## 5. TAMIL NADU AGRICULTURAL UNIVERSITY

## PONNAIYAR UPTO KRISHNAGIRI SUB BASIN - TNAU COMPONENT

### 5.1 About the centre

The Regional Research Station, Paiyur is the implementing centre which was started in the year 1973. It is catering to the needs of rainfed farming community of the North Western zone. So for, 15 varieties have been evolved and released in the crops namely, paddy (Paiyur 1), ragi (Paiyur 1), samai (Paiyur 1& 2), sorghum Paiyur (1& 2), green gram (Paiyur 1), cow pea (Paiyur 1), horse gram (Paiyur 1& 2), sesame (Paiyur 1), niger (Paiyur 1), cotton (Paiyur 1), tomato (Paiyur 1) and mango (Paiyur 1). Besides the varieties, the crop management technologies released are found to be of importance in improving the productivity levels. Also, this station is producing and supplying large quantities of seeds of paddy, tomato, moringa, gourds, bhendi, mango grafts, guava layers and bio-inoculants namely, *Azospirillum*, *Azotobactor*, *Rhizobium*, *PSB*, *Trichoderma*, *Psuedomonas* and vermicompost. Various training programmes are offered to farmers, extension officials and other beneficiaries in the fields of agriculture, horticulture and allied enterprises.

### 5.2. About sub basin

This sub basin contains one reservoir, 12 anaicut systems and 6 non system tanks (PWD tanks). The total ayacut area works out to 4481.53 ha.

**Cropping pattern of the sub basin**

| S. No | Block | Existing | | | Proposed | | |
|---|---|---|---|---|---|---|---|
| | | I st season | 2nd season | 3rd season | I st season | 2nd season | 3rd season |
| 1. | Hosur, Kelamangalam Shoolagiri | Paddy | Paddy | - | Paddy<br>Paddy<br>Ragi | Ragi<br>Pulse<br>Pulse/Ragi | Vegetables<br>Vegetables<br>Vegetables /flowers |
| | | Vegetables / Flowers | Vegetables / Flowers | Vegetables / Flowers | Vegetables / Flowers | Vegetables / Flowers | Vegetables / Flowers |
| 2. | Veppanapalli | Vegetables | Vegetables | Vegetables | Vegetables/ Flowers | Vegetables/ Flowers | Vegetables / Flowers |
| 3. | Krishnagiri | Paddy | Paddy | - | Paddy<br>Paddy | Ragi<br>Pulse | Vegetables<br>Vegetables |

### 5.3 Soil type

Soil type varies from sandy to sandy loam, clay and clayey loam which can be grouped under inceptisol, alfisol and vertisol.

**Cropping Area in hectares**

| Season | Crops | Pre project | | | | Post project | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | FI | PI | GAP | Total | FI | PI | GAP | Total |
| Annual crop | Coconut | 69 | | | 69 | 69 | | | 69 |
| | Banana | 38 | | | 38 | 300 | | | 300 |
| | Mango | 36 | | | 36 | 150 | | | 150 |
| | Fodder | | | | | 100 | | | 100 |
| Crop I Sep-Jan | Paddy | 790 | 800 | | 1590 | 1470 | | | 1470 |
| | Ragi | 225 | 200 | | 425 | 1075 | | | 1075 |
| | Vegetables | 150 | | | 150 | 617 | | | 617 |
| | Flower | | | | | 700 | | | 700 |
| | Total | 1308 | | | | 4481 | | | 4481 |
| | | 2308 | | 2173 | 4481 | 100% | | | |
| Crop II | Paddy | | | | | 400 | | | 400 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Feb-May | Ragi | | 120 | | 120 | 730 | | | 730 |
| | Vegetables | | 55 | | 55 | 200 | | | 200 |
| | Flowers | | | | | 300 | | | 300 |
| Crop II Jun-Sep | Vegetables | | | | | 100 | | | 100 |
| Total | | 2308 | 175 | | 2483 | 1730 | | | 1730 |
| | | Pre project Gap area: 2173.38 | | | | Post Project Gap Area : NIL | | | |

## 5.4 Existing important constraints in farming and plans for rectifying it

**Constraints identified:**

- Poor soil health
- Lack of timely availability of water
- Non availability of quality seeds
- Depleted water table
- Scarce labour availability
- Low productivity and income
- Lack of marketing facilities

### 5.4.1. Specific issues

- Non adoption of water saving technologies in crop production
- Unbalanced and over use of inorganic inputs namely fertilizers and pesticides
- Lack of diversification and intensification
- Low level of income

### 5.4.2 Counter measures proposed

- Adopting water saving technologies like SRI and drip/ Micro irrigation method in crop production
- Emphasizing for balanced application of inputs through soil testing and crop requirements
- Implementing crop intensification with better management of all the inputs
- Diversification with less water requiring and more income generating crops

### 5.4.3. Introduction of labour saving implements.

- Using chisel plough for sub soil hard pan breaking
- Promoting the use of rotavator for pulverizing the soil into fine tilth
- Promoting the use of broad bed furrow former for wide spaced annual crops

### 5.4.4 Plan for crop diversification, crop introduction and crop intensification

- Diversification Cultivating flowers and vegetables in the place of paddy or in the gap area Intensification
- Promoting System of Rice Intensification
- Promoting improved ragi cultivation practices

### 5.4.5 Plan for introducing non-monetary inputs to increase the productivity.

- Promoting the use of labeled seeds for sowing
- Emphasizing soil test based nutrition
- Recommending temporal cultivation practices
- Demonstrating integrated pest, disease and weed management practices
- Equipping for clean harvest procedures

### 5.5 Cluster Development

Based on the clusters promoted by Department of Agriculture & Horticulture following activities are being implemented.

| Name of cluster | Activity | Remarks |
|---|---|---|
| Tattaganapalli | Improved production technology for ragi<br>System of Rice Intensification | Demonstration of ragi production technology<br>Water use efficiency in SRI will be estimated |
| Moranapalli | Improved production technology for ragi<br>System of Rice Intensification | Demonstration of ragi production technology<br>Water use efficiency in SRI will be estimated |
| Thorapalli | Improved production technology for ragi<br>System of Rice Intensification | Demonstration of ragi production technology<br>Water use efficiency in SRI will be estimated |
| Chennathur | Improved production technology for ragi<br>System of Rice Intensification<br>Precision farming in vegetables | Demonstration of ragi production technology<br>Water use efficiency in SRI will be estimated<br>Input management under precision farming will be demonstrated |
| Kamandoddi | Improved production technology for ragi<br>System of Rice Intensification<br>Precision farming in vegetables<br>Precision farming in flowers | Demonstration of ragi production technology<br>Water use efficiency in SRI will be estimated<br>Input management under precision farming will be demonstrated |
| Nalaganakothapalli | Precision farming in vegetables<br>Precision farming in TC banana | Input management under precision farming will be demonstrated |
| Koneripalli | Precision farming in TC banana<br>Precision farming in vegetables | Input management under precision farming will be demonstrated |
| Alapatti | Improved production technology for ragi<br>System of Rice Intensification | Input management under precision farming will be demonstrated |
| Ballampalli | Precision farming in flowers | Input management under precision farming will be demonstrated |
| Alekotta | Precision farming in flowers | Input management under precision farming will be demonstrated |

* In all over the Basin water use efficiency in SRI will be estimated.

## 5.6. DETAILS OF ACTIVITIES
## 5.6.1. FIELD ACTIVITIES

### 5.6.1. 1.System of Rice Intensification

**Justification**

One of the very high water requiring crop per unit of produce is rice. Being the staple food for millions of Indian population, enhancing the productivity by saving irrigation water is possible through SRI. In SRI, the merits are namely much reduced seed rate- there by reduction in seed cost, low water application through alternate wetting and drying in the initial phases, cono weeder operation for weed trampling with less labour, square planting for higher tiller number and higher productivity. So, SRI can help to increase water and crop productivity with higher net income.

| S.No | Technology | Cost of input (Rs.) | Total area (ha) | Budget (lakh) |
|---|---|---|---|---|
| 1 | SRI | 6000 | 10 | 0.60 |

**Justification for the unit cost of SRI**

| S. No | Particulars | Amount(Rs.) |
|---|---|---|
| 1 | Seed cost 8kg/ha @ Rs. 25 /kg | 200.00 |
| | Cost of nursery raising | 500.00 |
| | Cost of fertilizers (150:50:50 kg NPK / ha) | 0 |
| | Urea - 330 kg @ Rs. 5 / kg | 1650.00 |
| | Super Phosphate - 315 kg @ Rs. 4 /kg | 1260.00 |
| | Muriate of Potash – 80kg @ Rs.5/ kg | 400.00 |
| | $ZnSO_4$ 25 kg @ Rs. 35 / kg | 875.00 |
| | Cost of Bio fertilizer (Azospirillum and Phospho bacteria @ 10 pockets each) | 120.00 |
| | Pseudomononas 2.5 kg / ha @ Rs. 100 /kg | 250.00 |
| | Bio pesticides | 745.00 |
| | **Total** | 6000.00 |

### 5.6.1. 2. Precision farming in vegetables/ tissue culture banana/ flowers

| Technology | Area (ha) | Budget Rs/ha | Total cost (in lakhs) |
|---|---|---|---|
| Precision farming in vegetables | 40 | 65000 | 26.00 |
| Precision farming in TC banana | 25 | 72400 | 18.10 |
| Precision farming in flowers | 20 | 46760 | 9.35 |

**Justification for vegetables**

The quantum jump in water, crop and fertilizer productivity can help the farmer to save precious water, cost on fertilizer and increase the margin of profit. Besides, the uniformity of the produce results in lesser wastage during sorting and grading. This can help the farmer for getting higher farm gate price. According to the choice of the beneficiary farmer any vegetable crop namely, cabbage, cauliflower, carrot, beans, beet root, chilly, tomato and etc., can be demonstrated under drip fertigation method.

**Justification for the unit cost**

| S.No | Particulars | | Amount (Rs) |
|---|---|---|---|
| **1** | **Drip cost as per the Govt. norms** | **:** | **28800** |
| **2** | **Cultivation charges as per the NHM norms** | **:** | **15000** |
| | Seed / Seedlings | | 6000 |
| | Organic manures | | 4500 |
| | Bio inoculants / bio fertilizer | | 1500 |

| | | | |
|---|---|---|---|
| | Plant protection inputs | | 3000 |
| 3 | Water soluble fertilizers | | 0 |
| | 19:19:19 - 100 kg x Rs.58 | : | 5800 |
| | 12:61:0 - 50 kg x Rs.64 | : | 3200 |
| | 13:0:45 - 244 kg x Rs.50 | : | 12200 |
| | **Grand total** | | **65000** |

**5.6.1. 3. Justification for Tissue Culture Banana**

The sucker raised banana crop will not be uniform in yield, maturity and will have the possibility of having disease or insect infestation. These ill effects can readily be overcome by going in for tissue culture seedlings which are disease free and come to maturity uniformly with higher yield. The low water productivity with deep trench cultivation or basin irrigation can be improved tremendously with drip irrigation. Weed menace in the inter space and fertilizer efficiency can also be improved with fertigation techniques. Of all, labour cost can be saved for irrigation, weeding, fertilizer application with much reduced number of harvests. Marketability of both vegetables and banana is easier in the basin because of nearness to the huge consumer population of Bangalore, existence of SAFAL at Bangalore and many more direct corporate procurement centres at Hosur.

**Justification for the unit cost**

| S.No | **Particulars** | | **Amount (Rs)** |
|---|---|---|---|
| 1 | Drip cost as per the Govt. norms | : | 26400 |
| 2 | Cultivation charges as per the NHM norms | : | |
| | TC Banana seedlings 2500 Nos./ha @ Rs.10/No. | | 25000 |
| 3 | Water soluble fertilizers | | 0 |
| | Urea - 600 kg x Rs.5 | | 3000 |
| | 0:0:50 - 473 kg x Rs.38 | | 18000 |
| | **Grand total** | | **72400** |

**5.6.1.4. Justification for flowers**

The climatic condition of this sub basin enables the farmer to choose from a wide range of flowers to cultivate in open field condition. The options available are rose, marigold, asters, golden rod, chrysanthemum, blue and star daisies, limoenium and so on. Similar to vegetables the quality and productivity are higher with enhanced keeping quality also. The surplus water and income can help the farmers for area expansion and still more high-tech avenues. The special economic zone status in flowers of this zone makes the farmers easy for marketing tie up with TANFLORA, Hosur or agencies at Bangalore.

**Justification for the unit cost**

| **S.No** | **Particulars** | | **Amount (Rs)** |
|---|---|---|---|
| **1** | **Drip cost as per the Govt. norms** | **:** | **28800** |
| **2** | **Cultivation charges as per the NHM norms** | **:** | **12000** |
| | Planting material | | 9600 |
| | Bio inoculants / bio fertilizers | | 2400 |
| **3** | Water soluble fertilizers | | |
| | 13:0:45 – 25 kg x 50 | | 1250 |
| | 12:61:0 – 25 kg x 64 | | 1600 |
| | 19:19:19 – 50 x 58 | | 2900 |
| | Urea – 42 kg @ Rs.5/kg | | 210 |
| | **Sub total** | | **5960** |
| | **Grand total** | | **46760** |

### 5.6.1.5. Introduction of high value Capsicum in open field cultivation

| Technology | Area(ha) | Budget Rs/ha | Total cost (in laksh) |
|---|---|---|---|
| Capsicum – open field cultivation | 5 | 100000 | 5.00 |

**Justification**

The high end specialty corporate retail stores in metropolitan cities and two tier cities seems to find momentum with consumer tastes. Where in high cost vegetables and fruits are readily sold out in no time. One among the best crop is capsicum. The versatile use in any food preparation makes a larger consumer base. Though the cost of cultivation is high, the net profit is also better. This basin because of climate and soil, can well suit to cultivate Capsicum in open fields also during October to February months.

**Justification for the unit cost of Capsicum cultivation**

| S.No. | Particulars | Amount (Rs). |
|---|---|---|
| 1. | Cost of drip system (50% of the drip system cost) | 28800.00 |
| 2. | Cost of seeds / seedlings | 21000.00 |
| 3. | Cost of fertilizers (250:150:150 – recommended) | 0 |
| 4. | Urea – 500kg @ Rs. 5/kg | 2500.00 |
| 5. | Super phosphate 475kg @ Rs. 4/kg | 1900.00 |
| | 19: 19 : 19 – 100 kg @ Rs.58 /kg | 5800.00 |
| 6. | 13 :0 : 45 -100 kg @ Rs. 50/kg | 5000.00 |
| a. | 12 :61 :0 – 25 kg @ Rs. 64/kg | 1600.00 |
| b. | 0 : 0: 50- 300 kg @ Rs. 38/kg | 11400.00 |
| c. | Pesticides and bio – inoculants | 5000.00 |
| | Organic manures (Vermi compost) | 10000.00 |
| | Bio inputs / Bio fertilizer | 3000.00 |
| | Plant protection chemicals | 4000.00 |
| | Total | **100000.00** |

### 5.6.2. Model village with organic farming

**Justification**

Increased cropping intensity without crop rotation and organics coupled with imbalanced and over use of inorganic fertilizers and pesticides had already caused deleterious effect on soil fertility and environment. To show cause the farmers on the merits of maintaining the soil health for the betterment of crop bio environment, model village on organic use can help.

| Technology | Area (ha) | Unit cost (Rs/ha) | Total cost (in lakhs) |
|---|---|---|---|
| Model village and organic farming with farm waste recycling units | 20 | 5000 | 1.00 |

### 5.7. IEC Measures

### 5.7.1. Field days

| | | | |
|---|---|---|---|
| 1 | Field days | 30 No. | Rs. 90000/- |

### 5.7.2. Awareness creation activities

- Organizing informal meeting in sub basin village
- IAMWARM days.
- Printing pamphlets about the scheme.
- Tea shop / bus stop boards
- Message in AIR / local cable TV

- Wall paintings

**5.7. 3. On farm demonstration and skill development**

Under this activity imparting training to all the beneficiaries either as off campus or as on campus is planned

| Component | No. of batches (50 farmers / batch) | Cost / batch | Total cost in lakhs |
|---|---|---|---|
| SRI training to Farmers | 2 | 10000 | 0.20 |
| SRI training to Laborers | 2 | 10000 | 0.20 |
| Banana precision farming | 3 | 10000 | 0.30 |
| Vegetables precision farming | 4 | 10000 | 0.40 |
| High value capsicum cultivation | 3 | 10000 | 0.30 |
| Flowers precision farming | 3 | 10000 | 0.30 |
| Organic farming | 2 | 10000 | 0.20 |
| Rice fallow pulse production technology | 1 | 10000 | 0.10 |
| Total | | | 2.00 |

**Training**

- Titles for training are identified based on the interventions.

**Guidelines for organizing training programme**

- Number of farmers should be 40 -50 per batch
- Training should cover scheme objectives (10%) and technology (90%) – (30% theory) and (60% practical)
- Providing training bags / kits should be avoided
- More importance to be given for transfer of technologies by providing training manual
- Off campus training to be encouraged
- Number of trainings per technology should match with the activity proposed and impact area targeted.
- For each training one copy of report with details (No. of participants, contents delivered, practical classes) with photograph should be sent to Nodal Officer.

Budget provisions for **off campus training**

No. of participants : 50 Nos.

| S.No. | Particulars | Amount (Rs.) |
|---|---|---|
| 1 | Training materials (Note pad / pen and manual) Rs. 60/No. | 3000.00 |
| 2 | Refreshment charges (Intersession tea 2 times + one lunch @ Rs. 50/No.) | 2500.00 |
| 3 | Honorarium for 4 lectures / day Rs.250/No. | 1000.00 |
| 4 | Travel expenses of resource person Rs.200/No. | 800.00 |
| 5 | Miscellaneous (Hall rent / photograph/ documentation) | 1200.00 |
| | LCD | 1500.00 |
| | Total | 10000.00 |

Budget provisions for **on campus training**

No. of participants : 50 / Batch.

| S.No. | Particulars | Amount(Rs.) |
|---|---|---|
| 1 | Training materials (Note pad / pen and manual) Rs. 40/No. | 2000.00 |
| 2 | Refreshment charges (Intersession tea 2 times + one lunch @ Rs. 75/No.) | 3750.00 |

| | | |
|---|---|---|
| 3 | Honorarium for 4 lectures / day Rs.250/No. | 1000.00 |
| 4 | Transport of farmers (Vehicle hire charges) @ Rs.100/No. | 5000.00 |
| 5 | Miscellaneous (Hall rent / photograph/ documentation) | 1250.00 |
| | Total | *13000.00 |

* If LCD is used by outsourcing an amount of Rs.1500/day could be added.

**5.7.4. Capacity building**

Under the head of capacity building, an amount Rs. 3.00 lakhs was added to give training and exposure visits to the farmers

**Exposure visit**

Places identified for Exposure visit

| | |
|---|---|
| Precision farming | PAP Palar – Aliyar sub basin , Dharmapuri / Krishnagiri |

**Guidelines for organizing exposure visit**

**General**

- Exposure visit to cover number of technologies
- Preferably to the farmers field
- Utilize private buses by calling quotations
- Number of participants (40 – 45 farmers + 5 SRF) per trip
- Lodging should be arranged preferably in TNAU station
- A detailed report for each exposure visit (Places covered, technologies learnt, feed back) with photograph.
- It is preferable to organize more one day trips.
- Prior approval should be obtained to organize exposure visit indicating places to be covered, purpose, tentative split up budget.

**Budget for exposure visit (One day)**

| S.No. | Particulars | Amount (Rs.) |
|---|---|---|
| 1 | Actual rental charges of vehicles | |
| 2 | Refreshment charges for one day @ Rs. 100/No. | 5000.00 |
| 3 | Miscellaneous (Banner / photograph/ documentation/ Note/pen) | 2000.00 |

**Budget for exposure visit (Two days)**

| S.No. | Particulars | Amount (Rs.) |
|---|---|---|
| 1 | Actual rental charges of vehicles | |
| 2 | Refreshment charges for 2 days @ Rs. 200/No. | 10000.00 |
| 3 | Miscellaneous (Banner / photograph/ documentation/ Note/pen) | 2000.00 |

**5.8. Outsourcing of technical staff**

Outsourcing of technical staff is included in TNAU sub basin plan to carry out the field activities. Outsourcing staff has to cover the demo area in addition he / she should cover 200 – 250 hectares per year impact area or as zone of influence in the sub basin. The detailed job chart is as follows.

**Project Activity – Project Mode and Mission Mode**

**Pre implementation activity**

**Organize awareness campaign**

- Informal meetings with Farmers / Water Users Association through PRA methods – Focus group discussion and transect walk
- Ensure Transparency

- Explain about the scheme – organization objectives, activities, project contribution and farmers share
- Emphasis the role of stake holders in the project
- Project the expected benefit

**Publicity and Propaganda**

- Printing of pamphlets / Media and Boards
- Organize Street plays

**Identification and selection of Beneficiary**

- Discussion with Water Users Association / any Informal groups
- Willing to pay the farmers share
- Willing to provide Memorandum of Understanding to participate in the project at least for 3 years

**Selection of area**

- Select area contiguously
- Concentrate in one location in a year
- Select another area in next year

**Empowerment of stake holder**

- Organize cluster with Farmers Interested Group (FIG)
- Cluster for each activity (SRI / Precision farming)
- A cluster should have 35 beneficiaries (10% may be Non beneficiaries also)
- Facilitate interaction among the members to decide the nature of inputs they need – schedule of operation
- Encourage periodical meeting in between clusters

**Sustainability of clusters**

- Link each cluster with local Non Governmental Organization
- Form bylaws for each cluster and practice Non agricultural activity (Thrift)
- Identify income generation activities for each cluster preferably agri based (eg) Vermi compost, seedling production, Mushroom cultivation, value addition.

**Capacity Building**

- Provide hands on training to each cluster
- Explain in details - Do's and Don't
- Arrange exposure visit to show the success of techno logy

**Implementation stage**

- Formulate calendar of operations month wise for each stakeholder (Field preparation to harvest)
- Arrange all the critical inputs (seeds/bio inoculants/implements/fertilizers/ chemicals
- Implement the technology with stakeholder participation
- Arrange informal gathering of all villagers to show the technology at different stages in field level (eg. In SRI - At Nursery / Transplanting / Mechanical weeding)
- Record the observation on crop, soil, water and economics
- Maintain proper field sanitation (Free from Pest / Diseases)
- Supply nutrient and water under proper supervision
- Fix up field boards to indicate the technology

**Organizing field days at Harvest**

- Involve all the members
- Provide the yield statistics by actual harvest in the presence of farmer
- Involve all the line department officials
- Organize informal exhibition at field on the field by depicting all the activities to achieve the productivity
- Involve local press people to give wide publicity

**Post Implementation Stage**

- Analyze the collected data
- Document all the activities related to each stakeholder
- Organize awareness campaign for next season
- Engage the beneficiary as spokesman for technology transfer
- Finalize II year activities
- Prepare the activity chart month wise
- Work out the input requirement
- Finalize the budget requirement
- Evaluate the first year activities based on the achievements of physical and financial target
- Make necessary modification based on farmers feed back
- Provide market linkage for better price
- Utilize the services of Agri Business and Farm Advisory Cell
- Record on soil health

**Project Activity - Seed Village**

- Delineate the area with the test crop (Identified in the sub basin plan)
- Organize clusters with the farmers
- Sensitize the need of quality seeds
- Replace the farmers seed with quality certified or TFL seeds
- Maintain field sanitation
- Adopt Rogue spacing
- Train the farmers to remove off types
- Harvest Thrashing / Cleaning
- Storing in fresh gunnies
- Create market linkage to the farmers to sell the seeds
- Make the farmer as seed entrepreneur.
- Initiate action to organize seed village in subsequent years

**Project Activity – Model Village with Organic Farming**

- Delineation of area in a compact block (or) select area in a adopted village of KVK
- Finalise the available components at village level for organic farming
- Provide market linkage
- Arrange market linkage with organic growers association / NGO
- In addition to that it was mutually agreed that the outsourcing technical staff will be utilized for the formation of WUA in sub basins.

**Maintenance of records and registers**

- Field note for each activity
- Daily memorandum sheet
- Receipt and issue of inputs
- Technical observations on soil, water and crop

**5.9. Outsourcing of vehicle**

- Expenditure on TA /DA for the purpose of TN-IAMWARM Project
- Fuel bill of university vehicle utilized for the project
- Hire charges of university vehicle utilized for this purpose

**YEAR WISE ACTIVITY (HA)**

| Activity | I | II | III |
|---|---|---|---|
| System of Rice Intensification | 10 | - | - |
| Rice fallow pulse | 10 | - | - |
| Precision farming in vegetables | 15 | 15 | 10 |
| Precision farming in TC banana | 10 | 10 | 5 |
| Precision farming in flowers | 10 | 5 | 5 |
| Introduction of high value Capsicum in open field cultivation | 5 | - | |

**ADOPTION RATE YEAR WISE (HA)**

| Activity | I | II | III |
|---|---|---|---|
| System of Rice Intensification | 70 | -- | -- |
| Rice fallow pulse | 70 | - | - |
| Precision farming in vegetables | 75 | 75 | 50 |
| Precision farming in TC banana | 50 | 50 | 25 |
| Precision farming in flowers | 50 | 25 | 25 |
| Introduction of high value Capsicum in open field cultivation | 25 | - | - |

**YEAR WISE BUDGET FOR PONNAIYAR (UPTO KRISHNAGIRI) SUB BASIN**

P - Physical in ha  F - Finance in lakhs

| Sl No | Particulars | I year | | II year | | III Year | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F |
| **B** | **Mission mode** | | | | | | | | |
| 1 | System of Rice Intensification | 10 | 0.60 | | | | | 10 | 0.60 |
| 2 | Rice fallow pulse production technology | 10 | 0.15 | | | | | 10 | 0.15 |
| 3 | Precision farming in vegetables | 15 | 9.75 | 15 | 9.75 | 10 | 6.5 | 40 | 26.00 |
| 4 | Precision farming in flowers | 10 | 4.68 | 5 | 2.34 | 5 | 2.34 | 20 | 9.35 |
| 5 | Precision farming in banana | 10 | 7.24 | 10 | 7.24 | 5 | 3.62 | 25 | 18.10 |
| 6 | Introduction of high value capscicum | 5 | 5 | | | | | 5 | 5.00 |
| C | Model village and organic farming | 20 | 1.00 | | | | | 20 | 1.00 |
| **C** | Implements for farm mechanization | | | | | | | 0 | 0.00 |
| | SRI rotary weeder | 50 | 0.18 | | | | | 50 | 0.18 |
| | Row marker | 2 | 0.02 | | | | | 2 | 0.02 |
| | Chisel plough | 1 | 0.07 | 1 | 0.07 | | | 2 | 0.14 |
| | Rotovator | 1 | 0.90 | 1 | 0.90 | | | 2 | 1.80 |
| | Broad bed furrow former | 1 | 0.12 | 1 | 0.12 | | | 2 | 0.24 |
| **D** | **IEC measures** | | | | | | | | |
| | Field days | 10 | 0.3 | 10 | 0.3 | 10 | 0.3 | 30 | 0.90 |
| | Awareness creation activities | | 0.5 | | 0.5 | | | | 1.00 |
| | Documentation & reporting charges | | 0.2 | | 0.2 | | 0.2 | | 0.60 |
| | Information, Education & Communication (IEC) charges | | 2.00 | | | | | | 2.00 |
| | On farm demonstration & skill development of farmers | 8 | 0.80 | 8 | 0.80 | 4 | 0.4 | 20 | 2.00 |
| | Outsourcing charges on vehicles | | 0.60 | | 0.60 | | 0.60 | | 1.80 |
| **E** | **Capacity building to farmers** | | 1.00 | | 1.00 | | 1.00 | | 3.00 |
| **F** | **Management cost** | | | | | | | | |
| | Outsourcing of technical staff | | 3.42 | 2 | 2.40 | 2 | 2.40 | 4 | 8.22 |
| | **Sub total** | | **38.53** | | **26.22** | | **17.36** | | **82.10** |
| | Institutional charges | | 2.89 | | 1.97 | | 1.30 | | 6.16 |
| | **Sub total** | | **41.42** | | **28.18** | | **18.66** | | **88.26** |
| | 1 % incentive | | 0.44 | | 0.28 | | 0.19 | | 0.88 |
| | **Grand total** | | **41.86** | | **28.47** | | **18.85** | | **89.14** |

**TOTAL BUDGET FOR PONNAIYAR (UPTO KRISHNAGIRI) SUB BASIN**

P - Physical in ha  F - Finance in lakhs

| Sl No | Particulars | Total | |
|---|---|---|---|
| | | P | F |
| **A** | **Mission mode** | | |
| 1 | System of Rice Intensification | 10 | 0.60 |
| 2 | Rice fallow pulse production technology | 10 | 0.15 |
| 3 | Precision farming in vegetables | 40 | 26.00 |
| 4 | Precision farming in flowers | 20 | 9.35 |
| 5 | Precision farming in banana | 25 | 18.10 |
| 6 | Introduction of high value capscicum | 5 | 5.00 |
| B | Model village and organic farming | 20 | 1.00 |
| **C** | Implements for farm mechanization | 0 | 0.00 |
| | SRI rotary weeder | 50 | 0.18 |
| | Row marker | 2 | 0.02 |
| | Chisel plough | 2 | 0.14 |
| | Rotovator | 2 | 1.80 |
| | Broad bed furrow former | 2 | 0.24 |
| **D** | **IEC measures** | | |
| | Field days | 30 | 0.90 |
| | Awareness creation activities | | 1.00 |
| | Documentation & reporting charges | | 0.60 |
| | Information, Education & Communication (IEC) charges | | 2.00 |
| | On farm demonstration & skill development of farmers | 20 | 2.00 |
| | Outsourcing charges on vehicles | | 1.80 |
| **E** | **Capacity building to farmers** | | 3.00 |
| **F** | **Management cost** | | |
| | Outsourcing of technical staff | 4 | 8.22 |
| | **Sub total** | | **82.10** |
| | Institutional charges | | 6.16 |
| | **Sub total** | | **88.26** |
| | 1 % incentive | | 0.88 |
| | **Grand total** | | **89.14** |

**Nodal Officer (TN-IAMWARM)**
**& Director (WTC)**
**Water Technology Centre**
**TNAU, Coimbatore**