121 | 109 | 97 |

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T4 treatment has given higher production as compare to T1, T2& T3
8. Final recommendation for micro level situation: This is first year of trial, final result will be obtained after two-year trial
9. Constraints identified and feedback for research: - Milk Yield, Milk fat can be increased and estrus after calving can be reduced with use of anthelmintic, vaccination of FMD & HS and Chelated Mineral Mixture
10. Process of farmers participation and their reaction: This was first year of trial for experimentation and it will be improved and repeated next year.

3.3. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2024 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 | | |
|-------|---------------------|----------------------|---|---|---------------------------------|-----|-----|
| 1 | Groundnut | ICM | Varietal + INM+IDM + IPM | To test yield potentiality of newly released groundnut variety | 22 | 210 | 230 |
| 2 | Groundnut | ICM | Varietal evaluation+ IDM through Hexaconazole | Management of rust and tikka through spraying of Hexaconazole | 25 | 160 | 125 |
| 3 | Cotton | IPM | IPM through Pheromone Trap | Management of Pink bollworm through Pheromone Trap | 10 | 155 | 100 |
| 4 | Cotton | IPM | IPM through Mating Disruption Paste (MDP) | Management of Pink bollworm through MDP | 10 | 59 | 52 |
| 5 | Chickpea | ICM | Varietal+ INM+IDM+IPM | To test yield potentiality of newly released gram variety | 23 | 203 | 375 |
| 6 | Cumin | ICM | IPM | Bio control in pest management | 10 | 68 | 70 |
| 7 | Cumin | ICM | Line sowing | Management of pest & disease | 12 | 95 | 138 |
| 8 | Seasonal Vegetables | Nutritional Security | Nutritional garden | - | 17 | 95 | - |
| 9 | Pear millet | ICM | Varietal evaluation | To test yield potentiality of newly released variety | 7 | 50 | |
| 10 | Brinjal | ICM | Varietal evaluation | To test yield potentiality of newly released variety | 16 | 35 | 20 |
| 11 | Buffalo | Nutrient Management | Bypass Protein (22%) | Increased milk production | 17 | 40 | - |
| 12 | Buffalo | Nutrient Management | By Pass Fat | Increased milk production | 20 | 49 | - |
| 13 | Cow | Nutrient Management | Chelated Mineral Mixture | Increased milk fat % | 19 | 41 | - |
| 14 | Fodder | Fodder Management | Fodder management | Increased milk production | 18 | 39 | - |

B. Details of FLDs implemented during 2024 (**Kharif 2024, Rabi 2023-24, Summer 2024**) (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

Oilseeds:

| 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 | Groundnut | NRM | Varietal + INM + IDM + IPM | Kharif 2024 | 4.0 | 4.0 | 1 | 9 | 10 | - |
| 2 | Groundnut | ICM | IDM Hexaconazole | Kharif 2024 | 4.0 | 4.0 | 2 | 8 | 10 | - |

Pulses:

| 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 | Chickpea | ICM | Varietal+ INM+IDM+IPM | <i>Rabi</i> 2023-24 | 4.0 | 4.0 | 2 | 8 | 10 | - |

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 | Pearl millet | ICM | Varietal evaluation | Summer 2024 | 2.0 | 2.0 | 1 | 4 | 5 | - |

Vegetable:

| 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 | Brinjal | ICM | Varietal evaluation | <i>Rabi</i> 2023-24 | 4.0 | 4.0 | 1 | 9 | 10 | -- |

Others:

| 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 | ICM | IPM | <i>Rabi</i> 2023-24 | 4.0 | 4.0 | 0 | 10 | 10 | - |
| 2 | Cumin | ICM | Line sowing | <i>Rabi</i> 2023-24 | 2.0 | 2.0 | 0 | 5 | 5 | - |
| 3 | Cotton | IPM | IPM through Pheromone Trap | <i>Kharif</i> 2024 | 4.0 | 4.0 | 0 | 10 | 10 | - |
| 4 | Cotton | I IPM | IPM through MDP | <i>Kharif</i> 2024 | 2.0 | 2.0 | 0 | 5 | 5 | - |

| | | | | | | | | | | |
|---|---------|---------------------|--------------------------|------|---|---|---|----|----|---|
| 5 | Buffalo | Nutrient management | Bypass Protein (22%) | 2024 | - | - | 2 | 18 | 20 | - |
| 6 | Buffalo | Nutrient management | By Pass Fat | 2024 | - | - | 3 | 17 | 20 | - |
| 7 | Cow | Nutrient management | Chelated Mineral Mixture | 2024 | - | - | 2 | 18 | 20 | - |
| 8 | Fodder | Fodder management | Fodder management | - | - | - | 1 | 4 | 5 | - |

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 | <i>Kharif</i> | RF | M. B. | L | M | H | Wheat/ Cumin | 02/7/2024 | 16/10/2024 | 1318.5mm | - |
| Groundnut | <i>Kharif</i> | RF | M. B. | L | M | H | Wheat/ Cumin | 04/7/2024 | 12/10/2024 | 1318.5mm | - |
| Cotton | <i>Kharif</i> | RF | M. B. | L | M | H | Wheat/ Cumin | 03/7/2024 | 10/01/2025 | 1318.5mm | - |
| Brinjal | <i>Rabi</i> | Irrigated | M. B. | L | M | H | G'nut / Cotton | 2/11/2023 | 15/2/2024 | - | - |
| Chickpea | <i>Rabi</i> | Irrigated | M. B. | L | M | H | G'nut / Cotton | 16/11/2023 | 21/2/2024 | - | - |
| Cumin | <i>Rabi</i> | Irrigated | M. B. | L | M | H | G'nut / Cotton | 20/11/2023 | 15/2/2024 | - | - |
| Cumin | <i>Rabi</i> | Irrigated | M. B. | L | M | H | G'nut / Cotton | 16/11/2023 | 21/2/2024 | - | - |
| Pear millet | Summer | Irrigated | M. B. | L | M | H | Chickpea/ Wheat | 15/02/2023 | 25/05/2024 | 1318.5mm | - |

Technical Feedback on the demonstrated technologies

| S. No | Feed Back |
|-------|--|
| 1 | De-topping of cotton gave higher yield as compare to control. |
| 2 | Application of <i>Trichoderma</i> found the most efficient for control of stem rot in groundnut. |
| 3 | Spraying of Hexaconazole found the most efficient for control of tikka disease at later stage in groundnut. |
| 4 | Sawaj pheromone trap for pink bollworm was very effective to control pink bollworm damage. |
| 5 | Cotton (MDP tube): Less infestation of pink bollworm and give higher yield. |
| 6 | Application of <i>Trichoderma</i> reduce wilt disease in cumin. |
| 7 | Balancing dairy ration with Bypass protein gave maximum milk production and Bypass fat increased fat per cent. |
| 8 | Chickpea variety GG-5 is high yielding as well as disease resistant compared to old varieties |
| 9 | Line sowing in cumin crop is very effective to reduce disease infestation |

Farmers' reactions on specific technologies

| S. No | Feed Back |
|-------|--|
| 1. | Yield loss in cotton observed due to late season rainfall in monsoon. |
| 2. | Crop failure of chilli was found in large area due to late season rainfall in monsoon. |
| 3. | Research needed for control of white grub and stem rot in groundnut growing under natural farming. |
| 4. | Heavy infestation of sucking pest in chilli and cotton. |
| 5. | Sowing area of GJG-32 variety of groundnut increased as it is high yielding and resistant to tikka and rust disease. |
| 6. | Sowing area of groundnut increased and reduction in cotton area. |
| 7. | Less Infestation of white grub in groundnut as compared to previous year. |
| 8. | Fresh vegetable available at doorstep and at a time with minimum cost in kitchen gardening |
| 9. | Heavy infestation of white grub in natural farming |
| 10. | Collar rot disease in groundnut in natural farming |
| 11. | Research needed for control of insect-pests and diseases in natural farming |
| 12. | Pink bollworm and para wilt was found in cotton |
| 13. | Wilt disease was found in chickpea |
| 14. | Thrips and wilt were found in cumin crop |

Extension and Training activities under FLD

| Sl. No. | Activity | No. of activities organized | Date | Number of participants | Remarks |
|---------|--------------------------------------|-----------------------------|-------------------|------------------------|---------|
| 1 | Field days | 9 | Jan. to Dec. 2024 | 245 | - |
| 2 | Farmers Training | 7 | | 156 | - |
| 3 | Media coverage | 1 | | - | - |
| 4 | Training for extension functionaries | 2 | | 122 | - |

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops

[illegible]

| | | | | | | | | | | | | | | | | | | |
|-------------|-----|-----------------------------|-------------|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|
| Pear millet | ICM | Varietal (Bio fortified) | GHB 1129 | 5 | 2.0 | 32.00 | 27.00 | 29.50 | 25.25 | 16.83 | 23500 | 77438 | 53938 | 3.30 | 23000 | 66281 | 43281 | 2.88 |
|-------------|-----|-----------------------------|-------------|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|

FLD on Livestock

| Category | Thematic area | Name of the technology demonstrated | No. of Farmer | No.of Units (Animal/ Poultry/ Birds, etc) | Major parameters | | % change in major parameter | Other parameter | | Economics of demonstration (Rs.) | | | | Economics of check (Rs.) | | | |
|----------|---------------------|-------------------------------------|---------------|---|-------------------|-------------------|-----------------------------|-----------------|-------|----------------------------------|--------------|------------|-----------|--------------------------|--------------|------------|-----------|
| | | | | | Demo | Check | | Demo | Check | Gross Cost | Gross Return | Net Return | BCR (R/C) | Gross Cost | Gross Return | Net Return | BCR (R/C) |
| Cattle | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Buffalo | | | | | | | | | | | | | | | | | |
| Buffalo | Nutrient Management | Bypass Protein (22%) | 20 | 20 animals | 1884 kg/lactation | 1676 kg/lactation | 12.41 | | | 38700 | 86800 | 48100 | 2.24 | 36200 | 73700 | 37600 | 2.03 |
| Buffalo | Nutrient Management | By Pass Fat | 20 | 20 animals | 8.0% Fat | 6.9% Fat | 15.94 | | | 36000 | 93530 | 57530 | 2.60 | 31000 | 72600 | 41600 | 2.34 |
| Buffalo | Nutrient Management | Chelated Mineral mixture | 20 | 20 animals | 1659 kg/lactation | 1497 kg/lactation | 10.82 | | | 30900 | 68451 | 37551 | 2.22 | 28600 | 60195 | 31595 | 2.10 |

* 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 Fisheries : Nil

FLD on Other enterprises : Nil

FLD on Women Empowerment : Nil

FLD on Farm Implements and Machinery

Agri-drone demonstration

| Season and year | Village Name | Crop | No. of Demo. at farmer’s field | Area (Acre) | Critical inputs | No. of farmers participated |
|------------------|--------------|----------|--------------------------------|-------------|---|-----------------------------|
| Rabi, 2023-24 | Ranpur | Chickpea | 1 | 1 | Bio-pesticide (i.e. <i>Beauveria bassiana</i>) | 31 Farmers |
| | | Cumin | 1 | 1 | | |
| | Magharwada | Chickpea | 1 | 1 | | 40 Farmers |
| | | Cumin | 1 | 1 | | |

| | | | | | | |
|--------------|--------------|------------|-----------|-----------|-----------|--------------------------------------|
| Kharif, 2024 | Gunda | Chickpea | 2 | 2 | Pesticide | 44 Farmers |
| | Maliyasan | Chickpea | 2 | 2 | | 25 Farmers & 35 Students |
| | Kherdi | Pigeon pea | 1 | 2 | | 28 Farmers |
| | | Chilli | 1 | 2 | | |
| | Hadmatiya | Cotton | 1 | 2 | | 25 Farmers |
| | Total | | 11 | 14 | | 193 Farmers & 35 Students |

Farmers actively participated to see the Agri-drone demonstration and gave positive feedback about agri drone and interested to adopt the technology. The farmers have expressed their consent to spray pesticide using agri drone in their field.

By using agri drone technology, large area can be covered in short period of time as well as uniform spraying can be done and pesticide use efficiently is increased. Pesticide can be easily sprayed in standing crop like, cotton, chickpea, cumin, Pigeon pea, chilli etc.

FLD on Other Enterprise: Kitchen Gardening

| Nutrition garden components | Thematic area | Area (sq mt) | No. of Farmer | No. of Units | Yield (Kg)- supply of vegetables, fruits, etc from KG in the year | | % change in yield | Household size (number) | | Economics of demonstration (Rs./ha) | | | | Economics of check (Rs./ha) | | | |
|-----------------------------|--------------------------------------|--------------|---------------|--------------|---|--------|-------------------|-------------------------|-------|-------------------------------------|-----------------------|------------|-----------|-----------------------------|-----------------------|------------|-----------|
| | | | | | Demonstration | Check* | | Demo | Check | Gross Cost | Gross Return/Savings* | Net Return | BCR (R/C) | Gross Cost | Gross Return/Savings* | Net Return | BCR (R/C) |
| Different vegetables | Nutritive & fresh healthy vegetables | 1000 | 10 | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - |

Farm women reaction

| |
|---|
| -Kitchen gardening gives continues supply of fresh vegetables at lower cost which gives daily nutritious diet |
| -In kitchen gardening farm women are not applying any agrochemicals so they produce organic vegetables |
| -Before demonstration, farm women were growing only three to four vegetable crops in their backyard but after demonstration they said that they will grow different vegetable crops through kitchen gardening in scientific way |
| -They gave extra vegetables to their neighbors |
| -Farm women said that now we will generate income by selling of extra vegetables because now they are aware about precious organic vegetables |
| - Due to kitchen gardening children learned to about plant cognization and bio diversity. |

FLD On Demonstration details on crop hybrids: Nil

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

3.4. Training Programmes (Online programmes if any should be included under On Campus category)

Farmers' Training including sponsored training programmes (on campus)

| Thematic area | No. of courses | Participants | | | | | | | | |
|--|----------------|--------------|------------|------------|-----------|-----------|-----------|-------------|------------|------------|
| | | Others | | | SC/ST | | | Grand Total | | |
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| I Crop Production | | | | | | | | | | |
| Weed Management | 1 | 30 | 10 | 40 | 10 | 5 | 15 | 40 | 15 | 55 |
| Resource Conservation Technologies | 1 | 19 | 0 | 19 | 0 | 0 | 0 | 19 | 0 | 19 |
| Production of organic inputs | 2 | 30 | 6 | 36 | 0 | 0 | 0 | 30 | 6 | 36 |
| Others (pl. specify) | 1 | 15 | 0 | 15 | 0 | 0 | 0 | 15 | 0 | 15 |
| Total | 5 | 94 | 16 | 110 | 10 | 5 | 15 | 104 | 21 | 125 |
| Others (pl specify) | 1 | 20 | 0 | 20 | 0 | 0 | 0 | 20 | 0 | 20 |
| Total (a) | 1 | 20 | 0 | 20 | 0 | 0 | 0 | 20 | 0 | 20 |
| Cultivation of Fruit | 1 | 20 | 1 | 20 | 0 | 0 | 0 | 20 | 1 | 21 |
| Total (b) | 1 | 20 | 1 | 21 | 0 | 0 | 0 | 20 | 1 | 21 |
| Grand Total (a to g) | 2 | 40 | 1 | 41 | 0 | 0 | 0 | 40 | 1 | 41 |
| Dairy Management | 4 | 55 | 32 | 87 | 11 | 4 | 15 | 66 | 36 | 102 |
| Animal Nutrition Management | 2 | 23 | 0 | 23 | 7 | 0 | 7 | 30 | 0 | 30 |
| Disease Management | 2 | 29 | 0 | 29 | 4 | 0 | 4 | 33 | 0 | 33 |
| Feed & fodder technology | 1 | 0 | 16 | 16 | 0 | 5 | 5 | 0 | 21 | 21 |
| Total | 9 | 107 | 48 | 155 | 22 | 9 | 31 | 129 | 57 | 186 |
| V Home Science/Women empowerment | | | | | | | | | | |
| Household food security by kitchen gardening and nutrition gardening | 1 | | 19 | 19 | | 3 | 3 | 0 | 22 | 22 |
| Design and development of low/minimum cost diet | 1 | | 10 | 10 | | | 0 | 0 | 10 | 10 |
| Designing and development for high nutrient efficiency diet | 1 | | 12 | 12 | | | 0 | 0 | 12 | 12 |
| Minimization of nutrient loss in processing | | | | 0 | | | 0 | 0 | 0 | 0 |
| Processing and cooking | 1 | | 25 | 25 | | | 0 | 0 | 25 | 25 |
| Gender mainstreaming through SHGs | | | | 0 | | | 0 | 0 | 0 | 0 |
| Storage loss minimization techniques | | | | 0 | | | 0 | 0 | 0 | 0 |
| Value addition | 1 | | 24 | 24 | | 1 | 1 | 0 | 25 | 25 |
| Women empowerment | | | | 0 | | | 0 | 0 | 0 | 0 |
| Location specific drudgery reduction technologies | 1 | 6 | 10 | 16 | | 2 | 2 | 6 | 12 | 18 |
| Rural Crafts | | | | 0 | | | 0 | 0 | 0 | 0 |
| Women and child care | | | | 0 | | | 0 | 0 | 0 | 0 |
| Others (pl specify) | | | | 0 | | | 0 | 0 | 0 | 0 |
| Total | 6 | 6 | 100 | 106 | 0 | 6 | 6 | 6 | 106 | 112 |
| VI Agril. Engineering | | | | | | | | | | |
| Farm Machinery and its maintenance | 1 | 25 | 0 | 25 | 0 | 0 | 0 | 25 | 0 | 25 |
| Installation and maintenance of micro irrigation systems | 2 | 41 | 0 | 41 | 2 | 0 | 2 | 43 | 0 | 4 |
| Repair and maintenance of farm machinery and implements | 1 | 19 | 4 | 23 | 3 | 0 | 3 | 22 | 4 | 26 |
| Small scale processing and value addition | 1 | 21 | 0 | 21 | 0 | 0 | 0 | 21 | 0 | 21 |
| Post Harvest Technology | 1 | 22 | 0 | 22 | 0 | 0 | 0 | 22 | 0 | 22 |
| Others: Rain water harvesting | 1 | 12 | 0 | 12 | 3 | 0 | 3 | 15 | 0 | 15 |
| Total | 7 | 140 | 4 | 144 | 8 | 0 | 8 | 148 | 4 | 152 |
| VII Plant Protection | | | | | | | | | | |
| Integrated Pest Management | 1 | 15 | 0 | 15 | 0 | 0 | 0 | 15 | 0 | 15 |
| Integrated Disease Management | 1 | 21 | 0 | 21 | 0 | 0 | 0 | 21 | 0 | 21 |
| Bio-control of pests and diseases | 1 | 20 | 0 | 20 | 0 | 0 | 0 | 20 | 0 | 20 |
| Total | 3 | 56 | 0 | 56 | 0 | 0 | 0 | 56 | 0 | 56 |
| GRAND TOTAL | 32 | 443 | 169 | 612 | 40 | 20 | 60 | 483 | 189 | 672 |

Farmers' Training including sponsored training programmes (off campus)

| Thematic area | No. of courses | Participants | | | | | | | | |
|------------------------------------|----------------|--------------|-----------|------------|-----------|----------|-----------|-------------|-----------|------------|
| | | Others | | | SC/ST | | | Grand Total | | |
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| I Crop Production | | | | | | | | | | |
| Weed Management | 1 | 25 | 6 | 31 | 0 | 0 | 0 | 25 | 6 | 31 |
| Resource Conservation Technologies | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Production of organic inputs | 1 | 20 | 0 | 20 | 5 | 0 | 5 | 25 | 0 | 25 |
| Others (pl specify) | 2 | 30 | 5 | 35 | 10 | 4 | 14 | 40 | 9 | 49 |
| Total | 5 | 105 | 11 | 116 | 15 | 4 | 19 | 120 | 15 | 135 |
| Others (pl specify) | 1 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |

| | | | | | | | | | | |
|--|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|------------|
| Total (a) | 1 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| Others (pl specify) | 2 | 43 | 3 | 46 | 0 | 0 | 0 | 43 | 3 | 46 |
| Total (b) | 2 | 43 | 3 | 46 | 0 | 0 | 0 | 43 | 3 | 46 |
| Others (pl specify) | 1 | 23 | 3 | 26 | 0 | 0 | 0 | 23 | 3 | 26 |
| Total (f) | 1 | 23 | 3 | 26 | 0 | 0 | 0 | 23 | 3 | 26 |
| Grand Total (a to g) | 4 | 89 | 6 | 95 | 0 | 0 | 0 | 89 | 6 | 95 |
| Integrated water management | 1 | 30 | 0 | 30 | 5 | 0 | 5 | 35 | 0 | 35 |
| Soil and Water Testing | 1 | 20 | 4 | 24 | 5 | 0 | 5 | 25 | 4 | 29 |
| Total | 2 | 50 | 4 | 54 | 10 | 0 | 10 | 60 | 4 | 64 |
| Dairy Management | 2 | 14 | 15 | 29 | 3 | 6 | 9 | 17 | 21 | 38 |
| Animal Nutrition Management | 2 | 35 | 0 | 35 | 8 | 0 | 8 | 43 | 0 | 43 |
| Disease Management | 2 | 28 | 0 | 28 | 9 | 0 | 9 | 37 | 0 | 37 |
| Total | 6 | 77 | 15 | 92 | 20 | 6 | 26 | 97 | 21 | 118 |
| V Home Science/Women empowerment | | | | | | | | | | |
| Household food security by kitchen gardening and nutrition gardening | 1 | | 14 | 14 | | | 0 | 0 | 14 | 14 |
| Design and development of low/minimum cost diet | 1 | | 30 | 30 | | | 0 | 0 | 30 | 30 |
| Designing and development for high nutrient efficiency diet | | | | 0 | | | 0 | 0 | 0 | 0 |
| Minimization of nutrient loss in processing | | | | 0 | | | 0 | 0 | 0 | 0 |
| Processing and cooking | 1 | | 21 | 21 | | 4 | 4 | 0 | 25 | 25 |
| Gender mainstreaming through SHGs | | | | 0 | | | 0 | 0 | 0 | 0 |
| Storage loss minimization techniques | | | | 0 | | | 0 | 0 | 0 | 0 |
| Value addition | 1 | | 25 | 25 | | | 0 | 0 | 25 | 25 |
| Location specific drudgery reduction technologies | 1 | 4 | 36 | 40 | | 5 | 5 | 4 | 41 | 45 |
| Rural Crafts | 1 | 0 | 11 | 11 | | 4 | 4 | 0 | 15 | 15 |
| Women and child care | 1 | | 23 | 23 | | | 0 | 0 | 23 | 23 |
| Others (pl specify) | | | | 0 | | | 0 | 0 | 0 | 0 |
| Total | 7 | 4 | 160 | 164 | 0 | 13 | 13 | 4 | 173 | 177 |
| VI Agril. Engineering | | | | | | | | | | |
| Farm Machinery and its maintenance | 1 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| Installation and maintenance of micro irrigation systems | 1 | 26 | 0 | 26 | 0 | 0 | 0 | 26 | 0 | 26 |
| Repair and maintenance of farm machinery and implements | 2 | 41 | 0 | 41 | 2 | 0 | 2 | 43 | 0 | 43 |
| Small scale processing and value addition | 1 | 31 | 0 | 31 | 0 | 0 | 0 | 31 | 0 | 31 |
| Post Harvest Technology | 1 | 26 | 5 | 31 | 2 | 0 | 2 | 28 | 5 | 33 |
| Others: Application of Agri-drone in agriculture sector | 2 | 53 | 0 | 53 | 6 | 0 | 6 | 56 | 0 | 59 |
| Total | 8 | 200 | 5 | 205 | 10 | 0 | 10 | 210 | 5 | 215 |
| VII Plant Protection | | | | | | | | | | |
| Integrated Pest Management | 2 | 64 | 4 | 68 | 2 | 0 | 2 | 66 | 4 | 70 |
| Integrated Disease Management | 2 | 44 | 2 | 46 | 2 | 0 | 2 | 46 | 2 | 48 |
| Total | 4 | 108 | 6 | 114 | 2 | 0 | 2 | 110 | 6 | 116 |
| GRAND TOTAL | 36 | 633 | 207 | 840 | 57 | 23 | 80 | 690 | 230 | 920 |

| | | | | | | | | | | |
|--|----------|-----------|-----------|------------|----------|----------|----------|-----------|-----------|------------|
| Production of quality animal products | | | | | | | | | | |
| Dairying | 1 | 28 | 27 | 55 | 2 | 3 | 5 | 30 | 30 | 60 |
| Sheep and goat rearing | | | | | | | | | | |
| Quail farming | | | | | | | | | | |
| Piggery | | | | | | | | | | |
| Rabbit farming | | | | | | | | | | |
| Poultry production | | | | | | | | | | |
| Ornamental fisheries | | | | | | | | | | |
| Composite fish culture | | | | | | | | | | |
| Freshwater prawn culture | | | | | | | | | | |
| Shrimp farming | | | | | | | | | | |
| Pearl culture | | | | | | | | | | |
| Cold water fisheries | | | | | | | | | | |
| Fish harvest and processing technology | | | | | | | | | | |
| Fry and fingerling rearing | | | | | | | | | | |
| Any other (pl. specify) | | | | | | | | | | |
| TOTAL | 3 | 30 | 78 | 108 | 2 | 3 | 5 | 32 | 81 | 113 |

Training programmes for Extension Personnel including sponsored training (on campus)

| Area of training | No. of Courses | No. of Participants | | | | | | | | |
|---|----------------|---------------------|-----------|------------|-----------|----------|-----------|-------------|-----------|------------|
| | | General/ Others | | | SC/ST | | | Grand Total | | |
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Productivity enhancement in field crops | | | | | | | | | | |
| Integrated Pest Management | | | | | | | | | | |
| Integrated Nutrient management | | | | | | | | | | |
| Rejuvenation of old orchards | | | | | | | | | | |
| Protected cultivation technology | | | | | | | | | | |
| Production and use of organic inputs | | | | | | | | | | |
| Care and maintenance of farm machinery and implements | | | | | | | | | | |
| Gender mainstreaming through SHGs | | | | | | | | | | |
| Formation and Management of SHGs | | | | | | | | | | |
| Women and Child care | | | | | | | | | | |
| Low cost and nutrient efficient diet designing | | | | | | | | | | |
| Group Dynamics and farmers organization | | | | | | | | | | |
| Information networking among farmers | | | | | | | | | | |
| Capacity building for ICT application | | | | | | | | | | |
| Management in farm animals | 1 | 0 | 30 | 30 | 0 | 4 | 4 | 0 | 34 | 34 |
| Livestock feed and fodder production | | | | | | | | | | |
| Household food security | | | | | | | | | | |
| Natural Farming | 02 | 90 | 10 | 100 | 20 | 02 | 22 | 110 | 12 | 122 |
| Importance and Efficient use of MIS in agriculture | | | | | | | | | | |
| Any other (Rural Development and Climate Action in the Rural Economy) | 1 | 49 | 6 | 55 | 0 | 0 | 0 | 49 | 6 | 55 |
| TOTAL | 4 | 139 | 46 | 185 | 20 | 6 | 26 | 159 | 52 | 211 |

Training programmes for Extension Personnel including sponsored training (off campus)

| Area of training | No. of Courses | No. of Participants | | | | | | | | |
|---|----------------|---------------------|--------|-------|-------|--------|-------|-------------|--------|-------|
| | | General/ Others | | | SC/ST | | | Grand Total | | |
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Productivity enhancement in field crops | | | | | | | | | | |
| Integrated Pest Management | | | | | | | | | | |
| Integrated Nutrient management | | | | | | | | | | |
| Rejuvenation of old orchards | | | | | | | | | | |
| Protected cultivation technology | | | | | | | | | | |
| Production and use of organic inputs | | | | | | | | | | |
| Care and maintenance of farm machinery and implements | | | | | | | | | | |
| Gender mainstreaming through SHGs | | | | | | | | | | |
| Formation and Management of SHGs | | | | | | | | | | |
| Women and Child care | | | | | | | | | | |
| Low cost and nutrient efficient diet designing | | | | | | | | | | |
| Group Dynamics and farmers organization | | | | | | | | | | |
| Information networking among farmers | | | | | | | | | | |
| Capacity building for ICT application | | | | | | | | | | |
| Management in farm animals | | | | | | | | | | |
| Livestock feed and fodder production | | | | | | | | | | |
| Household food security | 1 | | 24 | 24 | | 3 | 3 | | 27 | 27 |

| | | | | | | | | | | |
|---|----------|------------|-----------|------------|-----------|----------|-----------|------------|------------|------------|
| Others (pl. specify) | | | | | | | | | | |
| Total | 1 | 23 | 0 | 23 | 3 | 0 | 3 | 26 | 0 | 26 |
| Home Science | | | | | | | | | | |
| Household nutritional security | 1 | | 30 | 30 | | | | | 30 | 30 |
| Economic empowerment of women | | | | | | | | | | |
| Drudgery reduction of women | | | | | | | | | | |
| Others (pl. specify) | | | | | | | | | | |
| Total | 1 | | 30 | 30 | | | | | 30 | 30 |
| Agricultural Extension | | | | | | | | | | |
| CapacityBuilding and Group Dynamics | | | | | | | | | | |
| Others (Awareness raising workshop for farmers on “PM-KUSUM Component-A”) | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Total | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| GRAND TOTAL | 9 | 200 | 99 | 299 | 23 | 8 | 31 | 223 | 107 | 330 |

3.5. Extension Programmes

| Activities | No. of programmes | No. of farmers | No. of Extension Personnel | TOTAL |
|---|-------------------|----------------|----------------------------|-------|
| Advisory Services (Other than KMAS) | 945 | 1500 | 5 | 1505 |
| Diagnostic visits | 7 | 52 | 7 | 59 |
| Field Day | 9 | 245 | 5 | 250 |
| Group discussions | 12 | 78 | 0 | 78 |
| Kisan Ghosthi | 3 | 42 | 0 | 42 |
| Film Show | 5 | 236 | 6 | 242 |
| Self -help groups | - | - | - | - |
| Kisan Mela (Participant) | 2 | - | - | - |
| Exhibition | 1 | 393 | 12 | 405 |
| Scientists' visit to farmers field | 17 | 73 | 7 | 80 |
| Plant/animal health camps | 1 | 58 | 3 | 61 |
| Farm Science Club | - | - | - | - |
| Ex-trainees Sammelan | - | - | - | - |
| Farmers' seminar/workshop | 1 | 90 | 6 | 96 |
| Method Demonstrations | 7 | 213 | 3 | 216 |
| Extension Literature Published | 11 | - | - | - |
| PM Kisan Samman Sammelan | 2 | 178 | 1 | 179 |
| Different activities under SHS | 5 | 189 | 0 | 189 |
| Celebration of international women day | 1 | 239 | 5 | 244 |
| Celebration of International Yoga Day | 1 | 31 | 0 | 31 |
| Celebration of 78th Independent day | 1 | 111 | 0 | 111 |
| Celebration of Technology Week and Krishak Swarn Samruddhi Week | 1 | 393 | 4 | 397 |
| Awareness raising workshop for farmers on “PM-KUSUM Component-A” | 1 | 38 | 3 | 41 |
| Celebration of World soil health day | 1 | 30 | 0 | 30 |
| Celebration of Kishan Diwas | 1 | 28 | 0 | 28 |
| Celebration of Poshan Mah | 1 | 67 | 3 | 70 |
| Awareness program under celebration of international year of millets | 8 | 350 | 4 | 354 |
| ICAR team visited at KVK, Targhadia | - | - | - | - |
| Agri-drone Demonstration at farmers field | 11 | 228 | 0 | 228 |
| Rabi Krushi Mahotsav (7 Scientists) | - | - | - | - |
| Participant in Viksit Bharat Sankalp Yatra | 16 | 7478 | 32 | 7510 |
| One day workshop on “Rural Development and climate Action in Rural Economy” collaboration with CEE at KVK, Targhadia | 1 | 90 | 3 | 93 |
| Live telecast programme on release of 109 Climate Resilient and Biofortified Crop Varieties by Hon’ble Prime Minister at KVK, Targhadia | 1 | 60 | 2 | 62 |
| NPSS live screening at KVK | 1 | 56 | 1 | 57 |

Note- Advisory services includes social media, website, telephonic calls etc.

Details of other extension programmes:

| Particulars | Number |
|---|-----------|
| Electronic Media (CD./DVD) | - |
| Extension Literature | 11 |
| Newspaper coverage | 13 |
| Popular articles | - |
| Radio Talks | 12 |
| TV Talks | 1 |
| Animal health camps (Number of animals treated) | 1(58) |
| Social Media (No. of platforms Used) | 7 |
| Others (pl. specify) | - |
| Total | 45 |

3.6 Online activities during year 2024

| S. No. | Activity Type | Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webex etc.) | Title of Program | No. of Programmes | No. of Participants/ Views |
|--------|---|---|-----------------------|-------------------|----------------------------|
| A | Farmers training | - | - | - | - |
| | Total | | | | |
| B | Farmers scientist's interaction programme | Audio conf. | INM & Natural farming | 5 | 302 |
| | Total | | | 5 | 302 |
| C | Farmers seminars | - | - | - | - |
| D | Expert lectures | | | | |
| 1 | | Audio conferencing | Natural farming | 2 | 123 |
| | Total | | | 2 | 123 |
| E | Any other (Pl. specify) | - | - | - | - |
| | Grand Total (A+B+C+D+E) | | | 7 | 425 |

3.7. 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 (Breeder) | GJG-32 | - | 10500 kg Expected | 1795000 | - |
| | Groundnut (Breeder) | GG-35 | - | 6000 kg Expected | 1025000 | - |
| | Groundnut (TF) | GJG-32 | | 5500 kg Expected | 380000 | |

Production of planting materials by the KVK : Nil

Production of Bio-Products : Nil

Production of livestock materials : Nil

4. Literature Developed/Published (with full title, author & reference)

A. KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.):

B. Literature developed/published

| Item | Citation /Title | Authors name | Name & Number |
|---------------------------|---|--|--|
| Research papers/ Abstract | Optimization of Ultrasound-Assisted Microwave Encapsulation of Peanut Oil in Protein-Polysaccharide Complex. | Sachin S. Bhuvra, Navnit K. Dhamsaniya and Gopal V. Marviya | <i>Food Technology and Biotechnology</i> , 62 (1):78-88. https://doi.org/10.17113/ftb.62.01.24.8206 , ISSN:1330-9862 |
| | System-wide analysis of groundnut's salinity resilience: Integrating plant-cell interactions with environmental stress dynamics through cutting-edge transcriptomics. | Meera K. Joshi, Gopal V. Marviya, Feba Jacob, Umesh K. Kandoliya, Priyanka M. Pandya, Ashish G. Vala | <i>Journal of Biotechnology</i> , 394:1-14. |
| | Self-confidence and self-reliance impact of women through self-help group with special reference to Gujarat | H.H. Padsumbia, Dr. J.H. Chaudhry, Sonal V. Baria and D.S. Thakar | International journal of advanced biochemistry research, 2024; 8(12):934-938 |
| | Impact of training programme on livelihood of rural women of Rajkot district | Manvar H.A., Kathiriya J.B., Sanepara D. P. and Hirapara D. S | International Journal of Science, Environment and Technology, Vol. 13, No 5, 2024, 314 – 317 |
| | Field screening of varieties/genotypes against mite infesting okra | R.B. Vadher, D.K. Ravaliya, Gadhiya VC, Thaker JN, P.S. Gorfad and M.K. Kanani | International Journal of Advanced Biochemistry Research 2024: 8(8): 1028-1031 |
| | Farmer's perception of groundnut production technology | P.S. Gorfad, R.B. Vadher, N.B. Jadav, J.V. Chovatia and Dr. JN Thaker | International Journal of Advanced Biochemistry Research 2024: 8(8): 510-511 |
| | Empowerment of Women by Self Help Groups | Manvar H. A. and Rajpura M. R. | SEEG National Seminar- Souvenir, 6-7 January 2024 at Sardarkrushinagar |
| | Awareness and Adoption of Agricultural Drudgery Reducing Tools by Farm Women in Saurashtra Region of Gujarat | Dr. D.S. Thakar, Dr. N. B Jadav, H. H. Padasumbiya | Souvenir-cum-Abstracts 2024, 3 rd International Conference on "Climate-Smart Nutri Sensitive Integrated Farming System for Gender-Equitable Sustainable Agriculture: |
| | Women's Role in Livestock Production and their Impact on Livestock Income | Smt. H.H. Padsumbiya, Dr. J. B. Kathiriya and Dr. D. S. Thakar | |

| | | | |
|---|---|--|--|
| | | | Prospects and Challenges (ICNSFS-2024)” during November 06-08, 2024 at ICAR-Central Institute for Women in Agriculture, Bhubaneswar, Odisha, India |
| Book chapter | Molecular Docking: Advance Bioinformatics strategy for Structure Based Drug Designing, IIP Series, Volume 3, Book 4, Part 2, Chapter 2, Pp. 184-196 | Poojaben M Prajapati, Komal G Lakhani, Bharat Maitreya, G. V. Marviya | Futuristic Trends in Biotechnology, eISBN:978-93-6252-751-6 |
| | Iraq: A Proteomic Approach for Quantification of Protein and Data Analysis, IIP Series, Volume 3, Book 4, Part 2, Chapter 4, Pp. 223-243 | Poojaben M Prajapati, Komal G Lakhani, Bharat Maitreya, G. V. Marviya | Futuristic Trends in Biotechnology, eISBN:978-93-6252-751-6 |
| Technical reports | Monthly, quart, Six monthly and Annual | Junagadh Agri. University | 19 |
| Extension Literature in Vernacur language | Prakrutik krushi calendar -2024 (પ્રાકૃતિક કૃષિ કેલેન્ડર-૨૦૨૪) | Dr. G. V. Marviya, Dr. J. H. Chaudhry, Dr. J. N. Thakar, Dr. M. M. Tajpara, Shri D. P. Sanepara, Smt. H.H. Padsumbiya, Shri S. R. Rathva | 500 copies (3-1-69) |
| | Prakrutik krushima aachchhadan ek chamatkarik parinam _ 2023-24(પ્રાકૃતિક કૃષિમાં આચ્છાદન એક ચમત્કારિક પરિણામ_૨૦૨૩-૨૪) | Dr. J. H. Chaudhry, Dr. G. V. Marviya, Smt. H.H. Padsumbiya, Shri D. P. Sanepara, Dr. M. M. Tajpara, Dr. J. N. Thakar, Shri S. R. Rathva | 1000 copies (3-1-73) |
| | Prakrutik krushima nitrogen, phosphorus ane potash ni agatyata _ 2023-24 (પ્રાકૃતિક કૃષિમાં નાઈટ્રોજન, ફોસ્ફરસ અને પોટાશની અગત્યતા _ ૨૦૨૩-૨૪) | | 1000 copies (3-1-71) |
| | Prakrutik krushini vyakhya ane siddhanto _ 2023-24 (પ્રાકૃતિક કૃષિની વ્યાખ્યા અને સિદ્ધાંતો _ ૨૦૨૩-૨૪) | | 1000 copies (3-1-70) |
| | Prakrutik krushi dwara sakbhajini aadhunik kheta paddhti _ 2023-24 (પ્રાકૃતિક કૃષિ દ્વારા શાકભાજીની આધુનિક ખેતી પદ્ધતિ _ ૨૦૨૩-૨૪) | | 1000 copies (3-1-74) |
| | Prakritik khetinu kalpvruksh: Limdo _ 2023-24 (પ્રાકૃતિક ખેતીનું કલ્પવૃક્ષ: લીમડો_ ૨૦૨૩-૨૪) | | 1000 copies (3-1-72) |
| | Kapasni khetima ek navo abhigam: sankda gale vavetar paddhti _ 2023-24 (કપાસની ખેતીમાં એક નવો અભિગમ: સંકડા ગાળે વાવેતર પદ્ધતિ_ ૨૦૨૩-૨૪) | Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Smt. H. H. Padsumbiya | 1000 copies (3-1-79) |
| | Kapasma aavti jivato ane tenu niyantran _ 2023-24 (કપાસમાં આવતી જીવતો અને તેનું નિયંત્રણ_ ૨૦૨૩-૨૪) | Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Dr. M. M. Tajpara | 1000 copies (3-1-76) |
| | Kapas ni santhi mathi sendriy khatar _ 2023-24 (કપાસની સંઘીમાંથી સેન્દ્રીય ખાતર_ ૨૦૨૩-૨૪) | Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Dr. J. N. Thakar | 1000 copies (3-1-75) |
| | Kapasma gulabi iyalnu sanklit niyantran _ 2023-24 | Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, | 1000 copies (3-1-78) |

| | | | |
|--------|--|---|-------------------------|
| | (કપાસમાં ગુલાબી ઈયળનું સંકલિત નિયંત્રણ ૨૦૨૩-૨૪) | Shri S. R. Rathva | |
| | Kapasna rog ane tenu sanklit niyantran _ 2023-24 (કપાસના રોગ અને તેનું સંકલિત નિયંત્રણ ૨૦૨૩-૨૪) | Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Shri D. P. Sanepara | 1000 copies (3-1-77) |
| Others | | | |

C. Details of Electronic Media Produced

| S. No. | Type of media (CD / VCD / DVD/ Audio-Cassette) | Title of the programme | Number |
|--------|--|------------------------|--------|
| - | - | - | - |

D. Details of Social Media Platforms Created / Used

| S. No. | Type of social media platform | No of events (uploaded video/post/story etc. | Title of social media | Number of Followers/ Subscribers |
|--------|--|--|----------------------------------|----------------------------------|
| 1 | YouTube Channel (no of video uploaded) | - | JAU Junagadh | 41.4 K |
| 2 | Facebook page/ Account (no of Post) | - | Junagadh Agricultural University | 7.6 K |
| 3 | Mobile Apps | - | JAU iKrushi Sanhita | |
| 4 | WhatsApp groups | - | 12 | 1285 |
| 5 | Twitter Account | 12 | @krishi_i94206 | 8 |
| 6 | Any other (Pl. Specify) | - | - | - |

D. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

1. Introducing new horticulture crop (Dragon fruit) in regular cropping system to overcome agricultural challenges and to increase allover agricultural income”

Name: **Ranchhodbhai Gordhanbhai Karsariya**

Village: Ranjitgad, Block: Jasdan, District: Rajkot, State: Gujarat

Mobile No.: +91 7874089404

Age: 56 Year

Education: 7th Standard

Land holding: Total: 1.28 ha (Irrigated: 1.28 ha, Non-irrigated: Nil)

Source of Irrigation: Well-2 No. and Bore-1 No.

Farming Experience: 35 Year

Crops grown:

Kharif: Groundnut (0.8 ha)

Rabi: Wheat (0.4 ha) and Coriander (0.4 ha)

Summer: Nil

Horticulture crop: Dragon Fruit (0.4 ha)

Other horticulture crops: Anola (5 trees) and Sweet Lime/Mousambi (2 trees) since last 2 years and Avocado (20 plants), Mango (70 plants), Lichee (15 plants), Banana (300 plants), Apple (2 plants), Gauva (5 plants), and Custard Apple (5 plants) planted during Jun-2023.

Livestock: 3 Cows (2 Gir and 1 Deshi breed)



Shri Ranchhodbhai Gordhanbhai Karsaria is a progressive farmer residing at Ranjitgad village of Jasdan block of Rajkot district. He is holding very less agricultural land for farming and with these limited sources initially he practiced regularly in his field like other farmers. He actively participated in various programs organized by Krishi Vigyan Kendra, Targhadia (Rajkot) regularly and also visited Junagadh Agricultural University Junagadh. Financial crisis is always a major issue for purchasing various agricultural inputs like seeds, fertilizers, pesticides/insecticides etc. for them. To mitigate or overcome such problems he finally made him

decides to divert from his traditional agricultural practices and to planting a new horticulture crop which was new to those region i.e. "Dragon Fruit".

Before adopting the GAPs, he grows regular major oilseed crop like groundnut in kharif season while wheat and coriander in rabi season, in total 1.28 ha field. During the year he produced average 35.2 Qt/ha groundnut while wheat and coriander @ of 28.8 Qt/ha and 12.37 Qt/ha respectively. With these practices he earned net average of Rs. 2,26,000 per year from his total 1.28 ha land. After adoption of GAPs he planted Dragon fruit plants in 0.40 ha out of total 1.28 ha land and in 0.8 ha land he grow regular kharif and rabi crops as mention earlier and in remaining 0.08 ha he planted other valuable horticulture crops. With these practices he earned net average of Rs. 9,35,000 per year from his total 1.28 ha land in which net Rs. 850000/year from Dragon fruit crops while net Rs. 85000/year from other regular seasonal crops. So, with adopted GAPs he earned net Rs. 7,09,000 per year more from his total 1.28 ha land with compare to previous practices. Moreover, in future he can earn more income from other horticulture crops planted recently. In addition to it he gets cow milk regularly for his family and other byproducts like cow dung and cow urine for his field around the year.

Table-1: Economical evaluation of two agricultural practices

| Crop Pattern | Before GAP | | | | | After GAP | | | | | Income increases after adoption of GAPs (Rs./year) |
|--------------|------------|----------------|--------------------|---------------------------|------------------|-----------|----------------|--------------------|---------------------------|------------------|--|
| | Area (ha) | Quantity (Kg.) | Gross Income (Rs.) | Cost of cultivation (Rs.) | Net Income (Rs.) | Area (ha) | Quantity (Kg.) | Gross Income (Rs.) | Cost of cultivation (Rs.) | Net Income (Rs.) | |
| Groundnut | 1.28 | 3520 | 176000 | 80000 | 96000 | 0.80 | 2200 | 110000 | 80000 | 30000 | 7,09,000 |
| Wheat | 0.64 | 2800 | 140000 | 55000 | 85000 | 0.40 | 1750 | 87500 | 55000 | 32500 | |
| Coriander | 0.64 | 1200 | 60000 | 15000 | 45000 | 0.40 | 750 | 37500 | 15000 | 22500 | |
| Dragon Fruit | - | - | - | - | - | 0.40 | 10000 | 1000000 | 150000 | 850000 | |

Note: Table showing average values of last five years.

Considering environmental benefits of these GAPs due to minimum or no use of chemical fertilizers or insecticides/pesticides, the soil deteriorations can be minimized and soil fertility increase over time period and hence the quality as well as quantity is also increased. According to natural farming theme, various natural preparations like, Jivamrut, Cow dung, Cow urine, Buttermilk etc. use during farming practices along with authentic bio fertilizer and bio pesticides available in market.

After seeing the successful attempts of Dragon fruit farming by Shri Ranchhodhbhai Karsariya, many other farmers of surrounding regions adopted this new practice in their field and currently 10 to 15 farmers are successfully doing of dragon fruit cultivation in about 12 to 15 acres of land.



“Dragon fruit farm” field

2. Natural Farming

Name of Farmer : Jadeja Shaktisinh Vanrajsinh

Village : Khokhari (Ghanshyamgadhi)

Taluka : Paddhari

District : Rajkot (Gujarat)

Education : M.A., B.Ed.



Introduction:

- Mentor in Natural farming & Input Preparation
- Developing Master Trainers at Village level for Natural farming
- Awarded Best ATMA Farmer Award at District Level
- Developed various inputs to control pest and diseases in Farming

Training and guidance of KVK:

- He initiated Organic Farming in 2015 and then converted into Natural Farming in 2017 under the guidance of KVK, Rajkot-1.
- He had started to take training at KVK, after that he created farmers group for Natural Farming and guided them with the support of KVK.
- Under the guidance of KVK, he has participated in trainings and workshops of Natural Farming at State and National Level.

Practices adopted:

- Practiced in-situ crop residue management with zero burning.
- He also using stubble mulch for weed management and moisture conservation.
- Use of digital media tools like WhatsApp, Facebook, Instagram and YouTube for dissemination of information.
- He created WhatsApp group for selling own products directly.
- He adopted the use of Bijamrut as seed treatment, Use of Jivamrut and Ghan Jivamrut as nutrient management, use of Dasparni Ark, Agniastara, Brahmastra, Nimastra as Insect-Pest and Disease management in Natural Farming.

Comparison between Natural Farming and Conventional Farming

| Parameters | Natural Farming (Area in ha) | | Conventional Farming (Area in ha) | |
|--------------------------|---------------------------------|--------------------|--------------------------------------|--------------------|
| | Groundnut (1.62ha) | Wheat (0.81 ha) | Groundnut (1.62ha) | Wheat (0.81 ha) |
| Cost of cultivation (Rs) | 68,000 | 32,500 | 58,000 | 27,500 |
| Production (q) | 34 | 38 | 28 | 35 |
| Gross return (₹) | 1,78,500 | 80750 | 1,19,000 | 61,250 |
| Net return (₹) | 1,10,500 | 48250 | 61,000 | 33,750 |
| B:C ratio | 2.63 | 2.48 | 2.05 | 2.22 |

Benefits and achievements:

- Input Cost Reduction
- Labour Cost Saving
- Time Saving in Farming
- Quality Seed Availability
- Utilized crop residues for mulching.
- Improved Soil Health.
- Created employment.
- Created higher income through value addition of produce.
- Consulted by many farmers for natural farming
- Increased net income with the use of natural fertilizers and insecticides.

Impact of the Technology:

- Benefitted more than 100 farmers in the Rajkot district and provided quality seeds to farmers.
- Formed FPO (Siddhagiri Natural Farmer Producer Company) with 500 members and disseminated information about various technologies through seminars with the help of KVK Scientists.
- Created awareness by participating in kisan melas, kisan club meetings organized by KVK and Department of Agriculture and Farmers Welfare, Gujarat.
- Provided guidance of natural farming to farmers of other states also.



E. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year

- Use of cow urine, butter milk, bajra flour, etc. for insect pest and disease management.
- Use of small or wrinkle seeds of groundnut for sowing purpose.
- Farmers grow maize as a mixed crop in groundnut and inter crop in cotton is best Practices for sucking pest management by attracting the natural enemies.
- Cotton Stalk Shredder
- Tractor mounted sprayer
- Chaff cutter for minimizing the animal fodder waste
- IPM in cotton-Use of Trap crop, Pheromone trap, etc.
- Minimizing the chemical fertilizer and maximizing organic manure.
- Value addition in different agriculture crops like groundnut, guava, onala etc.

F. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

| S. No. | Crop / Enterprise | ITK Practiced | Purpose of ITK |
|--------|--------------------------|--|---|
| 1 | Groundnut | Farmers maintain a set furrow system and apply manure and fertilizers every year in the same furrow. | To get residual effect of manure and fertilizers in succeeding crop |
| | Groundnut | Some farmers near the river bed, apply sand in the set furrow for increasing infiltration rate of the soil | To reduce the water Logging condition in the field |
| | Groundnut | Farmers grow maize as mix crop in groundnut | To increase natural enemies & fodder purpose |
| 2 | Kharif crops | Farmer apply lifesaving supplementary irrigation to the crops during moisture stress condition | For life saving irrigation to minimize the risk of crop failure |
| 3 | Cotton | Farmers grow maize after 3-4 rows of cotton | To increase the natural enemies and fodder purpose |
| 4 | Cotton | After heavy rain, farmer apply irrigation to balance the salt concentration at top of soil | To balance the salt concentration |
| 5 | Livestock (Cow, Buffalo) | Use of salt in cotton seed cake | Increase milk production |
| | | Use of calcium carbonate in water tank | For control of bacterial infection and calcium deficiency |
| | | Use of petrol and diesel in wound | For control of maggot wound |

5.1. Indicate the specific training need analysis tools/methodology followed for

A. Practicing Farmers

- a) Survey
- b) Field survey
- c) Group discussion

B. Rural Youth

- a) Survey
- b) Field survey
- c) Group discussion

C. In-service personnel

- a) Survey
- b) Field survey
- c) Group discussion

5.2. Indicate the methodology for identifying OFTs/FLDs

- For OFT:**
- i) Field level observations
 - ii) Farmer group discussions

- For FLD:**
- i) New variety/technology
 - ii) Poor yield at farmer's level
 - iii) Existing cropping system

5.3. Field activities

- i. Name of villages identified/adopted with block name (from which year) -
- ii. No. of farm families selected per village :
- iii. No. of survey/PRA conducted :
- iv. No. of technologies taken to the adopted villages
- v. Name of the technologies found suitable by the farmers of the adopted villages:
- vi. Impact (production, income, employment, area/technological– horizontal/vertical)
- vii. Constraints if any in the continued application of these improved technologies

6. LINKAGES

A. Functional linkage with different organizations

| Name of organization | Nature of linkage |
|--|--|
| Dy. Director of Agriculture. | Most of the Organizations are members of Scientific Advisory Committee (SAC) of KVK and have linkage with different activities of KVK viz., Training Programme, Khedut Sibir, Farmers Day, Animal treatment Camp, Farmers fair, Film Show, Ex-training meeting and Soil health card etc. |
| Dy. Director of Agril. Extension (FTC) | |
| Dy. Director of Horticulture | |
| Dy. Director of Animal Husbandry | |
| Dy. Director of Social Forestry | |
| Jilla Udhayong Kendra | |
| Milk Co-Operative Society (Gopal Dairy) | |
| Bank of Baroda | |
| National Bank for Agriculture & Rural Development (NABARD) | |
| NHRDF | |
| Doordarshan Kendra | |
| All India Radio | |
| WALMI | |
| District Rural Development Agency (DRDA) | |
| ATMA | |
| GLDC | |
| District Watershed Development Agency (DWDA) | |
| GGRC | |
| Reliance foundation | |
| GSFC, GNFC, IFFCO, KRIBHCO | |
| Center for Environment Education, Jasdan | |

B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

| Name of the scheme | Date/ Month of initiation | Funding agency | Amount (Rs.) |
|---|---------------------------|------------------|--------------|
| Agricultural Technology Information Center (ATIC) | 2004 | Govt. of Gujarat | 16,10,000/- |
| Cluster Frontline Demonstrations on Rabi Pulses under NFSM | 2015-16 | ICAR-New Delhi | - |
| Cluster Frontline Demonstrations on Oilseeds under NFSM (NMOOP) | 2015-16 | ICAR-New Delhi | 4,89,375/- |
| Attracting and Retaining Youth in Agriculture (ARYA) | 2015-16 | ICAR-New Delhi | 2,52,750/- |
| Creation of Seed Hubs for Increasing Indigenous Production of Pulses in India | 2016-17 | ICAR-New Delhi | - |
| Swachhta Action Plan | 2020-21 | ICAR-New Delhi | 11,585/- |
| Out scaling of Natural Farming through KVKs | 2022-23 | ICAR-New Delhi | 31,116/-/- |
| Targeting Technology to agro ecological zones large scale demonstrations of best practices to enhance cotton productivity | 2023-24 | ICAR-New Delhi | 14,39,670/- |

C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

If yes, role of KVK in preparation of SREP of the district?

Coordination activities between KVK and ATMA

| S. No. | Programme | Particulars | No. of programmes attended by KVK staff | No. of programmes Organized by KVK | Other remarks (if any) |
|--------|-----------|---------------|---|------------------------------------|------------------------|
| 01 | Meetings | Staff meeting | 3 | - | - |

| | | | | | |
|-----------|--------------------------------------|--------------------------|---|---|---|
| 02 | Research Projects | | | | - |
| 03 | Training Programmes | Farmer training | 5 | 3 | - |
| 04 | Demonstrations | Technology demonstration | 2 | 2 | |
| 05 | Extension Programmes | | | | |
| | KisanMela | | - | - | - |
| | Technology Week | | 1 | 1 | - |
| | Exposure visit | | - | - | - |
| | Exhibition | | 1 | 1 | |
| | Soil health camps | | - | - | - |
| | Animal Health Campaigns | | - | - | - |
| | Others | | - | - | - |
| 06 | Publications | | | | - |
| | Video Films | | - | - | - |
| | Books | | - | - | - |
| | Books chapter | | - | - | |
| | Extension Literature | | - | - | - |
| | Pamphlets | | - | - | - |
| | Others (Pl. specify) | | - | - | - |
| 07 | Other Activities (Pl.specify) | | | | |
| | Watershed Approach | | - | - | - |
| | Integrated Farm Development | | - | - | |

D. Give details of programmes implemented under National Horticultural Mission : Nil

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Constraints if any |
|--------|-----------|-------------------|---------------------------|--|--------------------|
| | | | | | |

E. Nature of linkage with National Fisheries Development Board : Nil

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Remarks |
|--------|-----------|-------------------|---------------------------|--|---------|
| | | | | | |

F. Details of linkage with RKVY : Nil

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Remarks |
|--------|-----------|-------------------|---------------------------|--|---------|
| | | | | | |

G. Details of linkage with PKVY (Paramparagat Krishi Vikas Yojana) : Nil

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Remarks |
|--------|-----------|-------------------|---------------------------|--|---------|
| | | | | | |

H. Details of linkage with NFSM

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Remarks |
|--------|-----------|-------------------|---------------------------|--|---------|
| | | | | | |

| | | | | | |
|---|--|--|---|---|---|
| 1 | Oilseeds: CFLDs, Training, Agro Advisory and Literature distribute | District Agri. Department , Rajkot | - | - | - |
|---|--|--|---|---|---|

I. Details of linkage with SMAF (Sub-mission on Agroforestry) : Nil

| S. No. | Programme | Nature of linkage | Funds received if any Rs. | Expenditure during the reporting period in Rs. | Remarks |
|--------|-----------|-------------------|---------------------------|--|---------|
| | | | | | |

7. Convergence with other agencies and departments: Yes

8. Innovative Farmers Meet

| Sl.No. | Particulars | Details |
|--------|---|---------|
| | Have you conducted Farm Innovators meet in your district? | No |
| | Brief report in this regard | |

9. Farmers Field School (FFS) : Nil

10.1. Technical Feedback of the farmers about the technologies demonstrated and assessed:

| S. No. | Feed Back |
|--------|--|
| 1 | De-topping of cotton gave higher yield as compare to control. |
| 2 | Application of <i>Trichoderma</i> found the most efficient for control of stem rot in groundnut. |
| 3 | Spraying of Hexaconazole found the most efficient for control of tikka disease at later stage in groundnut. |
| 4 | Sawaj pheromone trap for pink bollworm was very effective to control pink bollworm damage. |
| 5 | Cotton (MDP tube): Less infestation of pink bollworm and give higher yield. |
| 6 | Application of <i>Trichoderma</i> reduce wilt disease in cumin. |
| 7 | Balancing dairy ration with Bypass protein gave maximum milk production and Bypass fat increased fat per cent. |
| 8 | Chickpea variety GG-5 is high yielding as well as disease resistant compared to old varieties |
| 9 | Line sowing in cumin crop is very effective to reduce disease infestation |

10.2. Technical Feedback from the KVK Scientists (Subject wise) to the research institutions/universities:

| S.N. | Feed Back |
|------|--|
| 1 | Yield loss in cotton observed due to late season rainfall in monsoon. |
| 2 | Crop failure of chilli was found in large area due to late season rainfall in monsoon. |
| 3 | Research needed for control of white grub and stem rot in groundnut growing under natural farming. |
| 4 | Heavy infestation of sucking pest in chilli and cotton. |
| 5 | Sowing area of GJG-32 variety of groundnut increased as it is high yielding and resistant to tikka and rust disease. |
| 6 | Sowing area of groundnut increased and reduction in cotton area. |
| 7 | Less Infestation of white grub in groundnut as compared to previous year. |
| 8 | Fresh vegetable available at doorstep and at a time with minimum cost in kitchen gardening |
| 9 | Heavy infestation of white grub in natural farming |
| 10 | Collar rot disease in groundnut in natural farming |
| 11 | Research needed for control of insect-pests and diseases in natural farming |
| 12 | Pink bollworm and para wilt was found in cotton |
| 13 | Wilt disease was found in chickpea |
| 14 | Thrips and wilt were found in cumin crop |

11. Technology Week celebration during 2024: Yes

Period of observing Technology Week: From to 23rd to 27th September 2024

Online / Offline: Offline

Total number of farmers visited: 393

Total number of agencies involved: 5

Number of demonstrations visited by the farmers within KVK campus: 8

Other Details

| Types of Activities | No. of Activities | Number of Farmers | Related crop/livestock technology |
|---|-------------------|-------------------|---|
| Gosthies | - | - | |
| Lectures organized | 13 | 393 | Farm mechanization – A prime need and Importance of value addition in different crop produces, Scientific dairy development Technologies., Horticultural Crops- Importance and futures and Plant protection Technologies in major crops., Natural and Organic Farming |
| Exhibition | 1 | 185 | Agri equipment and demo unit |
| Film show | 2 | 175 | Crop and livestock technology |
| Fair | - | - | - |
| Farm Visit | 2 | 175 | Field and Demo unit visit |
| Diagnostic Practical's | 3 | 25 | Groundnut and chilly |
| Supply of Literature (No.) | - | 300 | Pamphlet of Agriculture and Natural Farming |
| Supply of Seed (q) | - | - | |
| Supply of Planting materials (No.) | - | - | |
| Bio Product supply (Kg) | - | - | |
| Bio Fertilizers (q) | - | - | |
| Supply of fingerlings | - | - | |
| Supply of Livestock specimen (No.) | - | - | |
| Total number of farmers visited the technology week | - | 393 | |

12. Interventions on drought mitigation (if the KVK included in this special programme) : Nil

A. Introduction of alternate crops/varieties

| State | Crops/cultivars | Area (ha) | Number of beneficiaries |
|-------|-----------------|-----------|-------------------------|
| | | | |

B. Major area coverage under alternate crops/varieties

| Crops | Area (ha) | Number of beneficiaries |
|-----------------|-----------|-------------------------|
| Oilseeds | | |
| Pulses | | |
| Cereals | | |
| Vegetable crops | | |
| Tuber crops | | |
| Total | | |

C. Farmers-scientists interaction on livestock management

| State | Livestock components | Number of interactions | No. of participants |
|--------------|----------------------|------------------------|---------------------|
| Total | | | |

D. Animal health camps organized

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

E. Seed distribution in drought hit states (Seed distribution/sold by KVK)

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

F. Large scale adoption of resource conservation technologies

| State | Crops/cultivars and gist of resource conservation technologies introduced | Area (ha) | Number of farmers |
|-------|---|-----------|-------------------|
| Total | | | |

G. Awareness campaign

| State | 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 |
| Total | | | | | | | | | | | | |

13. IMPACT

A. Impact of KVK activities (Not to be restricted for reporting period).

| Name of specific technology/skill transferred | No. of participants | % of adoption | Change in income (Rs.) | |
|--|---------------------|---------------|------------------------|------------------|
| | | | Before (Rs./Unit) | After (Rs./Unit) |
| Improved variety of Cumin (GC-4) | 265 | 85 | 35000 | 52000 |
| Improved variety of Gram (GJG-6) | 198 | 75 | 32500 | 43000 |
| New variety of Groundnut (GJG-32) | 355 | 60 | 45000 | 63000 |
| Wheat variety (GW-496, 366) | 210 | 80 | 32500 | 38000 |
| Use of <i>Trichoderma</i> for the control of stem rot in groundnut | 425 | 75 | 30200 | 35000 |
| Use of mineral mixture in buffalo | 235 | 65 | 39000 | 44000 |

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

B. Cases of large-scale adoption

- Adoption of *Trichoderma* for the management of stem rot disease in groundnut.
- Adoption of *Bt.* cotton varieties with INM and IPM concepts.
- Farmers prefer to sow high yielding variety of groundnut i.e. semi spreading variety GG-20 & GJG-22 and bunch variety GJG-32.
- Most of the farmers adopt variety of cumin (GC-4) which is resistant to wilt disease
- Intercropping/mix cropping in groundnut and cotton was adopted for minimize the risk factor in dry land agriculture with preservation of natural enemies.
- Farmers prefer to sow bold seeded variety of chickpea GJG-3
- Farmers are ready to use of rotavator/ cotton shredder/ mobile chopper for increasing the organic matter in soil particularly in *Bt.* Cotton cropping system

C. Details of impact analysis of KVK activities carried out during the reporting period

14. Kisan Mobile Advisory Services

| Month | No. of SMS sent | No. of farmers to which SMS was sent | No. of feedback / query on SMS sent |
|------------|-----------------|--------------------------------------|-------------------------------------|
| Jan 2024 | 0 | 0 | 0 |
| Feb 2024 | 0 | 0 | 0 |
| March 2024 | 0 | 0 | 0 |
| April 2024 | 0 | 0 | 0 |
| May 2024 | 0 | 0 | 0 |
| Jun 2024 | 0 | 0 | 0 |
| Jul 2024 | 0 | 0 | 0 |
| Aug 2024 | 0 | 0 | 0 |
| Sept 2024 | 0 | 0 | 0 |

C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.): Nil

| Sl. No. | Bio Products | Name of the Product | Qty (kg/lit) | Amount (Rs.) | | Remarks |
|---------|------------------|---------------------|--------------|----------------|--------------|---------|
| | | | | Cost of inputs | Gross income | |
| | Bio- Fertilizers | | | | | |
| | Bio- Fungicides | | | | | |
| | Bio- pesticides | | | | | |
| | Bio-Agents | | | | | |

D. Performance of instructional farm (livestock and fisheries production) : Nil

| Sl. No | Name of the animal / bird / aquatics | Details of production | | | Amount (Rs.) | | Remarks |
|--------|--------------------------------------|-----------------------|-----------------|------|----------------|--------------|---------|
| | | Breed | Type of Produce | Qty. | Cost of inputs | Gross income | |
| | | | | | | | |

E. Utilization of hostel facilities

Accommodation available (No. of beds):

| Months | No. of trainees stayed | Trainee days (days stayed) | Reason for short fall (if any) |
|----------------|------------------------|----------------------------|--------------------------------|
| January 2024 | - | - | - |
| February 2024 | - | - | - |
| March 2024 | - | - | - |
| April 2024 | - | - | - |
| May 2024 | - | - | - |
| June 2024 | - | - | - |
| July 2024 | - | - | - |
| August 2024 | - | - | - |
| September 2024 | - | - | - |
| October 2024 | - | - | - |
| November 2024 | - | - | - |
| December 2024 | - | - | - |

F. Database management

| S. No | Database target | Database created |
|-------|-----------------|------------------|
| | | |

G. Details on Rain Water Harvesting Structure and micro-irrigation system

| Amount sanction (Rs.) | Expenditure (Rs.) | Details of infrastructure created / micro irrigation system etc. | Activities conducted | | | | | Quantity of water harvested in '000 litres | Area irrigated / utilization pattern |
|-----------------------|-------------------|--|----------------------------|------------------------|---------------------------------|------------------------|--------------------------|--|--------------------------------------|
| | | | No. of Training programmes | No. of Demonstration s | No. of plant materials produced | Visit by farmers (No.) | Visit by officials (No.) | | |
| - | - | - | 3 | 3 | - | 215 | 2 | - | 2.00 |

H. Performance of Nutritional Garden at KVK farm

If Nutritional Garden developed at KVK farm/Village Level? Yes

If yes,

Nutritional Garden developed at KVK farm

| Area under nutritional garden (ha) | Component of Nutritional Garden | No. of species / plants in nutritional garden | No. of farmers visited |
|------------------------------------|---------------------------------|---|------------------------|
| 0.1 | Vegetable crops | 10 | 332 |
| | Fruit crops | 3 | |
| | Others if any | 3 | |

Nutritional Garden developed at Village Level (Area under nutritional garden)

| No. of Villages covered | Component of Nutritional Garden | No. of species / plants in nutritional garden | No. of farmers covered |
|-------------------------|---------------------------------|---|------------------------|
| 10 | Vegetable crops | 15 | 10 |
| | Fruit crops | 3 | |
| | Others if any | - | |

H. Details of Skill Development Trainings organized : Nil

| S.No. | Name of KVKs/SAUs/ICAR Institutes | Name of QP/Job role | Duration (hrs) | No. of participants | | | | | |
|-------|-----------------------------------|---------------------|----------------|---------------------|--------|--------|--------|-------|--------|
| | | | | SCs/STs | | Others | | Total | |
| | | | | Male | Female | Male | Female | Male | Female |
| | | | | | | | | | |

17. FINANCIAL PERFORMANCE**A. Details of KVK Bank accounts**

| Bank account | Name of the bank | Location | Branch code | Account Name | Account Number | MICR Number | IFSC Number |
|---------------------|------------------|----------|-------------|---------------------------------------|----------------|-------------|-------------|
| With Host Institute | SBI | Junagadh | | | | | |
| With KVK | SBI | Rajkot | 463 | TRAINING ORG.KVK.JAU. TARGHADIA | 10353003175 | 360002002 | SBIN0000463 |

B. Utilization of KVK funds during the year 2024-25 (Rs. in lakh) (Till Feb. 2025)

| S. No. | Particulars | Sanctioned | Released | Expenditure |
|---------------------------------------|--|------------|---------------|---------------|
| A. Recurring Contingencies | | | | |
| 1 | Pay & Allowances | | 165.16 | 160.58 |
| 2 | Traveling allowances | | | |
| 3 | Contingencies | | 10.90 | 10.24 |
| A | Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines) | | | |
| B | POL, repair of vehicles, tractor and Equipments | | | |
| C | Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained) | | | |
| D | Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training) | | | |
| E | Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year) | | | |
| F | On farm testing (on need based, location specific and newly generated information in the major production systems of the area) | | | |
| G | Training of extension functionaries | | | |
| H | Maintenance of buildings | | | |
| I | Establishment of Soil, Plant & Water Testing Laboratory | | | |
| J | Library | | | |
| | TOTAL (A) | | 10.90 | 10.24 |
| B. Non-Recurring Contingencies | | | | |
| 1 | Works | | | |
| 2 | Equipments including SWTL & Furniture | | | |
| 3 | Vehicle (Four wheeler/Two wheeler, please specify) | | | |
| 4 | Library (Purchase of assets like books & journals) | | | |
| | TOTAL (B) | | | |
| C. REVOLVING FUND | | | | |
| | GRAND TOTAL (A+B+C) | | 176.06 | 170.82 |

C. Status of revolving fund (Rs.) for the Five years

| Year | Opening balance as on 1 st April | Income during the year | Expenditure during the year | Net balance in hand as on 1 st April of each year |
|---------------------------|---|------------------------|-----------------------------|--|
| April 2020 to March 2021 | 26,54,648 | 23,54,367 | 17,89,147 | 32,19,868 |
| April 2021 to March, 2022 | 32,19,868 | 19,58,910 | 22,27,738 | 29,51,040 |
| April 2022 to March 2023 | 29,51,040 | 23,75,522 | 14,39,322 | 38,87,240 |
| April 2023 to March 2024 | 38,87,240 | 11,45,605 | 23,95,052 | 26,37,793 |
| April 2024 to Feb. 2025 | 26,37,793 | 6,30,329 | 13,93,569 | 18,74,553 |

17. Details of HRD activities attended by KVK staff during year

| Name of the staff | Designation | Title of the training programme | Institute were attended | Mode (Online/Offline) | Dates |
|--|-------------------------------------|--|-----------------------------|-----------------------|---------------|
| Dr. G. V. Marviya | Senior Sci. & Head | ARYA Annual Workshop-2024 | Gaya, Bihar, India | Offline | 22/23-02-2024 |
| Dr. J.N.Thaker Dr. M. M. Tajpara Dr. J. H. Chaudhary | Scientist | Training on "Research Methodology in Social Science and Management Skills" | DEE, JAU, Junagadh | Offline | 19/21-03-2024 |
| Dr. J. H. Chaudhary | Scientist | Regional Consultation on Natural Farming | Pune, Maharashtra, India | Offline | 16-05-2024 |
| Dr. G. V. Marviya | Senior Scientist and Head | Annual Action Plan Workshop on KVKs of Gujarat & Goa | AAU, Anand | Offline | 16-17/05/2024 |
| Smt. Hetal H. Padsumbiya Shri D. P. Sanepara Dr. M. M. Tajpara | Scientist | Training on "HRD Skill Enhancement and Up-gradation for Peak Performance" | DEE, JAU, Junagadh | Offline | 15-18/07/2024 |
| Dr. G. V. Marviya Dr. J. H. Chaudhary | Senior Sci. & Head Scientist | Training on "Digital Transformation in Agriculture: Strategies for Technology Transfer Excellence" | DEE, JAU, Junagadh | Offline | 18-20/07/2024 |
| Dr. J. H. Chaudhary | Scientist | Prakrutik Krushi Karyshala at Gandhinagar | Gandhinagar, Gujarat, India | Offline | 07/08/2024 |
| Dr. G. V. Marviya Dr. J. H. Chaudhary Shri D. P. Sanepara | Senior Scientist and Head Scientist | Annual Zonal Workshop-2024 of KVKs of ZoneVIII | JAU, Junagadh | Offline | 04/06-09-2024 |
| Smt. Hetal H. Padsumbiya | Scientist | National seminar on Innovations and Solutions for Global Sustainability: Breaking the Barriers in Home Science and Empowering the Change - Vision 2030 | Hariyana | Online | 13-11-2024 |

18. Details of progress in Doubling Farmers Income (DFI) villages adopted by KVKs : Nil**19. Details of activities planned under NARI /PKVY / TSP / KKA, etc. : Nil**

20. Details of Progress of ARYA Project

| Name of Enterprise | No of Training Conducted | No of Beneficiaries | No of Extension Activities | No of Beneficiaries | No of Unit established | Change in income | | No. Of Groups Formed |
|------------------------|--------------------------|---------------------|----------------------------|---------------------|------------------------|------------------|-------|----------------------|
| | | | | | | Before | After | |
| PHT and Value addition | 2 | 44 | - | - | - | - | - | - |
| Nursery management | 1 | 23 | - | - | - | - | - | - |

21. Details of SAP

| S. No. | Types of major Activity conducted- Swachhta Pakhwada, Cleaning, Awareness Workshop, Microbial based Agricultural Waste Management by Vermicomposting etc. | No. of Programmes conducted | No. of Participants |
|--------|---|-----------------------------|---------------------|
| 1 | Sapath taking and lunching of Swachh monitoring system by KVK staff, Cleaning and Sweeping of entire office premises / cleaning of KVK campus, Swachhta Awareness at local level, Cleaning and beautification of surrounding areas, Vermicomposting/Composting of biodegradable waste management& other activities on generate of wealth for waste. | 5 | 189 |

| Sr. No | Name of KVK | Date | Activity | No of VIPs | No of Farmers | Others | Total |
|--------|-------------|------------|---|------------|---------------|--------|-------|
| 1 | Rajkot-I | 23-09-2024 | Sapath taking by KVK staff, Cleaning and Sweeping of entire office premises / cleaning of KVK campus, Swachhta Awareness at local level, Cleaning and beautification of surrounding areas, vermicomposting /Composting of biodegradable waste management& other activities on generate of wealth for waste. | - | 35 | | |
| 2 | | 25-09-2024 | | - | 26 | | |
| 3 | | 27-09-2024 | | - | 47 | | |
| 4 | | Oct.2024 | | - | 57 | | |
| 5 | | Nov.2024 | | - | 24 | | |

21. Books published 2023-24: Nil

| Title of the Book | Authors | ISBN No (Optional) / Pages No | Description/review of the book (one paragraph/sentence) |
|-------------------|---------|-------------------------------|---|
| | | | |

22.. Please include any other important and relevant information which has not been reflected above (write in detail).

APR SUMMARY

1. Training Programmes

| Clientele | No. of Courses | Male | Female | Total participants |
|-------------------------|----------------|-------------|------------|--------------------|
| Farmers & farm women | 68 | 1173 | 419 | 1592 |
| Rural youths | 3 | 32 | 81 | 113 |
| Extension functionaries | 5 | 159 | 79 | 238 |
| Sponsored Training | 9 | 223 | 107 | 330 |
| Vocational Training | 0 | 0 | 0 | 0 |
| Total | 85 | 1587 | 686 | 2273 |

2. Frontline demonstrations

| Crops/Enterprise | No. of Farmers | Area(ha) | Units/Animals |
|-----------------------|----------------|-----------|---------------|
| Oilseeds | 20 | 8 | - |
| Pulses | 10 | 4 | - |
| Cereals | - | - | - |
| Vegetables | 10 | 4 | - |
| Other crops | 35 | 14 | - |
| Hybrid crops | - | - | - |
| Total | 75 | 30 | - |
| Livestock & Fisheries | 65 | - | 60 |
| Other enterprises | 21 | 14 | - |
| Total | 86 | 14 | 60 |
| Grand Total | 161 | 44 | 60 |

3. Technology Assessment & Refinement

| Category | No. of Technology Assessed & Refined | No. of Trials | No. of Farmers |
|----------------------------|--------------------------------------|---------------|----------------|
| Technology Assessed | | | |
| Crops | 1 | 3 | 3 |
| Livestock | | | |
| Various enterprises | | | |
| Total | 1 | 3 | 3 |
| Technology Refined | | | |
| Crops | 4 | 10 | 10 |
| Livestock | 2 | 4 | 4 |
| Various enterprises | | | |
| Total | 6 | 14 | 14 |
| Grand Total | 7 | 17 | 17 |

4. Extension Programmes

| Category | No. of Programmes | Total Participants |
|----------------------------|-------------------|--------------------|
| Extension activities | 1074 | 12658 |
| Other extension activities | 45 | 102 |
| Total | 1119 | 12760 |

5. Mobile Advisory Services

| Name of KVK | Message Type | Type of Messages | | | | | | Total |
|-------------|---------------------------------|------------------|-----------|---------|-----------|-------------|------------------|-------|
| | | Crop | Livestock | Weather | Marketing | Awar e-ness | Other enterprise | |
| Rajkot-I | Text only | - | - | - | - | - | - | - |
| | Voice only | - | - | - | - | - | - | - |
| | Voice & Text both | - | - | - | - | - | - | - |
| | Total Messages | - | - | - | - | - | - | - |
| | Total farmers Benefitted | - | - | - | - | - | - | - |

6. Seed & Planting Material Production

| | Quintal/Number | Value (Rs.) |
|----------------------------|----------------|-------------|
| Seed (q) | 220.0 | - |
| Planting material (No.) | - | - |
| Bio-Products (kg) | - | - |
| Livestock Production (No.) | - | - |
| Fishery production (No.) | - | - |

7. Soil, water & plant Analysis

| Samples | No. of Beneficiaries | Value (Rs.) |
|--------------|----------------------|-------------|
| Soil | 93 | - |
| Water | 93 | - |
| Plant | - | - |
| Total | 186 | - |

8. HRD and Publications

| Sr. No. | Category | Number |
|---------|-----------------------------|--------|
| 1 | Abstract | 3 |
| 2 | Workshops | 5 |
| 3 | Conferences | - |
| 4 | Meetings | 5 |
| 5 | Trainings for KVK officials | 10 |
| 6 | Visits of KVK officials | - |
| 7 | Book published | - |
| 8 | Training Manual | - |
| 9 | Book chapters | 2 |
| 10 | Booklet | - |
| 11 | Leaflets/ Folder/ Pamphlet | 11 |
| 12 | Research papers | 6 |
| 13 | Technical Bulletin | 9 |
| 14 | Popular article | - |
| 15 | Lead papers | - |
| 16 | Seminar papers/Seminar | 1 |
| 17 | Extension folder | - |
| 18 | Proceedings | 1 |
| 19 | Award & recognition | - |
| 20 | On-going research projects | 1 |
| 21 | Other | - |