

ANNUAL PLAN 2019-20
WRITE UP OF PLAN PROGRAMME

SECTORAL PROGRAMME - DETAILS OF SCHEMES
AGRICULTURE AND ALLIED SECTORS

STATE PLAN SCHEME

Crop Development

1) Food Crop Production (Outlay: ₹ 16725.00 lakh)

The food crop production project contains four schemes, viz, Rice Development, Development and promotion of Location specific crops, Vegetable Development and Development of Pulses and Tubers.

A reorientation of the project focusing on convergence, additional resources, new components and institutional development linking with Haritha Keralam was proposed for implementation in 13th plan. An amount of ₹167.25 crore is provided for the scheme during 2019-20. It is envisaged that atleast 33 percent of beneficiaries of the project will be women.

i)	Rice Development	Head of Account : 2401-00-102-90
		Outlay : Rs. 9085.00 lakhs

In the rice development scheme major thrust is given for the promotion of fallow land cultivation and group based paddy promotion concentrated in the major rice growing tracts of the State under seven Special Agriculture Zones with natural endowments for augmenting rice productivity. The ultimate objective would be to increase the area under rice to 3.00 lakh Ha by the end of 13th five year plan. An outlay of ₹90.85 crore is provided during 2019-20.

An amount of ₹6500.00 lakh is provided for providing input assistance under sustainable rice development component. Out of this outlay, an amount of ₹200.00 lakh is earmarked for Thrissur kole lands, ₹400.00 lakh for Palakkad district and ₹100.00 lakh for Pokkali Padasekharams. The support of input assistance will be linked to quality seeds, organic inputs, certification and bio control agents.

An amount of ₹300.00 lakh is set apart for promoting group farming activities of the active Padasekharasamithies. The amount will be released to Padasekhara samithies based on a transparent criterion for promoting group farming and facilitating e-payment system. The padasekharams will be revitalized and encouraged to set up rice mills. Good Agricultural Practices (GAP) certification assistance will also be provided to padasekharams.

An amount of ₹150.00 lakh is set apart to provide operational support to paddy development agencies in a project based manner.

The comprehensive approach for continuing the three year support as approved in 2016-17 will be extended to this year also for fallow land cultivation with adequate convergence and hand holding. For this an amount of ₹1200.00 lakh is provided. Rice fallows will be brought under sustainable cultivation in a phased manner in project mode with the active involvement and convergence of Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) Kudumbasree and the LSGD institutions. The assistance to farmers will be based on a panchayat level list of beneficiaries prepared under the supervision of a team headed by Agricultural Officers, in consultation with LSGD institutions. The possibility of cultivating double crop from single cropped paddy lands and triple crop from double cropped lands will be explored in potential areas to increase the gross cultivated area.

Considering the scope, Upland cultivation will be expanded for which an amount of ₹ 375.00 lakh is set apart. Here also for necessary infrastructure creation, hand holding of LSGD institutions and MNREGS will be ensured. Support for group formation of upland cultivators and fallow land cultivators will be provided. An year wise database of fallow land cultivated including area under cultivation, management practices followed, yield per hectare will be maintained at each *Krishibhavan* and Panchayat.

In order to ensure the availability of certified seeds suitable to the locality Registered Seed Growers' Programme (RSGP)/Seed Village Programme (SVP) will be continued. An amount of ₹125.00 lakh is provided for this. A list of RSGs will be maintained as a database.

Project based support for infrastructure development in Padhasekharams for reviving paddy cultivation will be implemented this year. An allocation of ₹50.00 lakh is provided.

Rice mills and parboiling units to undertake local processing, packing, branding and marketing of rice and rice products including mini rice mills and special mini rice mills to process speciality rice varieties are also proposed to be established through *padasekhara samithies*/co-operatives/NGOs/FPOs and farmer entrepreneurs under Rashtriya Krishi Vikas Yojana (RKVY) programme. Support will also be provided for certification. An amount of ₹70.00 lakh is earmarked for this.

The research system in the state had developed many flood and drought tolerant varieties. However, for regions including Kuttanad, these varieties need to be popularized among farmers. To facilitate this, trial plots for flood and drought tolerant varieties will be established in various rice growing tracts of Kerala including Kuttanad. An amount of ₹25.00 lakh is provided for this.

An amount of ₹20.00 lakh is provided for operational support. The component wise breakup of the scheme is shown below:

Sl. No.	Components	Amount (₹ in lakh)	
		Annual Plan	Green Book
1	Sustainable Rice Development	6500.00	5800.00
2	Support to Paddy development agencies	150.00	
3	Promotion of specialty rice (₹10000/ha)	120.00	120.00
4	Operational support to padasekharasamithies for group farming	300.00	300.00
5	Operationalisation of paddy and Wet land Act 2008	50.00	50.00
6	Promotion of upland paddy	375.00	375.00
7	Promotion of fallow land cultivation	1200.00	1200.00
8	Support for converting single crop to double crop	100.00	
9	Registered Seed Growers Programme/Seed village programme	125.00	125.00
10	Project Based support for infrastructure development in Padhasekharams for reviving paddy cultivation including block level convergence (New)	50.00	
11	Mini rice mills for local processing including special varieties of rice and support for packing (New)	70.00	
12	Trial plots for flood and drought tolerant varieties (New)	25.00	
13	Operational support	20.00	
	Total	9085.00	7970.00

ii)	Development and promotion of Location specific crops	Head of Account : 2401-00-103-75
		Outlay : Rs. 350.00 lakhs

In order to promote the cultivation of millets like ragi, foxtail millet, little millet etc., oil seeds crops like ground nut and sesamum and sugarcane in potential areas, assistance is provided for procurement of quality seeds and for land preparation, irrigation and other cultivation requirements. It is proposed to promote crop production activities in tribal lands so as to ensure food and nutritional security to tribal population focusing on activities including conservation of traditional varieties and traditional cultivation practices. Activities will be taken up on a project mode in coordination with ST department. An amount of ₹ 105.00 lakh is earmarked for tribal agriculture during 2019-20. Project based assistance will also be provided to tribal

projects in Palakkad and Wayanad districts to be taken up on a collaborative mode with reputed projects/ programmes for which ₹10.00 lakh is provided.

A special project for Attappady will be supported covering traditional crops from production to marketing. Promotion of millets in other areas is also proposed. The assistance will also be utilised for the establishment of modern production units of jaggery for the promotion of *Travancore jaggery*, *Marayursarkara* etc. Funds will also be utilized for obtaining GI registration for location specific varieties. Incubation centres and common facility centres will be set up in tie up with Indian Institute of Millet Research (IIMR), Hyderabad and other ICAR /reputed research institutions for promoting value addition. An amount of ₹ 350.00 lakh is set apart for the project.

The component wise breakup of the scheme is shown below:

Sl. No.	Components	Amount (₹ in lakh)
1	Development of Location specific crops- millets, oil seeds, sugarcane	350.00
	Total	350.00

iii)	Vegetable Development	Head of Account : 2401-00-119-85
		Outlay : Rs.6390.00 lakhs
		Head of Account : 2401-00-119-81
		Outlay : Rs.700.00 lakhs

The government has taken a number of initiatives to promote vegetable production in the state in a safe-to-eat manner to make the state self sufficient in the sector. The activities include promotion of homestead and terrace vegetable cultivation through urban clusters and waste management through supply of grow bags, vegetable seed production & distribution, supply of vegetable seedlings, promotion of institutional vegetable gardens, rain shelter cultivation, support to Block Level Federated Organizations and Farmer Producer Organisations, development support to graded clusters, promotion of micro irrigation with fertigation, productivity enhancement programmes, marketing and promotion of high tech farming. An amount of ₹70.90 crore is set apart for vegetable development programme during 2019-20. Out of this an amount of ₹ 63.90crore is earmarked for the activities through Agriculture department.

An amount of ₹700.00 lakh is set apart for the promotion of vegetable cultivation through VFPCCK in selected districts. Out of ₹700.00 lakh to VFPCCK, an amount of ₹ 400.00 lakh is set apart for the promotion of vegetable cultivation and

increasing production and productivity. Subsidy based cultivation of vegetables are not envisaged through VFPCCK.

Out of ₹ 850.00 lakh earmarked for urban clusters ₹75.00 lakh is set apart for waste management in urban clusters using tested and sustainable models in vermicompost and bio waste utilisation linked to vegetable production in corporation areas and ₹150.00 lakh will be utilized for continued support to already established clusters with seedlings and biocontrol agents. Grow bags produced through agro service centres and kudumbasree will also be supported. Urban vegetable cultivation will be institutionalized by the formation of Haritha groups. An amount of ₹25.00 lakh is set apart for Institutionalization of urban vegetable growers into registered 'Haritha Groups' providing technical support and marketing through *harithamitra* facilities under Residence associations in corporation/municipal areas. Haritha fund will be provided to Haritha groups federated from Residence associations at ward level in corporation areas. The local government will be actively brought into this activity.

The vegetable clusters established will be further graded based on the performance covering group activities, increase in production and productivity, innovative activities, leadership, technology application and cluster dynamics. The best clusters will be graded as A grade clusters and special development support will be for those clusters covering support for establishing nurseries, collection centres, pre cooling centres, input centres and other need based project based support. Best performing A grade clusters with two years experience will be given additional assistance based on volume of business. A separate performance criteria for best performing A grade clusters will be developed. ₹30.00 lakh is earmarked additionally for such clusters.

The cluster based development is the key component in the vegetable development initiative of the state. An amount of ₹2440.00 lakh is set apart for cluster development in districts and another ₹315.00 lakh for the support of graded clusters. Poor performing clusters will be delinked from support and new clusters will be formed. Transparent criteria will be developed for evaluating performance of clusters. The assistance will be limited to ₹15000 per hectare. The 5 ha upper limit of clusters will be relaxed and eligible assistance will be given to the area cultivated by the clusters on a pro rata basis. Staggered clusters will also be supported at the above rates. Clusters of women, youth and students will be promoted giving priority. A portion of outlay under cluster development will be utilized for project based assistance of each cluster in potential areas.

The amount earmarked for cluster development in districts will also be utilized for production and distribution of seeds of traditional varieties and ₹25.00 lakh for promotion of nutritional garden for the supply of perennial vegetable seedling kits (bread fruit, muringa, curry leaves, agathy etc.). Specialised clusters will be entrusted

for production and distribution of traditional varieties and nutritional garden. Services of agro service centres and karshika karma senas can be utilised for the establishment of nurseries and nutritional garden. Fallow land cultivation will be supported at cluster level.

In order to evaluate the progress of cluster development programme and to document the best practices, a study by a reputed agency will be commissioned and completed during the year 2019-20. An amount of ₹10.00 lakh is earmarked from the amount allocated for documentation.

Out of total subsidy per hectare 25 percent is earmarked for the promotion of inputs for safe food production and for promoting good agricultural practices. Biocontrol agents, pheromone traps, area wide IPM and bio fertilizers will be included in the 25 percent earmarked amount of the subsidy component. Another minimum 15 percent will be insisted for lime application.

The support for Block Level Federated Organizations (BLFO) for infrastructure development and operational support including revolving fund for which an amount of ₹100.00 lakh is set apart. Training of BLFO functionaries on accounting, management and key areas of organization development, establishment of new federated organizations and to provide revolving fund will be covered. The entire responsibility of revolving fund will be entrusted to registered groups. The role of department officers is restricted to guidance alone in revolving fund. There should not be any duplication of Block level federated organisations of the department and markets established by VFPCCK at ward level in panchayats. In potential panchayats both organisations could work together also. Good and well performing organizations will be given assistance for specific infrastructure support on project mode limited to a maximum of ₹10.00 lakh per BLFO. It is proposed to establish vegetable producer companies/ Farmer Producer organisations at the major vegetable producing areas for the marketing of the vegetables produced by small, marginal and large farmers linking with A grade clusters and BLFOs for which an amount of ₹100.00 lakh is provided. Professionals from reputed national and international institutions/ agencies will be engaged for the implementation of vegetable producer companies. BLFOs and clusters will be linked with the companies with appropriate organizational participation.

Nurseries will be established in identified blocks through clusters. Revolving fund for the existing nurseries and support for new nurseries are included in the outlay. An amount of ₹100.00 lakh is set apart for establishing small nurseries in gramapanchayats/ corporation / selected municipalities for the production and distribution of seedlings. Mini poly house units developed by Kerala Agriculture University (KAU) with a size of 10 sq.m. and 20 sq.m. will be promoted for raising kitchen gardens, after local suitability/ feasibility reports by the department officials. Trainings, evaluation, monitoring and documentation will also be included.

An amount of ₹200.00 lakh is earmarked for micro irrigation with fertigation for vegetables.

For operational expenses ₹80.00 lakh is earmarked. Part of the fund to be used for organizing campaigns.

Vegetable cultivation will be extended to fallow lands available under the ownership of department farms and PSUs also by involving farmers clusters and women groups.

The food crop production scheme will be linked to HarithaKeralam and clearly defined physical targets at panchayat level and other deliverables will be fixed in the project. Department of Agriculture will organize campaigns at block level and at panchayat level for Rice Development Programme and Vegetable Development Programme with the support of farmers groups and panchayats.

The component wise breakup of the scheme is shown below:

Sl. No.	Components	Amount (₹ in lakh)	
		Annual Plan	Green Book
1	Support to VFPCCK	700.00	
2	Promotion through homesteads including Onam vegetable production (Onathinuorumuram Pachakkari)	1000.00	1000.00
3	Promotion of urban clusters and waste management	850.00	
4	Vegetable cultivation through institutions	300.00	300.00
5	Training, awareness and publicity	50.00	50.00
6	Development of District Clusters	2440.00	2440.00
7	Technical support and contractual appointments	100.00	100.00
8	Development support to graded clusters	315.00	
9	Documentation	25.00	
10	Block level federated organizations (Block Sangamaithries)	100.00	
11	Establishment of nurseries	100.00	100.00
12	Rain shelter cultivation	600.00	600.00
13	Micro-irrigation with fertigation	200.00	200.00
14	Additional Support to best performing 'A' Graded Clusters for filling critical gaps based on volume of business.	30.00	
15	Promotion of zero energy cool chamber for storage of harvested vegetables	100.00	100.00
16	Vegetable producer companies	100.00	
17	Operational expenses	80.00	
	Total	7090.00	4890.00

iv)	Development of Pulses & Tubers	Head of Account : 2401-00-112-96
		Outlay : Rs.200.00 lakhs

It is proposed to augment the area and production under various pulses crops viz. cowpea, green gram, black gram, red gram, soya bean and others in the garden lands as well as in 3rd crop rice padasekharams. Similarly the tubers are proposed to be promoted in association with Central Tuber Crops Research Institute. An amount of ₹200.00 lakh is earmarked for this component.

The component wise breakup of the scheme is shown below:

Sl. No.	Components	Amount (₹ in lakh)
1	Promotion of tubers / pulses	200.00
	Total	200.00

2)	Coconut Development	Head of Account : 2401-00-103-87
		Outlay : Rs.6900.00 lakhs

The strategy proposed for coconut development is integrated development of holdings aimed at maximising income from unit area through better agro management practices and promotion of multi species cropping and farming systems. Further, there is an emerging need to enhance the production and productivity through replanting with new and high yielding palms and follow better management practices. A coconut council has been formed in the state with specific objectives to achieve this target.

The coconut development programme will be implemented in continuous areas called *keragramam* covering a minimum area of 250 ha, with the objective of increasing production and productivity through the activities such as replanting, integrated pests and disease management, integrated nutrient management, promotion of inter cultivation, improving irrigation facilities, promotion of value addition, ensuring availability of quality planting materials and employment generation. Application of lime, micro and secondary nutrients will be ensured for effective nutrient uptake. During 2019-20, an amount of ₹ 4300.00 lakh is provided for undertaking activities like cultural operations including Integrated Nutrient Management & Integrated Pest Management (INM & IPM), application of organic manure, distribution of climbing device, establishment of coconut nurseries, irrigation units etc. Operational cost to *Krishibhavans* for programme implementation including registration of samithy, trainings, meetings etc. is also included. The scheme will be implemented in selected panchayats. The institutional development at Panchayath level for convergence of various scheme implemented by Coconut Development Board (CDB), Local Self Government Institutions (LSGI), and the department of

Agriculture will be supported additionally. An amount of ₹ 5.00 lakh each will be provided for strengthening the activities of the Panchayat level Kera Apex Societies where minimum area under coconut in the panchayat is 250 ha. Model farm plans will be prepared and additional assistance will be ensured from the plan of LSGIs.

It is proposed to promote scientific cultivation of high yielding dwarf and semi-tall varieties suited for tender coconut, culinary coconut and copra, replacing unproductive, senile and diseased palms in contiguous areas. The provision under the component will be utilized for establishing model farms of high yielding dwarf as well as hybrid coconut varieties. A model farm should have a minimum size of 0.20 ha.

An amount of ₹100.00 lakh is set apart as Project based assistance for Coconut development. This is for innovative activities such as introducing new, eco friendly and sustainable technologies aimed at improving coconut production. Campaigns will be organized at block level to popularise the health benefits of coconut and its products including coconut oil and to promote their use.

Project based support will be provided for coconut development in collaboration with Central Plantation Crops Research Institute (CPCRI). Integrated pest and disease management measures will be adopted on project mode and implemented on a campaign basis to control major pests and diseases including rhinoceros beetle, red palm weevil, bud rot etc.

As part of Coconut Mission, ₹1900.00 lakh is provided for Rehabilitation and rejuvenation of coconut palms in Kerala with the following objectives: To revive the coconut wealth of Kerala through a campaign of replanting and maintenance; to enhance productivity of coconut; and to ensure forward linkages with agro-industry.

There is a need for replanting at least 75 coconut seedlings per ward every year in the state with the support of KAU, CDB, CPCRI, Farmer Producer Organisations and local governments. The main components of the rejuvenation programme include:

1. Cut and removal of old, senile, unproductive and disease advanced palms.
2. Replanting with high yielding semi tall and dwarf varieties
3. Rejuvenation of existing gardens by adopting integrated management practices.
4. Assistance for replanting
5. Underplanting in old plantations with good quality planting materials.
6. Development of existing coconut farms for effective supply of seeds nuts

An amount of ₹1900.00 lakh is provided for the above stated components.

We need to develop good seed coconut farms in the State to cater to the needs of the rejuvenation programme. Aralam Farm has immense potential for being developed as a seed garden for collecting seeds nuts of released tall varieties (West Coast Tall and Laccadive Ordinary) of coconut. As per the recommendation of the expert team to develop the area to meet the future needs of the state, out of the total outlay of ₹1900.00 lakh, an amount of ₹200.00 lakh is earmarked for Rehabilitation and Rejuvenation of Coconut palms in the Aralam Farm/TRDM area and converting it into a coconut seed farm in coordination with Scheduled Tribes Department. An amount of ₹100.00 lakh is earmarked for development of other seed farms in the state.

The component wise break up is given below

Sl. No.	Components	Amount (₹ in lakh)	
		Annual Plan	Green Book
1	Keragramam	4300.00	4300.00
2	Development of Model HYV Dwarf/ Semi-Tall Coconut Farms	300.00	
3	Project based support for coconut development in collaboration with CPCRI	50.00	
4	Pest & disease management in coconut gardens on a campaign basis	250.00	
5	Project based assistance for coconut development	100.00	
6	Rehabilitation and rejuvenation of coconut palms in Kerala as part of Coconut Mission-Coconut Council (NEW)	1900.00	1900.00
	Total	6900.00	6200.00

3)	Development of Spices	Head of Account : 2401-00-108-59
		Outlay : Rs.1000.00 lakhs

Spice crops occupy a predominant position in the agricultural economy of the state. Apart from foreign exchange earnings, organic spices, value added spices like oils and oleoresins are assuming significance. On the production side low yield, damage to standards, crop loss due to pests and diseases, post-harvest losses and fluctuating prices are causing declining area and production of spices in the State. Revival of production of spices is essential to improve the livelihood of people as well as to improve foreign exchange earnings.

A pepper rehabilitation programme including the components, viz. Decentralised pepper nurseries, establishment of new pepper gardens, and

revitalization of existing gardens, integrated pepper development in Idukki, assistance for area expansion, promotion of Vesicular Arbuscular Mycorrhiza(VAM), farmers varieties, grafts, soil less nursery, support to secondary and micro nutrients, soil ameliorants, prophylactic spraying through agro service centres and revitalization of pepper samithies are envisaged. Area expansion of ginger, turmeric, pure/ inter cropping of nutmeg and clove is also included under the programme.

An amount of ₹15.00 lakh is set apart for providing project based support for the establishment of nurseries for development of planting materials of pepper using orthotropic shoots and grafts with the technical guidance of Indian Institute of Spices Research (IISR/KAU). The outlay under Wayanad package will be integrated with the comprehensive project. The services of the agro service centres in the pepper growing areas will be integrated with the project. Setting up of bio pharmacies will be encouraged through pepper samithies/agro service centres/federated organisations/ Karshika Karma Senas. An amount of ₹500.00 lakh will be utilized in Idukki district, for developing pepper.

4)	Hi - Tech Agriculture	Head of Account : 2401-00-113-82
		Outlay : Rs.55.00 lakhs

Technological advancement holds the key in the development of agriculture in terms of measurable changes in productivity, profitability and ecology. Expansion of seedlings production in plastic perforated trays under favourable microclimate created in cost effective low cost structures, standardization of new growing media for optimum plant growth, refined technologies for hardening of seedling, green house design, structure and technology need to be fine-tuned to suit different agro climatic conditions. During the year 2019-20, it is proposed to support construction of new poly houses through krishibhavans, rainshelters, hardening units, open precision farming on vegetables, flowers, banana and other crops. The selection and all approval will be entrusted to district level officer.

Training, awareness programmes, field visits and fairs will also be conducted to create awareness among the farmers. An amount of ₹20.00 lakh is provided for the same.

In order to support the entrepreneurs it is proposed to develop a network of experts and support groups at state and district level in association with an institution. The support group covering VHSE people, retired or other professionals could be trained for the purpose. The support for human resource development is for promoting Hi-tech agriculture through State Agricultural Management and Extension Training Institute (SAMETI). An amount of ₹10.00 lakh is set apart for the component. A portion of the outlay will be utilized for the development of demonstration unit at SAMETI.

The components of the scheme are shown below:

Sl. No.	Component	Amount (₹ in lakh)
1	Human resource group for technology support and capacity building through SAMETI	10.00
2	Assistance for new poly houses /capacity building and technical support	25.00
3	Other activities	20.00
	Total	55.00

5)	Development of Fruits, Flowers and Medicinal plants	Head of Account : 2401-00-119-79
		Outlay : Rs.1200.00 lakhs

For the development of fruits, flowers and medicinal plants, an amount of ₹1200.00 lakh is set apart during 2019-20. It is envisaged that 25 percent of beneficiaries of the project will be women.

For comprehensive fruit development programme covering banana through area expansion including supply of planting material, an amount of ₹600.00 lakh is earmarked. The project will be implemented in all districts by the department of Agriculture in association with VFPCCK. Special assistance / incentives for banana cultivation, including high-density planting, is included in the outlay. Assistance will be provided for the establishment of floriculture units, establishment of new floriculture nurseries including tissue culture units and for establishment of grading, packing centres. Strengthening of Biotechnology and Model Floriculture Centre, Kazhakuttom and establishment of decentralized production/hardening centres will be promoted on a hub and spoke mode using the funds provided separately. An amount of ₹500.00 lakh is earmarked for this scheme. The funds from RKVY and SHM will be integrated with the project.

The project for promotion of medicinal plants is proposed to be implemented in Thrissur, Malappuram, Wayanad, Idukki and Palakkad districts. An amount of ₹100.00 lakh is earmarked for training & awareness, area expansion through clusters, setting up of collection centres, Plant Health Management units and for transportation and marketing facilities. The scheme will be implemented through the department of Agriculture. The scheme implemented with the support of Medicinal Plants Board will be integrated with the project. Arrangements for market tie up will be made with CAREKERALAM, Koratty and other Ayurvedic pharmaceuticals.

The breakup of the scheme is shown below:

Sl. No.	Scheme	Amount (₹ in lakh)
1	Development of Fruits	600.00
2	Development of Flowers	500.00
3	Development of Medicinal plants	100.00
	Total	1200.00

SOIL AND PLANT HEALTH MANAGEMENT

6)	Soil and Root Health Management & Productivity Improvement	Head of Account : 2401-00-800-28
		Outlay : Rs.2933.00 lakhs

The improvement of soil health is essential for augmenting crop productivity considering the depleted nutrient status of the soil resource of the state. Based on soil testing, service would be reviewed with more focus on application of soil test results for improving the productivity of crops. The panchayat adoption programme for the implementation of comprehensive soil testing programme including demonstration on micronutrients will be expanded to cover more panchayats. Soil test based extension service will be strengthened in the panchayats. All the farmers in the selected panchayats will be issued soil health cards. Nutrient management plans will be prepared at panchayat, block, district and Agro ecological zone basis. In each district three panchayats will be selected for soil test based extension services, through District Soil Testing Lab and Mobile Soil Testing Lab. The demonstration component implemented through District Soil Testing Lab is not supported and no contractual manpower would be provided. A special emphasis will be given for the selected panchayats for soil analysis with the support of Agriculture Technology Management Agency (ATMA), District Soil Testing Lab and Mobile Soil Testing Lab. ATMA alone will implement the demonstration component.

It is proposed to promote cultural practices to support root development and growth like seed treatment using bio fertilizers and bio pesticides, application of trichoderma, use of Vesicular Arbuscular Mycorrhiza (VAM), application of Phosphate Solubilizing Bacteria (PSB), Organic manure application, Plant Growth-Promoting Rhizobacteria (PGPR) etc. A major root health initiative will be supported with a major component on support for on farm production and application of VAM in selected *Krishibhavans*. An amount of ₹100.00 lakh is earmarked for this purpose. Root health card will be issued through plant clinics.

The soil testing service would be made accessible to farmers in every panchayat with the support of local governments. The implementation of the programme would be integrated with the soil health management and soil health initiative. The mobile soil testing and stationary soil testing labs those under agro service centres will be converged in the project implementation.

It is proposed to take up soil analysis on a campaign mode across the State with the support of local governments, progressive farmers, FPOs and Farmer's clubs promoted by NABARD. It is also proposed to make available quality inputs for correcting the soil pH and also for providing secondary and micro nutrients to supplement crop production.

A major intervention in management of soil acidity is required to improve crop productivity. An amount of ₹ 2491.00 lakh is set apart for the project component. An amount of ₹ 250.00 lakh is set apart for supporting micro and secondary nutrients in different crops for which inputs will be distributed as per soil test data at subsidized rate. Based on recommendations of soil analysis, it is proposed to apply soil ameliorants and soil fertility portal through Indian Institute of Information Technology and Management, Kerala (IIITMK) will also be promoted. The data generated in this project will be shared between other agencies in the state like KSLUB, Soil Conservation Department and KAU.

An amount of ₹ 52.00 lakh is set apart for the soil health management project in potential areas through VFPCCK covering lime application, micro and secondary nutrients in banana and vegetables. The results of the soil test based Nutrient Management Plan will be popularized with appropriate link with input agencies. The regular awareness programme through print and visual media will be continued.

The components of the scheme are shown below:

Sl. No.	Component	Amount (₹ in lakh)	
		Annual Plan	Green Book
1	Soil ameliorants in selected districts	2491.00	2491.00
2	Awareness programme, seminars, workshop	10.00	
3	Maintenance of soil fertility portal, printing of panchayat wise and block wise nutrient management plans, reports, cards, expert support to IIITMK	30.00	
4	Project on Soil fertility in potential areas through VFPCCK	52.00	
5	Support for secondary and micronutrients	250.00	
6	Root health management practices	100.00	
	Total	2933.00	2491.00

7)	Crop Health Management	Head of Account : 2401-00-107-78
		Outlay : Rs.1163.00 lakhs

Pest management strategies need to recognize that crop health is an essential element of sustainable agriculture. Improvements in integrated pest management can lead to sound crop health management. The approach of crop health management will

bring together management towards sustainable ecosystems and people's health through Good Plant Protection Practices (GPPP).

Systematic surveillance and advisories will be provided to the farmers through advisories. The number of surveillance plot will be decided based on cropping pattern of the selected panchayats. The officers enrolled for the Post Graduate Diploma in Plant Health Management (PGDPHM) course will take a lead role in Pest surveillance project and Monthly Technology Advice (MTA) preparation with the ATMA team.

The Pest Surveillance systems and advisories will be implemented in potential blocks. An amount of ₹117.75 lakh is provided for the component. The fixed plot and rowing survey component is proposed to be restructured linked to the clinics alone, with reduced number of fixed plots with flexibility at block level. Plant health clinics will be implemented in the newly selected 50 Krishibhavans in addition to the existing 202 clinics. An amount of ₹100.00 lakh is provided for printing of crop health advisories and bulletins for each of the 202 for filling the critical gaps in the panchayath level and district level plant health clinics established in the previous year. The surveillance and rowing survey will be analysed and monthly report at district level will be published. The data will be shared with other government departments. The block level plant clinics will be designated as the plant clinic of the block where support of other Agriculture officers will be ensured by the Assistant Director of Agriculture. Additional support including infrastructure support will be provided to plant clinics.

The components of the scheme are shown below.

Sl. No.	Component	Amount (₹ in lakh)
1	Development of pests and disease surveillance system and advisories including use of GPS for pest and disease surveillance	117.75
2	Rodent control	50.00
3	Plant Health Clinics	340.00
4	Input to farmers	0.25
5	Printing of crop health advisories and bulletins	100.00
6	Development of 9 parasite breeding stations and new Biocontrol labs	60.00
7	Honorarium to Field Assistants (FAs)	416.00
8	Honorarium to District Plant Health Managers (DPHM)	54.00
9	Management of wild animal attack in cropped areas through technology support	25.00
	Total	1163.00

Bio control agents are not available in adequate quantities in all the districts. It is proposed to develop all the 9 parasite breeding stations as stocking centres for bio

control agents as well as to promote parasite breeding. An amount of ₹60.00 lakh is set apart for development of these nine stations and for setting up of new bio control labs.

A series of capacity building programme on crop health management will be initiated for the technical officers in association with NIPHM. The PG diploma course in Plant Health Management launched for the officers of the department of Agriculture at SAMETI in collaboration with NIPHM, Hyderabad, will be supported additionally to develop specialist team of officers on plant health management.

It is proposed to provide assistance to install bee hive fencing system around gardens susceptible to wild elephant attack with the technical support of ATMA, Wayanad. Other successful local systems and practices prevalent for protection against wild animals and birds would also be assisted. An amount of ₹25.00 lakh is earmarked for technology support against wild animals and birds.

8)	Organic Farming and Good Agricultural Practices	Head of Account : 2401-00-105-85
		Outlay : Rs.538.00 lakhs

Organic farming is an emerging area in the country and the export potential of organic products is increasing across the world. During 2019-20 it is proposed to assist organic farming and the components of the scheme include assistance for certification, empowerment of clusters, promotional assistance for clusters, green manuring, model units for organic manure preparation and Safe to eat food production including Participatory Guarantee System (PGS) certification through VFPCCK & Krishibhavans. Organic farming would be also be supported under the centrally sponsored scheme Paramparagat Krishi Vikas Yojana (PKVY).

An amount of ₹15.00 lakh is provided for promotion of zero budget natural farming-which gives emphasis to the popularization of traditional varieties and safe food production following ecofriendly farming practices.

The components for the programme includes support to GAP clusters, establishment of new ecoshops and support for existing ecoshops, direct marketing of GAP certified produce, awards to best performing LSGIs etc. It is envisaged that 10 percent of beneficiaries of the project will be women.

The components of the scheme are shown below.

Sl. No.	Items	Amount (₹ in lakh)
1	Organic farming under PGS through VFPCCK and Krishibhavans	25.00
2	Formation of new clusters	150.00

3	Management of existing ecoshops & establishment of new ecoshops to be run by clusters	33.00
4	Promotion of zero budget natural farming	15.00
5	Pesticide residue analysis in agricultural produce	50.00
6	Support for implementation	115
7	Organic farming of fruits and vegetables through SHGs and certification – VFPCCK (NEW)	150.00
	Total	538.00

INPUT AND SERVICE DELIVERY

9)	Production and Distribution of Quality Planting Materials	Head of Account : 2401-00-104-91
		Outlay : Rs.1825.00 lakhs
		Head of Account : 4401-00-104-98
		Outlay : Rs.675.00 lakhs

Planting material is a basic and critical input for agricultural production. Inadequate availability of quality seeds, planting materials and germ plasm are major constraints limiting productivity. The supply of adequate quality seeds is absolutely essential for increasing productivity of crops and total agricultural production.

The Departmental Farms are to be modernised to function not only as production centres of quality planting materials but also as centres of demonstration of advanced agricultural technology for High Tech farming. The farms have to be with basic as well as sophisticated infrastructural facilities like green houses, irrigation support, tissue culture and hardening facilities, seed processing and storage facilities. In the case of District farms and Seed farms, the departmental programmes will be restricted to filling the gaps. But in the case of thirteen specialised farms, the Department will cater to all the requirements and make them commercially viable. The outlay will be utilised for the purchase of newly evolved nucleus planting materials, increasing the area under progeny orchards, production of planting materials and infrastructure works. Funds will be released on the basis of an approved project report for each farm, which will be evaluated later. Separate outlay is earmarked for taking infrastructure projects of the farms under RIDF.

An amount of ₹450.00 lakh is set apart for Kerasamrudhi project for the production and distribution of quality coconut seedlings. The outlay will also be utilized for the production of hybrid and dwarf seedlings. The enhancement from the previous level of allocation is for implementation of the programmes/projects envisaged through coconut council mainly rejuvenation and replanting. An amount of ₹150.00 lakh is set apart for the production of fruits and vegetables grafts and seedlings through VFPCCK.

Additional support is included for the modernization of departmental farms including mechanization. Infrastructure support as well as temporary man power support will be given to Bio Technology and Model Floriculture Centre (BMFC) and tissue culture laboratories established at other two farms, for the production of quality tissue culture plants. The infrastructure facilities available with the Department are not adequate to meet the production and demand of seedlings.

It is also proposed to promote conservation of traditional varieties of crops especially rice, vegetable, tubers and other crops in the departmental farms. Establishment of Integrated Farming System units in the farms for augmenting revenue of farms will be continued.

It is proposed to develop the department farms into model demonstration farms to function as farm schools for farmers and general public. An amount of ₹50.00 lakh is set apart for this purpose. An amount of ₹200.00 lakh is set apart for seed production programme in state seed farms.

Availability of quality planting material for pepper is a pre-requisite for development of pepper sector in the state. An amount of ₹650.00 lakh is provided for development of planting material/rooted cuttings of pepper. The model followed by KVK, Kannur for participatory mode in this regard will be followed. An amount of ₹50.00 lakh within the above amount is earmarked for pepper planting material production in collaboration with KVK, Kannur and Pepper Farmer producer Organisation, Cheruthazham. 10 lakh rooted pepper planting material will be produced through this mode in 2019-20. Similarly, out of ₹650.00 lakh, an amount of ₹50.00 lakh is set apart for Wayanad, for pepper planting material production in collaboration with KVK, Ambalavayal.

The component wise breakup of the scheme is shown below.

Sl. No.	Components	Amount (₹ in lakh)	Head of Account
1	Operation and technology support to demonstration units for HTF units	25.00	2401-00-104-91
2	Manpower support to the TC labs	15.00	2401-00-104-91
3	Kerasamrudhi	450.00	2401-00-104-91
4	Planting material production through VFPCK	150.00	2401-00-104-91
5	Establishment of model demonstration plots of high yielding dwarf coconut varieties, exotic fruit plants etc. in DAFs & Special Farms	50.00	2401-00-104-91
6	Promotion of Integrated Farming System in potential Dept. farms	200.00	2401-00-104-91

7	Routine Planting material production including rooted pepper cuttings including collaboration with KVK, Kannur, Pepper Farmer producer Organisation, Cheruthazham and KVK, Ambalavayal	650.00	2401-00-104-91
8	Seed production programme in State Seed Farms	200.00	2401-00-104-91
9	Maintenance of progeny orchards & establishing new progeny orchards	85.00	2401-00-104-91
		15.00	4401-00-104-98
10	Mechanisation in special farms & infrastructure development	660.00	4401-00-104-98
TOTAL		2500.00	

10)	Modernisation of Departmental Laboratories	Head of Account : 2401-00-105-86
		Outlay : Rs.800.00 lakhs

One of the major services offered by the Department of Agriculture to farming community is Soil Testing for fertility analysis and Fertilizer testing including organic and biofertilizers and Pesticides testing and Seed testing for quality control analysis of these inputs. These are critical production components which significantly affect the production and productivity of crops. Quality of these inputs is to be ensured through scientific means.

The existing laboratories of the departments which analyze samples of soil, fertilizers, pesticides, seed etc. were established years back. Most of the equipments available in these labs purchased are old and obsolete and are not suited to provide quick and accurate results of data analysis. The major components under Modernisation are purchase of equipments and chemicals, Strengthening Bio Technology and Model Floriculture Centre (BMFC), hiring of manpower (contractual), operational expenses including mobility. The BMFC will be strengthened for the production of 15lakh tissue culture plants and the scope for further expansion will be explored in a phased manner. The revolving fund will be made operational.

One panchayat from each district was adopted by the soil testing laboratories for the implementation of comprehensive soil testing programmes including micronutrients. Soil test based extension service was introduced in these panchayats. All the farmers in the panchayat would be issued soil health cards. An amount of ₹125.00 lakh is set apart for strengthening state bio control lab. Additional fund would be met from the scheme on production and distribution of quality planting materials for BMFC. An amount of ₹75.00 lakh will be set apart for the functioning of Quality Control Enforcement Wing of the department. An amount of ₹160.00 lakh

earmarked for continuing the work of new Integrated Fertilizer Quality Control Lab (IFQCL) and Integrated Pesticide Quality Control Lab (IPQCL). The availability of existing building infrastructure with the department, if any, may be considered.

Component wise breakup of the scheme.

Sl. No.	Component	Amount (₹ in lakh)
1	Strengthening of BMFC, Kazhakuttom	125.00
2	Strengthening of State Bio controllab, Mannuthy	125.00
3	Strengthening of laboratories	250.00
4	Operational expenses and manpower support	40.00
5	Establishment of Integrated Fertilizer Quality control Lab(IFQCL) and Integrated Pesticide Quality Control Lab (IPQCL)	160.00
6	Quality Control Enforcement Wing	75.00
7	Accreditation of labs (New)	25.00
	Total	800.00

MODERNIZING AGRICULTURAL EXTENSION & HUMAN RESOURCE DEVELOPMENT

11)	Strengthening Agricultural Extension	Head of Account : 2401-00-109-80
		Outlay : Rs. 4545.00 lakhs

The success of all agricultural development strategies depends on the adoption of scientific technology by the farmers. In order to improve income of the farmers, a field visit oriented extension system is essential in the state. The ATMA model of Agricultural extension with suitable modification integrated as ATMA plus could be popularized with appropriate convergence at the higher level with co-ordination at the lower level among the departments in the productive sector. An extension wing has been established in the department by integrating soil testing, crop health management, agro services, parasite breeding and extension activities of all ongoing schemes.

The outlay earmarked for the scheme for 2019-20 is ₹4545.00 lakh. An amount of ₹25.00 lakh is set apart for strengthening of SAMETI and for operational expenses and infrastructure support for SAMETI including purchase of equipments and honorarium for five experts, Block Technology Managers (BTM) and IT specialists. Five experts will be engaged at SAMETI with Post Graduation and PhD. Out of this one expert will be in the area of social engineering with specialisation in MSW or Sociology and another will be an expert in Innovations and Communications with a PhD in Agricultural extension. The capacity building programmes through

institutions of national repute will be strengthened. The state share of ATMA programmes is included under the umbrella scheme Krishi Unnathi Yojana.

Kerala Agricultural Innovation Extension Project (KAIEP) will be implemented by integrating ATMA, elements of similar projects like ATMA Plus, possibilities in social media, practical experiences and findings of farmers and LEADS with a financial allocation of ₹1820.00 lakhs. Under the project, LEADS programme will be extended to 941 panchayats. The scheme is proposed to be implemented through Technology and Market Unit to be constituted in the panchayats. Two professional District Farmers Producer and Marketing Organisation (DFPMO) will be established at the district level in Idukki and Wayanad on pilot basis for facilitating marketing of produce through sharing of market information, professional support, and tie-up with other organisations, etc. Additional one Assistant Technology Managers (like Field Assistant of the present LEADS Panchayat) for every block will be provided to streamline the activities and to expand the LEADS activities to the whole of the state apart from the four LEADS districts viz. Wayanad, Kannur, Palakkad and Kollam. Components like LEADS, ATMA plus, MTA preparation, Panchayat Resource Group and Panchayat Farm Plan, establishment of farm models at block level, visit of experts/officials progressive farmers to research institute model farms etc. are included in the project. External Monitoring will be carried out through an agency selected by competitive open bidding.

During 2019-20, it is proposed to complete the work of upgradation of the Regional Agriculture Technology Training Centres (RATTCs) as Satellite centres of SAMETI for which an amount of ₹400.00 lakh is set apart. The project directorate of ATMA will be strengthened with additional infrastructure and contractual manpower including provision for rent. An amount of ₹65.00 lakh is set apart for this purpose. In each project directorate District Technology Manager (DTM) engaged in Animal Husbandry, Agriculture & Fisheries will be supported. Human Resource support of ₹200.00 lakh is provided for continuing the existing DTMs at district level. The honorarium of all DTMs will be ₹30,000/- excluding the traveling allowance. Support for one contract Agricultural officer each at Farmer Training Centre (FTC) Kozhikkode and Pandalam are included in the provision.

An amount of ₹100.00 lakh is earmarked for providing operational support and hiring of vehicles for all project directorates for effective extension delivery.

The ongoing component of integrated farming system models implemented through ATMA will be strengthened and restructured with additional enterprises and technical support.

An amount of ₹775.00 lakh is earmarked for meetings and awareness programmes, exposure visits to award winning farmers, karshakasabha and njattuvlachanthas. Within this component an amount of ₹500.00 lakh is earmarked

for conducting meetings and awareness programmes, which will be bifurcated as follows:

- a) An additional allocation for widening the scope and conduct of VAIGA over and above the allocation to SFAC under marketing: ₹100.00 lakh
- b) International Safe- to- eat/ Organic Farmers Meet and Expo of Products and Techniques and Children’s Agricultural Science Congress : ₹250.00 lakh
- c) Conduct of regional / agro- climatic region based agro festivals through designated agencies: ₹100.00 lakh
- d) Crop calender based festivals and Farmers Meets: ₹50.00 lakh

Awards earlier included under the schemes of rice development, vegetable development programme, organic farming and agricultural extension separately are integrated under the component “Award for best performers”. ₹325.00 lakh is earmarked for this component.

The ongoing component of Integrated Farming System Models will be strengthened and restructured with additional enterprises and technical support. A special plan will be prepared for reviving damaged units with loss of cattle and poultry in addition to crops. An amount of ₹ 750.00 lakh is set apart for IFSM during 2019-20.

An amount of ₹75.00 lakh is set apart for meeting the operational expenses for the implementation of social audit in the department.

The component wise breakup of the scheme is shown below.

Sl. No.	Component	Amount (₹ in lakh)
1	Upgradation of RATTCs and FTCs	400.00
2	Kerala Agricultural Innovation Extension Project (KAIEP) (New)	1820.00
3	SAMETI	25.00
4	Strengthening Project Directorate of ATMA including hiring of office space	65.00
5	Award for best performers	325.00
6	HR support to project directorate and Extension wing	200.00
7	Training to FAs and BTMs on regular basis	10.00
8	Operational Support and Hiring of vehicles for ATMA	100.00
9	Public participation	775.00
10	Establishment of Integrated Farming System Models (IFSM)/Projects	750.00
11	Operational expenses for implementation of social audit	75.00
	Total	4545.00

The various components earlier considered under various extension schemes including ATMA, ATMA PLUS, LEADS etc. have been brought under the Umbrella scheme of Kerala Agricultural Innovation Extension Project.

12)	Farm information and communication	Head of Account : 2401-00-109-84
		Outlay : Rs. 500.00 lakhs

The Farm Information Service provides information and communication support for agricultural development. The scheme aims at the development of information dissemination through the use of mass and electronic media including web based services. At present the Farm Information Bureau (FIB) has its state unit at Thiruvananthapuram and regional units at Ernakulam and Kozhikode is proposed to expand the information services and supporting activities. A full-fledged information cum data centre at the headquarters with appropriate system for regular reporting and delivery of information with the modern communication systems leading to cyber extension would be aimed.

The ‘Karshaka Information Systems Services and Network (KISSAN) Kerala’ project is proposed to be implemented by Farm Information Bureau (FIB). An amount of ₹60.00 lakh is earmarked for providing project based assistance for KISSAN Project.

The components are:

Sl. No.	Component	Amount (₹ in lakh)
1	Kerala Karshakan and Other Divisions of FIB	270.00
2	Publications	40.00
3	Media Liaison	80.00
4	Other communication initiatives including radio services	50.00
5	Karshaka Information System Services Network (KISSAN), Kerala project through FIB	60.00
	Total	500.00

13)	Human Resource Development	Head of Account : 2415-01-277-98
		Outlay : Rs.275.00 lakhs

During the year 2012-13, it was initiated to depute Senior technical officers for post graduate courses in Agricultural Extension, Agricultural economics, Entomology, Plant Pathology, Agronomy and Soil Science in KAU for facilitating the implementation of extension schemes. The scheme will continue during 2019-20 also. It is necessary to depute the senior officers to attend workshops, seminars and

conferences at state and national level. Another important purpose of the outlay is to depute technical officers of the Department to short term training in eminent institutions of the country and other institutions to upgrade the technical and managerial competence. KAU will reserve separate seats for the deputed candidates for the 6 courses. The outlay is for these purposes. The HRD scheme also will be coordinated by the Project Director, ATMA for convergence at district level. An amount of ₹150.00 lakhs is set apart for this component.

An amount of ₹ 75.00 lakh is set apart for the capacity building programmes of officers of extension wing, training centres and other selected officers with experts from National level institutes and MDP at SAMETI.

Capacity building programme on crop health management will be continued for the technical officers in association with NIPHM. The PG diploma course in Plant Health Management launched for the officers of the department of Agriculture at SAMETI in collaboration with NIPHM, Hyderabad, will be supported additionally to develop specialist team of officers on plant health management. The amount of ₹50.00 lakh set apart for capacity building will also be utilised for projects taken up by the officers enrolled for the PGDPHM course.

The component wise breakup of the scheme is shown below:

Sl. No.	Component	Amount (₹ in lakh)
1	HRD initiatives	150.00
2	Capacity building through National level Institutes and MDP at SAMETI	75.00
3	Capacity building in association with NIPHM including PG Diploma in Plant Health management	50.00
	Total	275.00

14)	Agro Service Centres and Service Delivery	Head of Account : 2401-00-113-83
		Outlay : Rs. 1810.00 lakhs
		Head of Account : 4401-00-113-98
		Outlay : Rs. 670.00 lakhs

Agro service centres (ASC) established at block level to facilitate integration of services like mechanisation, ATMA based extension, credit support, weather advisory services, soil testing support and other technology based services. In order to provide full-fledged service to the farmers at a single point, it is necessary that the various requirements of farmers such as agricultural inputs, farms related information like credit, marketing etc. are brought under a common service centre. With this objective, agro service centres are established. The agro service centres established at the block

level in the first phase is to support transfer of technology and service delivery. The Panchayat Raj institutions are expected to provide additional infrastructure support to the Agro service centres. These centres act as technology and information disseminating centres with facilitating role in field visits. A mobile farm clinic is also established at the block level to provide solution to the field problems equipped with audiovisual and online support. The Agro service centres work to support the ATMA activities as well as mechanization. The farmers service centers proposed at the block level under the Cooperation Department will be linked with the agro service centres for input delivery. It is proposed to establish 20 new centres during 2019-20.

In order to reduce administrative work, comprehensive software for progress monitoring from Krishi Bhavan upwards till directorate, total computerisation and internet support and mobility support was developed in 2012-13. From 2012-13 onwards, all the subsidies are distributed through bank accounts of farmers. The outlay will also be utilized to support e-payment system covering data entry and software development. An amount ₹425.00 lakh is provided to support man power at block level on contract basis for e-payment system for a maximum period of one year initiated through National E-Governance Programme (NeGP). An amount of ₹10.00 lakh is set apart for setting up soil testing labs through selected Agro service centers based on the approved pattern.

In order to strengthen further the activities of the centres, an amount of ₹ 320.00 lakh is set apart. The operational support will be for one more year to make the centres self-sustainable. The centres will set up biopharmacy, nurseries and other services in all the centres. The services will be linked to Karshika Karma Sena where ever possible.

An amount of ₹ 200.00 lakh is set apart for the support of selected Karshika Karma Senas including setting up new karma sena. A performance analysis of all agro service centres and karshika karma sena will be undertaken before providing assistance.

In order to provide accident insurance to registered farmers and members of karshikakarmasena and agroservicecentres it is proposed to institute a group insurance programme in association with insurance companies with beneficiary contribution. An amount of ₹ 20.00 lakh is earmarked for remitting insurance premium.

The apex body for the guidance of agro service centres and karshika karma sena will develop an organizational structure for linking karma sena with agro service centres. Agro machinery service centres will be established at district/ regional level coordinated by the apex body with the support of engineering wing of the department. The ITI trained people engaged at Agro service centres if available will also be used for the repair services. It is envisaged that 15 percent of beneficiaries of the project will be women.

The component wise breakup of the outlay is shown below.

Sl. No.	Components	Amount (₹in lakhs)	Head of Account
1	Establishment of new Agro service centres	640.00	4401-00-113-98
2	Operational support (wages to mobile clinics)	190.00	2401-00-113-83
3	Infrastructure support for Block ADA and Krishibhavans and plant health clinics	30.00	4401-00-113-98
		170.00	2401-00-113-83
4	Support to Karshika Karma Sena	200.00	2401-00-113-83
5	Soil Testing Labs in selected Agro-service Centres	10.00	2401-00-113-83
6	Operational Support to Vehicle at Krishibhavans	50.00	2401-00-113-83
7	Strengthening existing Agro-Service Centres	320.00	2401-00-113-83
8	Group insurance scheme for farmers and members of karshikakarmasena and Agro service centres	20.00	2401-00-113-83
9	Honararium to data entry operators of NeGP	425.00	2401-00-113-83
10	Functional expenses of Apex body for co-ordination of Agro Service centres and software development for monitoring and capacity building including skill development of Agro service centres and Karshika karma sena, including agro machinery service centre and pooling of machineries and equipments	425	2401-00-113-83
Total		2480.00	

RISK MANAGEMENT

15)	State Crop Insurance scheme	Head of Account : 2401-00-110-82
		Outlay : Rs. 2000.00 lakhs

The crop insurance scheme was in operation covering 25 major crops grown in the State since 1995 was restructured in 2016-17 by bringing considerable

enhancement in the crop loss compensation. The Crop Insurance Fund is operated with contributions from the participating farmers by way of registration fee and premium and Government contribution. In addition to the existing crops, millets will also be included under the coverage of the scheme. An amount of ₹ 2000.00 lakh is earmarked for the scheme during 2019-20.

16)	Contingency Programme to meet Natural Calamities and Pests and Disease Endemic	Head of Account : 2401-00-800-91
		Outlay : Rs. 750.00 lakhs

The scheme is intended for creating a buffer stock of seeds of paddy and other annual crops for distribution to affected farmers in the event of natural calamities and resultant crop damages. Assistance for strengthening of bunds to prevent breaches during floods and for removal of debris will be in a need based manner. An amount of ₹ 750.00lakh is provided for the scheme during 2019-20.

BIO DIVERSITY CONSERVATION AND FARM DIVERSIFICATION

17)	Bio diversity and local germ plasm conservation and promotion	Head of Account : 2401-00-103-77
		Outlay : Rs. 50.00 lakhs

It is proposed to conserve the traditional and indigenous varieties available in different crops, including paddy and millets, especially in tribal habitats by providing assistance for cultivation and multiplication of seeds of these varieties by tribals, local farmer clusters, NGOs and other organizations. Provision under the scheme would be utilized for procurement and distribution of seeds of these traditional varieties for promotion of cultivation in other areas and districts. The outlay under the scheme would also be utilised for establishment of a Modern Seed Bank for conservation of traditional and other varieties of different crops. An amount of ₹ 50.00 lakh is earmarked for the scheme.

NEW SCHEMES

18)	Development of Agriculture Sector in Kuttanad (New Scheme)	Head of Account : 2401-00-119-78
		Outlay : Rs. 2000.00 lakhs

An amount of ₹2000.00 lakh is earmarked for the development of agricultural sector in Kuttanad. The main objective of the scheme is to provide sufficient infrastructure and also risk management. Out of the total outlay, an amount of ₹1500.00 lakh is earmarked for a “Risk Management Package” for mitigation of problems of Kuttanad Wetland Ecosystem which could be utilized for managing the risks associated with the changes/modifications in the cropping/farming system.

An amount of ₹500.00 lakh is earmarked for establishment of Vertical axial flow pump/submersible pumpsets 10-50 HP replacing the conventional Petti & Para, including construction of raised platforms for installation.

19)	Arecanut Package (New Scheme)	Head of Account : 2401-00-108-56
		Outlay : Rs. 200.00 lakhs

Arecanut is one of the major plantation crops of Kerala, especially in northern districts. Arecanut sector is showing a declining trend, both in terms of area and production. This is mainly due to incidence of diseases like Mahali (fruit rot) which needs high cost for plant protection measures, non availability of good quality planting materials and also lack of institutional support which has led to disinterest among arecanut farmers in adopting scientific cultivation practices. Hence it is proposed to provide assistance for area expansion, plant protection and other management practices. An amount of ₹ 200.00 lakhs is provided for this purpose for the whole state.

20)	Office Automation and IT Infrastructure (New Scheme)	Head of Account : 2401-00-001-86
		Outlay : Rs. 430.00 lakhs

This scheme aims to implement ‘e-Office’ in Agriculture Department. e-Office is an integrated solution for the organizational effectiveness by improving productivity, quality, resource management, turn-around time and increase transparency by replacing the old manual process with an electronic file system.

This scheme also envisions to develop IT and communication infrastructure like Virtual Class Room Facility in various locations/offices and Mini Computer Labs at Directorate, SAMETI, 14 Principal Agricultural Offices, SFAC Call Center, RATTCs, FTCs and other training centres including KAU.

To strengthen the IT and e-Governance initiatives, procurement of latest hardware, computing and networking devices, software, procurement for development of other IT and e-Governance infrastructure and their maintenance, high speed connectivity etc are essential and to be met from this scheme.

CORE SECTOR SCHEME – STATE SHARE

21)	Umbrella Scheme on Krishi Unnathi Yojana and other CSS (40%State Share)	
a.	Sub Mission on Agriculture Extension (SMAE)	Head of Account : 2401-00-109-64
		General Outlay : Rs. 1780.00 lakhs
	SCP	Head of Account : 2401-00-789-97 (01)
		Outlay : Rs. 200.00 lakhs
	TSP	Head of Account : 2401-00-796-96 (01)
		Outlay : Rs. 20.00 lakhs
b.	Other CSS (40% CSS) – State Share	Head of Account : 2401-00-109-65
		General Outlay : Rs. 14982.00 lakhs
	SCP	Head of Account : 2401-00-789-86
		Outlay : Rs. 1683.00 lakhs
	TSP	Head of Account : 2401-00-796-87
		Outlay : Rs. 168.00 lakhs

As part of rationalisation of CSS, the number of schemes were reduced and a new concept of umbrella schemes was introduced incorporating the schemes suitable to the state and having the flexibility to implement and design sub-schemes. The central budget will provide allocation under each umbrella scheme based on a transparent criteria. In order to facilitate scheme implementation, all the other CSS on Agriculture are also included in the umbrella scheme.

Krishi Unnathi Yojana is the umbrella scheme under Agriculture with 60% central share and 40% state share. The state share of ongoing centrally sponsored schemes viz. National Food Security Mission(NFSM), Mission on Integrated Development of Horticulture(MIDH), National Mission for Sustainable Agriculture (NMSA), National Mission on Oil seeds and Oil palm(NMOOP), National Mission on Agriculture Extension and Technology Management (NMAET), Rastriya Krishi Vikas Yojana (RKVY), Paramparagath KrishiVikasYojana (PKVY), Pradhan Mantri Krishi SinchayeeYojana (PMKSY), National project on Agro Forestry, Sub Mission on Plant Protection and Plant Quarantine, Information Technology, Integrated scheme on Agriculture Marketing and GOI supported Crop Insurance scheme are included under the scheme. An amount of ₹ 18833.00 lakh is provided as state share of the scheme of which an amount of ₹ 2000.00 lakh is provided as state share of the scheme- Sub Mission on Agriculture Extension (SMAE) under National Mission on Agriculture Extension and Technology Management (NMAET). The state share for

any other new centrally sponsored schemes approved during 2019-20 will also be met from the outlay. Administrative sanction will be issued for all schemes after getting sanction from GOI except NMAET. The outlay under RKVY will be used for infrastructure development activities for rice development, vegetable development, promotion of organic farming, strengthening of market infrastructure in wholesale markets, district procurement centres, support to neera processing projects etc.

MARKETING, STORAGE & WAREHOUSING

The total outlay provided during 2019-20 under Marketing, Storage & Warehousing including other Agricultural Programmes is ₹73.65 crore.-

AGRICULTURE MARKETING AND POST HARVEST MANAGEMENT

An amount of ₹72.45crore is set apart for implementing schemes under this.

22)	Strengthening Agriculture Marketing	Outlay : Rs.4235.00 lakhs
i	Market Development	Head of Account : 2435-01-800-99 Outlay : Rs. 1985.00 lakhs
ii	Market Intervention Support for Price Stabilization	Head of Account : 2435-01-101-85 Outlay : Rs. 2000.00 lakhs
iii	Share capital to HORTICORP	Head of Account : 4401-00-190-97 Outlay : Rs. 25.00 lakhs
v	Assistance to Kerala State Warehousing Corporation for construction of Godown cum Agriculture complex (New)	Head of Account : 4408-02-101-98 Outlay : Rs. 150.00 lakhs
iv	Assistance to Kerala State Warehousing corporation for Computerization (New)	Head of Account : 2408-02-190-98 Outlay : Rs. 75.00 lakhs

Appropriate and effective linkages between the producers and sellers continue to be weak in the state. Market infrastructure, lack of sufficient market intelligence and institutional support are to be improved. The total amount earmarked during 2019-20 for the scheme was ₹4235.00 lakh for market intervention support fund, promotion of marketing in vegetables and fruits through VFPCK.

The objective of the component on market intervention support for price stabilisation is to launch procurement operations through designated agencies on selected agricultural commodities during harvesting season with a view to guarantee

remunerative prices to the growers. The outlay is meant for providing incentives to the procuring agencies based on the terms and conditions prescribed by Government as part of each operation and expenses connected with vegetable procurement during festival season and procurement of green coconut will also be met from this outlay. The fund will be augmented for market intervention support during 2019-20. Out of the amount of ₹4235.00 lakh, an amount of ₹2000.00 lakh is set apart for market intervention support fund, an amount of ₹80.00 lakh for the functioning of Agricultural Prices Board and ₹700.00 lakh for the promotion of marketing in vegetable and fruits through VFPCCK and ₹100.00 lakh for the establishment of knowledge centre attached to Krishi Business Kendras (KBKs) in Thiruvananthapuram, Ernakulam and Kasaragod. The market intervention support to HortiCorp will be approved for procurement from clusters promoted under vegetable development alone when price falls significantly. The amount will be released based on an approved project report.

Gramapanchayat level weekly markets will be supported in association with LSGIs. Karshaka Mitras will be engaged for effective coordination of marketing of surplus farm produce including the use of social media for marketing. It is proposed to engage 25 new Karshakamitras in Alappuzha district during 2019-20.

An e-vipani portal is functioning in the call centre at Small Farmers Agribusiness Consortium (SFAC) for tapping the market opportunities for ensuring maximum price for the farmers produce and also for giving access to farmers to the latest technologies. An amount of ₹63.00 lakh is earmarked for strengthening the e-portal facilities and linking farmer collectives with states following GAP through software development & networking. An amount of ₹150.00 lakh is set apart for Kerala State Ware Housing Corporation for the construction of Godown cum Agriculture Complex and an amount of ₹75.00 lakh for computerization of Kerala State Ware Housing Corporation for connecting the sub offices through a web based software.

The component wise breakup of the scheme is shown below.

Sl. No.	Component	Amount (₹ Lakhs)	Head of Account
1	Operational expense of wholesale markets and district procurement centres	477.00	2435-01-800-99
2	Market development of VFPCCK	700.00	2435-01-800-99
3	Establishment of farmer Knowledge centres at KBKs	100.00	2435-01-800-99
4	Agmarknet & Market Intelligence	50.00	2435-01-800-99
5	Market intervention support for price stabilisation	2000.00	2435-01-101-85

6	Prices Board	80.00	2435-01-800-99
7	Share capital to HortiCorp	25.00	4401-00-190-97
8	Additional support to Weekly Markets	50.00	2435-01-800-99
9	E-portal and linking farmer collectives with states following GAP- software development & networking	63.00	2435-01-800-99
10	Engaging Karshaka Mitras and training and portal based service	210.00	2435-01-800-99
11	WTO Cell - Operational expenses	5.00	2435-01-800-99
12	Establishment of Agro super bazar	250.00	2435-01-800-99
13	Assistance to Kerala State Ware Housing corporation for Computerization	75.00	2408-02-190-98
14	Assistance to Kerala State Ware housing Corporation for construction of Godown cum Agriculture complex	150.00	4408-02-101-98
	Total	4235.00	

23)	Post harvest management & Value addition	Head of Account : 2435-01-800-94
		Outlay : Rs. 1910.00 lakhs

Post harvest management and value addition/agro processing have a very crucial role in improving the Kerala economy and the income of the farmer from agriculture sector.

The SFAC will provide support to small and medium enterprises similar to the norms followed by the industries department, for which an amount of ₹800.00 lakh is set apart. The maximum support for an individual unit will be limited to ₹50.00 lakh after approving the credit by the financial institution. An amount of ₹400.00 lakh is set apart for the implementation of SHG based or individual based units through SFAC. Separate norms will be developed for giving assistance to SHG based/ individual based micro level units. Employment generation and livelihood security will be given emphasis in micro level enterprises. An amount of ₹200.00 lakh will be provided for supporting value addition units and marketing under Govt. sector/ PSUs/Co-operatives/ kudumbasree units in a project based manner. An amount of ₹325.00 lakh is set apart for providing technology support to entrepreneurs through SFAC for conducting trainings, seminars, workshops, consultancies including organizing “VAIGA 2019” through SFAC and for meeting the operational expenses

of SFAC. Out of this, an amount of ₹100.00 lakh is earmarked for conduct of’ VAIGA 2019.

Apiculture and production of honey and its value added products have immense potential in Kerala State. The support for apiculture and honey production will be continued for the benefit of honey growers and promotion of value added honey products through State Horticulture Mission. An amount of ₹100.00 lakh is set apart for this component.

The Kerala Agro Business Company (KABCO) will function as an independent, professionally managed Special Purpose Vehicle (SPV) for establishment of agro parks and to establish market linkage to farmers, facilitate transformation of agriculture to agribusiness, promote value addition and to perform other related functions. The KABCO registered as a company under Indian Companies Act will become the Engine of Revival of agro processing sector in Kerala. KABCO will facilitate setting up of agro parks, agro malls, agro bazaars, development of industries relating to vegetables, fruits, cash crops etc. for domestic and international market. The KABCO will also undertake surveys and feasibility studies. The KABCO will also be involved in identification of new markets, and implementation of IT solutions with portal, e-commerce, Interactive Voice Response (IVR) system etc. An amount of ₹40.00 lakh is set apart for the activities of Kerala Agro Business Company (KABCO) including HR support and also to meet the operational expenses related to setting up of agro parks .

Establishment of cold chain facilities is an essential requirement for value addition and export of agriculture commodities. It is proposed to conduct a study for establishment of cold chain facilities in the State for which ₹25.00 lakh is provided. For startup projects in agriculture sector and for agri business incubators, ₹ 20.00 lakh is set apart.

The component wise breakup of the scheme is shown below.

Sl No	Component	Amount (₹ in lakhs)
1	Support to value addition units through SFAC	
a	Assistance to small and medium agro processing units	800.00
b	Assistance to individual or SHG based value addition units at gramapanchayat level- micro level units	400.00
2	Support for value addition units and marketing in Govt. sector / PSUs/ Co-operatives/ Kudumbasree units	200.00
3	Training, seminar, workshops, consultancies and operational support to SFAC	325.00
4	Promotion of apiculture and production of honey and its value added products	100.00

5	Operational support to Agro Parks & activities of Kerala Agro Business Company (KABCO)	40.00
6	Study for Establishment of Cold chain for fruits and vegetables (New)	25.00
7	Support to Agri start up and agri business incubators	20.00
	Total	1910.00

24)	Additional assistance for construction of Biogas Plants	Head of Account : 2810-00-105-97
		Outlay : Rs. 100.00 lakhs

Under the CSS, New National Biogas Development Project, assistance @ ₹12000/plant is provided for general category and ₹13000/plant for SC/ST category/or as per the extant guidelines of the scheme. The cost of construction of biogas plants in the State varies from ₹30,000/- to ₹1,00,000/- per plant. In order to make the scheme attractive to the farming community it is proposed to provide additional amount from state plan funds as additional assistance for the construction of biogas plant @ ₹8000/plant and ₹9000/plant for General and SC/ST categories respectively over and above the central assistance. An amount of ₹100.00 lakh is earmarked for the purpose during 2019-20.

25)	Rural Infrastructure Development Fund (RIDF)	Head of Account : 4435-01-101-97
		Outlay : Rs. 1000.00 lakhs

The outlay is for the implementation of projects approved under RIDF. It is proposed for the development of market infrastructure under the funding support from RIDF of NABARD during 2019-20. The support to Kerala State Warehousing Corporation for the implementation of RIDF projects will also be provided from the outlay.

OTHER PROGRAMMES

During the year 2019-20, following scheme is included under other programmes.

26)	International Research and Training Centre for Below Sea level Farming, Kuttanad	Head of Account : 2415-01-004-88
		Outlay : Rs. 70.00 lakhs

The International Research and Training Centre for Below Sea level Farming was established in Kuttanad. The outlay is provided for popularizing innovative activities, resolving field problems, data base generation on pollution and for the capacity building.

STORAGE AND WAREHOUSING

27)	Kerala State Warehousing Corporation – Share participation	Head of Account : 4408-02-190-99
		Outlay : Rs. 50.00 lakhs

State Government has to provide share participation to the Kerala State Warehousing Corporation to match the flow of funds from the Central Warehousing Corporation. An amount of ₹50.00 lakh is provided for this purpose during 2019-20.

SPECIAL PROGRAMME FOR AREA DEVELOPMENT

28)	Wayanad Package	Head of Account : 2401-00-800-27
		Outlay : Rs. 1700.00 lakhs

Wayanad is a distress district in the state and is the most backward district. In spite of various schemes implemented in the district, the basic problems are hindering the development of the district. The agrarian economy of the district has been under distress in recent years. Wide fluctuation in prices has brought in high degree of instability in farm incomes. The State and Central Government have come out with intervention packages for the revival of the livelihood of the affected population. Wayanad suffered some economic and environmental shocks mainly from the sharp fall in the prices of pepper and coffee and a long period of unsustainable land use practices. Pepper is already in the declining phase due to the incidence of pests and diseases, loss of erythrina standards due to insect attack as well as declining productivity.

In order to revive the agrarian economy of the district, it is proposed to implement a cafeteria of focused intervention, with appropriate backward and forward integration.

A comprehensive project for the revival of pepper will be supported. Panchayat level apex bodies will be constituted to coordinate the activities of pepper samithies. Area wide integrated pest management, grafting, production of planting materials from orthotropic shoots, setting up of nurseries, micronutrient application, root development activities and other need based support will be provided. An amount of ₹1000 lakh is set apart for the development of pepper in Wayanad district. Out of this an amount of ₹ 25 lakh is set apart for external consultancy support for regular field visits for advising specific solutions to field problems and publication of leaflets and reference materials. An amount of ₹175 lakh is set apart for supporting application to dolomite in pepper growing tracts to correct soil acidity.

The component wise break up is shown below:

Sl. No.	Component	2019-20 Amount (₹ Lakhs)
1	Integrated Pepper Development	1000
2	Project implementation unit	30
3	Area expansion of nutmeg	50
4	Restoration and flood mitigation	620
	Total	1700

A comprehensive planting material production strategy will be evolved with the support of nurseries supported in previous years. The visit of field assistants of LEADS and project implementation unit will be integrated with the project.

CENTRALLY SPONSORED SCHEMES

1)	Umbrella Scheme on Krishi Unnathi Yojana and other CSS (60% State Share)	
a.	Sub Mission on Agriculture Extension (SMAE) General	Head of Account : 2401-00-109-64 Outlay : Rs. 2670.00 lakhs
	SCP	Head of Account : 2401-00-789-97 (01) Outlay : Rs. 300.00 lakhs
	TSP	Head of Account : 2401-00-796-96 (01) Outlay : Rs. 30.00 lakhs
	Other CSS (60% CSS) General	Head of Account : 2401-00-109-65 Outlay : Rs. 22472.00 lakhs
	SCP	Head of Account : 2401-00-789-86 Outlay : Rs. 2525.00 lakhs
	TSP	Head of Account : 2401-00-796-87 Outlay : Rs. 252.00 lakhs

As part of rationalisation of CSS, the number of schemes were reduced and a new concept of umbrella schemes were introduced during 2016-17 incorporating the schemes suitable to the state and having the flexibility to implement and design sub-schemes. The central budget will provide allocation under each umbrella scheme

based on a transparent criteria. In order to facilitate scheme implementation, all the other CSS on Agriculture are also included in the umbrella scheme.

Krishi Unnathi Yojana is the umbrella scheme under Agriculture with 60% central share and 40% state share. The central share of ongoing centrally sponsored schemes viz. National Food Security Mission (NFSM), Mission on Integrated Development of Horticulture (MIDH), National Mission for Sustainable Agriculture (NMSA), National Mission on Oil seeds and Oil palm (NMOOP), National Mission on Agriculture Extension and Technology Management (NMAET), Rastriya Krishi Vikas Yojana (RKVY), Paramparagath Krishi Vikas Yojana (PKVY), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), National project on Agro Forestry, Sub Mission on Plant Protection and Plant Quarantine, Information Technology, Integrated scheme on Agriculture Marketing and Government of India supported Crop Insurance scheme are included under the scheme. An amount of ₹ 28249 lakh is provided as anticipated central share of the scheme of which an amount of ₹ 3000 lakh is provided as central share of the scheme - Sub Mission on Agriculture Extension (SMAE) under National Mission on Agriculture Extension and Technology Management (NMAET). The central share for any other new centrally sponsored schemes approved during 2019-20 will also be met from the outlay. Administrative sanction will be issued for all schemes after getting sanction from GOI except NMAET. The outlay under RKVY will be used for infrastructure development activities for rice development, vegetable development, promotion of organic farming, strengthening of market infrastructure in wholesale markets, district procurement centres, support to neera processing projects etc.

2)	National Biogas Development Project – 100% CSS	Head of Account : 2810-00-105-99
		Outlay : Rs. 1.00 lakhs

Under the scheme, assistance will be provided for setting up of bio gas plants of the normal type as well as sanitary toilet linked plants and for conduct of various training courses for masons, beneficiaries and other turnkey agents. The subsidy rate is ₹ 12000/plant for general category and ₹ 13000/plant for SC/ST category. The outlay is for construction of biogas plants, cost of training and for other operational costs. The required amount will be provided based on the approval of the project by Government of India. An amount of ₹ 1.00 lakh is provided as token provision for the anticipated central assistance during 2019-20.