

**PROCEEDINGS OF THE DIRECTOR OF AGRICULTURE , DIRECTORATE
OF AGRICULTURE DEVELOPMENT AND FARMERS' WELFARE,
VIKAS BHAVAN, THIRUVANANTHAPURAM**

(Present : P.S.Radhamony)

Sub: Annual Plan 2018-19 – **Vegetable Development Programme** – Continuous Administrative Sanction for amber book components accorded – orders issued- reg:

Read: 1) G.O.(Rt)No. 378/2017/AD dated.04.04.2017
2) G.O.(Rt)No. 467/2017/AD dated.03.05.2017
3) Annual Plan 2018-19
4) G.O.(Rt) No.308/2018/AGRI dated.05.04.2018

Order No. TP(2)7452/2018

Dated: 26.04.2018

Government of Kerala, vide order read 1st above accorded Administrative sanction for the implementation of the scheme, Vegetable Development Programme through the Department during 2017-18 for an amount of Rs.5793.00 lakhs for components included in the Green Book debiting expenditure to head of account 2401-00-119-85 (P). Government vide order 2nd above accorded Administrative Sanction for Amber Book components of the scheme for an amount of Rs.2097.00 lakhs.

Objectives

- Step up the domestic production of vegetables to meet our domestic requirement.
- Promote a culture of self reliance and achieve self sufficiency in vegetables.
- Promote good agricultural practices in vegetable production.
- Convince the farmers of the advantages of modern technology through trainings, field trials and exposure visits.
- Ensure market for indigenous farmers' produce by strengthening block level federated organizations.
- Acknowledge exemplary performance in vegetable production through awards and incentives.
- Give thrust to cultivation of vegetable varieties that form part of daily diet of Keralites like bhindi, tomato, cowpea, chilies etc.
- Popularise micro irrigation for effective use of water which is a precious natural resource
- To make Haritha Keralam programme a reality.

As per the Annual Plan 2018-19, the scheme is proposed to be continued with a budget allocation of Rs.8000.00 lakhs under head of account 2401-00-119-85 (P), Out of

this, components worth Rs.2817.50 lakhs were included in Green Book and the balance amount of Rs.5182.50 is set apart for Amber Book components. An abstract of the scheme is furnished below.

Sl. No.	Component	Amount (Rs. in lakhs)		
		Total	Green Book	Amber Book
1	Promotion through homesteads including Onam vegetable production (Onathinu Orumuram Pachakkari)	600.00	600.00	
2	Promotion of urban clusters and waste management	850.00		850.00
3	Vegetable cultivation through institutions	300.00	197.00	103.00
4	Training, awareness and publicity	50.00	50.00	0.00
5	Cluster development in districts	2050.00	1265.50	784.50
6	Technical support and contractual appointments	100.00	100.00	0.00
7	'Safe to eat branding' – Project based assistance for pesticide residue analysis and issuing reports to facilitate enforcement	50.00		50.00
8	Awards / incentives	75.00		75.00
9	Development support to graded clusters	1000.00		1000.00
10	Documentation	50.00		50.00
11	External monitoring	40.00		40.00
12	Block level federated organizations (Block Sangamathries)	200.00		200.00
13	Establishment of nurseries	200.00		200.00
14	Rain shelter cultivation	700.00		700.00
15	Micro-irrigation with fertigation	400.00		400.00
16	Additional Support to best performing "A" Graded Clusters for filling critical gaps based on volume of business.	50.00		50.00

17	Promotion of zero energy cool chamber for storage of harvested vegetables	200.00	200.00	
18	Mini poly house for vegetable cultivation	100.00	100.00	
19	Vegetable producer companies	500.00		500.00
20	On farm production of bio control agents trichoderma / VAM etc. for distribution within the cluster	25.00		25.00
21	Supply of soil ameliorants including micro nutrients	305.00	305.00	
22	Small value addition units through clusters	75.00		75.00
23	Operational expenses	80.00		80.00
	Total	8000.00	2817.50	5182.50

Administrative sanction for the green book components worth Rs.2817.50 lakhs have been accorded by Government, vide order read 4th above. All the amber book components listed above, except items 7 and 19, will be continued during 2018-19, abiding by the norms and conditions of the Government Orders read above. The details of continuing components worth a total amount of Rs.4632.50 lakhs are furnished below.

1. Promotion of Urban Clusters and Waste Management (Rs. 850.00 lakhs)

a) Supply of Growbags for Terrace Cultivation in new clusters (Rs.630.00 lakhs)

It is proposed to provide assistance for popularising vegetable cultivation in urban areas, in terraces as well as homesteads. This component will be implemented through residence associations. Technical guidance will be provided by the Krishi bhavans concerned. Agro Service Centres will act as nodal points for providing continued technical support to these urban farmers.

For terrace vegetable gardens **25 nos. grow bags (1 unit)** planted with seedlings of 4-6 major vegetable crops, worth Rs. 2000/-, will be supplied to houses in Corporation, Municipal and Panchayat area in a need based manner allowing 75% subsidy i.e., subsidy of **Rs.1500/- per unit**. Growbags will have (40 cm X 24 cm X 24 cm size) 600 gauge, (150 micron thickness) white outer and black inner and should contain 10 to 13 Kg. potting mixture. The potting media combination should be as detailed below.

- | | |
|---|-----------------------------------|
| a) Red soil * | 8 Kg. |
| b) Coir pith compost | 1.50 Kg. (pH should be above 5.0) |
| c) Vermicompost/FYM/Other organic manures | 300 gm |

d) Bone meal	100 gm
e) Neem cake	100 gm.
f) Micronutrient	15 gm.

* In places where there is scarcity of soil for filling the bag, 50-60 % of the soil can be replaced by coir pith compost.

The growbag should contain vegetables seedlings of tomato, chillies, brinjal, cabbage, cauliflower etc. (3 seedlings/bag) along with seeds of cowpea, amaranthus or other varieties. Supply of seedlings of cool season vegetables, if any, should be done in appropriate season. The sample of growbags produced should be subjected to verification by Deputy Director of Agriculture (NWDPR) before commencement of distribution of each lot. Sample photographs of each lot should also be sent to the Principal Agricultural Office by e-mail.

Principal Agricultural Officers of concerned districts will arrange the supply of growbags with seedlings preferably from Department Farms, or other agencies like VFPC/Agro Service Centre/Karmasena/ Kudumbasree units. Quality of growbags, potting mixture and seedlings should be ensured by the supplying agencies as well as the implementing officials before supply. The supplying agencies should do the follow up till the establishment of the seedlings. For arrangements for growbags, preference should be given to Department Farms. It is proposed to supply **42000 grow bag units** utilising an amount of **Rs. 630.00 lakhs**.

A random sampling and verification of the quality of growbags, potting mixture and seedlings distributed should be carried out to ensure their adherence to the prescribed quality standards. Such reports should be filed by Officials. Leaflets/booklets explaining cultivation aspects, pest and disease management, irrigation and manure application etc. should be provided along with growbags.

This component may also be implemented in rural areas with space constraints.

b) Support to existing urban clusters (Rs.75.00 lakhs)

It is proposed to provide assistance for the maintenance of 37500 growbags units established during the previous years by supplying critical inputs such as micronutrients, biocontrol agents, organic pesticides, seeds and seedlings, nutrient supply for the potting mixture etc. The beneficiaries will also be given close follow up and training in proper crop management, including manure and fertiliser application, pest and disease management, good agricultural practices etc by the Krishi Bhavans. The assistance under this component will be limited to Rs.200/-per farmer. An amount of **Rs.75.00 lakhs** is set apart for this purpose.

c) Waste Management linked to vegetable production (Rs. 75.00 lakhs)

i. *Organic Waste Management (Rs.65.00 lakhs)*

In support to Haritha Keralam Programme, domestic composting units will be established along with growbag units to manage the domestic waste and to provide

necessary organic manure for the cultivation. For this vermi compost units/other composting units will be established with 50% of the total cost of Rs. 5000/- ie. Rs. 2500/unit. An amount of Rs. 65.00 lakhs is set apart under this component to establish 2600 units.

ii. Waste Water Management (Rs.10.00 lakhs)

Domestic waste water treatment models suitable for both households and flats/condominiums are being experimented by the CWRDM, for recycling of waste water for enabling vegetable cultivation in three districts, utilising funds released during 2017-18. An amount of Rs. 10.00 lakhs is set apart for continuing the programme on a project mode in other districts through CWRDM and also for establishing 10 demonstration plots of such models in urban areas.

d) Mini-drip/Wick irrigation units (Rs. 45.00 lakhs)

Mini-drip/Wick Irrigation units will be established alongwith the growbag units to avoid excessive use of water, depletion of soil nutrients and for regular moisture supply to the crops. 50% subsidy to the drip units limited to Rs. 2000/unit will be provided for 2250 units. An amount of Rs. 45.00 lakhs is proposed for this component.

e) Formation of Haritha Groups (Rs.25.00 lakhs)

Urban vegetable cultivation will be institutionalised by federating urban clusters of various residence associations at ward level to form "Haritha Groups". These groups will be registered under the Charitable Societies Act. At least 3 to 5 residence associations should join together to form a Haritha Group. An assistance of Rs.50000/-will be provided per Haritha Group to meet the expenses related to registration and other operational expenses.

An amount of **Rs.25.00 lakhs** is set apart for the institutionalisation of urban vegetable growers into Hariha Groups and also for providing technical support and marketing facilities through local volunteers 'Haritha Mitras' to be engaged for this purpose. This will open a self employment opportunity for such volunteers.

The follow up and management of urban clusters shall be the responsibility of Project Director, ATMA of the district.

2) Vegetable Cultivation through Institutions (Rs. 103.00 Lakhs)

Project based cultivation by institutions including NGOs (Rs. 103.00 lakhs)

It is proposed to undertake Project Based Vegetable Cultivation through institutions including NGOs. Institutions can be either private or public. The voluntary organizations/NGOs willing to take up vegetable cultivation in the premises of public and private institutions can also avail assistance under this component. Lumpsum provision of **Rs. 103.00 lakhs** is set apart for this activity.

Assistance will be provided in line with the existing rates of cost of cultivation, based on the project prepared exclusively for the purpose and funds will be released on first-come first-served basis. The minimum prescribed area for the project is 50 cents. Assistance for seeds and other inputs, infrastructure facility, equipments machineries and land development works shall also be included limiting the amount to Rs. 2.00 lakhs per project. While considering land development component the subsidy should not exceed 10% of the total project cost. Principal Agricultural Officer can sanction projects up to Rs.1.00 lakh, and for projects above Rs.1.00 lakh, sanction should be obtained from Director of Agriculture. The projects up to Rs. 1.00 lakh will be scrutinized at district level by a committee constituted by Principal Agricultural Officer concerned. The projects above Rs. 1.00 lakh recommended and received through Principal Agricultural Officer, will be scrutinized at the Directorate of Agriculture by an Evaluation Committee which will be chaired by Additional Director of Agriculture (Farms, Biogas & Vegetables) with Joint Director of Agriculture (VC) as the Convener. Funds will be released through the Principal Agricultural Officer concerned after formal sanction of the project proposal. An agreement shall be executed with the institution stating that vegetable alone will be cultivated in the proposed area for next three years, without any further department assistance.

Institutions, which are willing to participate in the programme, but do not have minimum 50 cents of cultivable land may be allowed to take up vegetable cultivation in the available land and assistance provided as per norms.

Area under each crop, and crop wise production details have to be maintained properly in a register by the institutions and officials of th department.

3) Cluster Development in Districts (Rs. 784.50 lakhs)

a) Clusters (Rs. 540.00 lakhs)

For promoting commercial cultivation of vegetables, minimum 15 farmers will be formed as a cluster to take up cultivation in 5 ha of vegetable crops, either in garden land or wetland, as per availability and suitability. This component will be implemented throughout the state. The cluster members should select vegetable crops and varieties suitable for their locality. It is proposed to organize **680 clusters** in all the revenue blocks in the State. This may be on continuous area based approach or on scattered area basis. Assistance will be given @ **Rs. 75,000/- per cluster** with a minimum area of **5 ha**. However, prorata asistance @ Rs.15000/- per ha will be extended for commercial vegetable cultivation up to 7 ha. Assistance for a cluster cultivating vegetables in **7 ha** will be **Rs.1.05 lakhs**. Each cluster shall be registered with a President and a Convenor.

Assistance @ of **Rs. 15000/ha** will be provided for cultivation of vegetables in **680 clusters** in an area of **3600 ha**, for which a provision of **Rs. 540.00 lakhs** is earmarked. It should be ensured that cultivation in clusters is taken up in a minimum of 2-3 seasons, even if assistance is provided only for one season.

The amount will also be utilised for providing data entry and computer support to A grade / super grade clusters/ other clusters with markets @ Rs.1.50 lakhs per cluster in a need based manner.

The production will be streamlined based on a 52-week production plan and details made transparent through an e-portal mechanism to ensure effective marketing.

Poor performing clusters will be delinked from support and new clusters will be formed.

While forming new clusters, young farmer' clusters (members below 40 years of age) and student clusters (NCC/NSS/Green Cadet Corps etc) will be given priority, considering the key role of youth in grooming the future of Kerala Agriculture.

Space availability in young rubber plantations may also be considered on merit while forming new clusters. A separate programme for intercropping in immature rubber holdings will be formulated at district level based on feasibility, linked with clusters.

Maintenance of Model Plots within Clusters

One model plot per block will be maintained within a cluster under the direct supervision of Assistant Director of Agriculture/Agricultural Officer concerned, so as to have a demonstrative value for the programme that can be replicated. In such model plots, all technologies will be adopted and innovations practiced. Activities under ATMA / ATMA plus may be linked with such plots. Preference will be given for establishing demonstrations / FFS under ATMA in model plots. Separate documentation of such model plots will be made at district level.

b) Soil Testing

Soil Testing should be done in all clusters before the cultivation. Soil sample collection in clusters, schools and institutions by Field Assistants should be completed by 15th of May. The Principal Agricultural Officer will give instructions to the DSTLS/MSTLS to complete the analysis from clusters in a time bound manner so as to give the results before 15th of June.

In clusters vegetable cultivation should be planned in such a way so that the harvest coincides with festive seasons (Onam, Vishu etc.). Pest and disease forecasting may also be carried out and information on the measures to be taken in advance may be passed on to the clusters in time.

c) Solarisation

Solarisation to be promoted in clusters to reduce disease incidence. Demonstration on solarisation should be conducted in 'A' Grade Clusters utilizing funds given as assistance.

Note: Out of total subsidy per hectare 25% is earmarked for the promotion of inputs for safe food production and for promoting good agricultural practices. Bio-control agents, pheromone traps, area wide IPM and bio-fertilizers will be included in the 25% earmarked amount of the subsidy component. Another minimum 15% will be insisted for lime application. Certificate to this effect should be provided in the claim by the Agricultural Officer.

d) Vegetable Cultivation in Fallow Land (Rs. 244.50 lakhs)

Suitable area which is kept fallow for the last 3 years is selected and land preparation is done and cultivation of vegetable crop is undertaken. Fallow land, where vegetable cultivation can be done has to be identified. The cultivation can be undertaken through the individual farmers, landless agricultural labourers, farmer groups, youth clubs and any other organizations who are willing to undertake fallow land cultivation. An amount of **Rs. 30,000/- per hectare** will be given as assistance for undertaking one hectare of fallow land cultivation. (Rs. 25000/ha for cultivators and Rs. 5000/ha for land owners). The assistance for cultivators will be for the activities from land preparation to harvest. Assistance will be provided to the owners of the land for giving the land for cultivation. In an area of **815 ha** of fallow land, vegetable cultivation will be undertaken for which **Rs. 244.50 lakhs** is earmarked. Vegetable cultivation can be done in fallow either owned by the cultivators or in leased lands. As far as possible SC/ST Farmers/Groups should be given preference for this programme.

The details of assistance proposed and district wise targets are given below.

Sl. No.	Item	Rate of assistance (Rs/ha)	Area (ha)	Total Amount (Rs. in lakhs)
1.	Cultivation Assistance	25000	815	203.75
2.	Lease value of land	5000	815	40.75
	TOTAL	30000	815	244.50

Abstract of the component Cluster Development in Districts

Sl. No.	Particulars	No./Unit	Rate (Rs.)	Amount (Rs. in lakhs)
a.	Clusters (5 to 7 ha)	680 Nos	15000 ha	540.00
b.	Soil Testing			0.00
c.	Solarisation			0.00
d.	Vegetable Cultivation in Fallow Land	815 ha	30000	244.50
	TOTAL			784.50

4) Award / Incentives (Rs. 75.00 lakhs)

Best performers under vegetable cultivation at district and state level will be given awards. Incentives/exposure visits also will be arranged to honour the best performers. Awards will be given on best performances as detailed below and an exposure visit for the best performers of the state to the important Agricultural Research Stations and Model Agricultural Plots of the country will be arranged.

a) Awards

- Best Vegetable Farmer (only at District Level)
- Best Student
- Best Teacher
- Best Head of Institution
- Best Educational Institution
- Best Extension Functionary – Assistant Director of Agriculture, Agricultural Officer, Agricultural Assistant
- Best Cluster
- Best Institution – Private, Public
- Best Tribal Cluster
- Best Terrace Cultivation

The total financial outlay of the programme is detailed below.

i) District level awards

Items	I (Rs.)	II (Rs.)	III (Rs.)	Total for 14 districts (Rs. in lakhs)
Best Vegetable Farmer	15,000	7,500	5,000	3.85
Best Student	15,000	7,500	5,000	3.85
Best Teacher	15,000	7,500	5,000	3.85
Best Head of Institution	15,000	7,500	5,000	3.85
Best Educational Institution	15,000	7,500	5,000	3.85
Best Extension Functionary – Asst. Director of Agriculture	15,000	7,500	5,000	3.85
Agricultural Officer	15,000	7,500	5,000	3.85
Agricultural Assistant	15,000	7,000	5,000	3.85
Best Cluster	15,000	7,500	5,000	3.85
Best Private Institution	15,000	7,500	5,000	3.85
Best Public Institution	15,000	7,500	5,000	3.85
Total Provision for Award Function and Field Visits in Districts LS				11.2
Sub Total				53.55

ii) State Level awards

Items	I (Rs.)	II (Rs.)	III (Rs.)	Total
Best Student	50,000	25,000	15,000	0.9
Best Teacher	50,000	25,000	15,000	0.9
Best Head of Institution	50,000	25,000	15,000	0.9
Best Educational Institution	75,000	50,000	25,000	1.5
Best Extension Functionary				
Asst. Director of Agriculture	50,000	25,000	15,000	0.9
Agricultural Officer	50,000	25,000	15,000	0.9
Agricultural Assistant	50,000	25,000	15,000	0.9
Best Cluster	50,000	25,000	15,000	0.9
Best Institution - Private	50,000	25,000	15,000	0.9
Public	50,000	25,000	15,000	0.9
Best Tribal Cluster	50,000	25,000	15,000	0.9
Best Terrace Cultivation	50,000	25,000	15,000	0.9
Best Residential Association	50,000	25,000	15,000	0.9
Sub total				12.3
Provision for Award Function and Field Visits LS				4.67
Total Amount for Awards (53.55+12.3+4.67)				70.52

b) Incentives / exposure visit (Rs.4.48 lakhs)

It is envisaged that exposure visit will create confidence and awareness to adopt the scientific cultivation in their own fields as well as farmers fields which would result in increased production.

Exposure visits will be arranged for the best performers of the state to the important Agricultural Research Stations and Model Agricultural Plots of the country. An amount of **Rs. 4.48 lakhs** is set apart for this item.

Award committees will be constituted at State Level and District Level for the purpose of finalizing the awards.

The *District Level Committee* will be constituted with the following members.

1	Principal Agricultural Officer of the concerned district	Chairman
2	Representatives of the KVK/Research Station of Kerala Agriculture University in the concerned district	Member
3	Deputy Director of Education of the district	Member
4	Deputy Director of Agriculture (NWDPR) of the concerned district	Convener
5	Assistant Directors of Agriculture of the concerned block	Member

The *State Level Committee* will be constituted with the following members.

1	Director of Agriculture	Chairman
2	Professor and Head, Department of Horticulture, College of Agriculture, Vellayani or his representative	Member
3	Additional Director of Agriculture (Farms, Biogas & Vegetables)	Convener
4	Additional Director of Agriculture (Extension)	Member
5	State Level Representative of Education Department	Member

The following instructions are issued for strict compliance while implementing this component.

- Wide publicity should be given for the invitation of nomination for awards through newspaper (website:- karshikakeralam.gov.in/ keralaagriculture.gov.in) and should be discussed in district level and panchayath level Karshika Vikasana Samithi well in advance. A district level award function should be arranged.
- The eligibility of the award is confirmed only to person in Kerala only.
- The award is given once in a year.
- The award winners of the previous one year will not be considered for the current year awards.
- The person who competes for each award should submit application within the stipulated time. Format for application communicated during 2012-13 can be utilized for this purpose. **Nominations in the case of Officials can be made by the Controlling Officers also based on performance.**
- **For the award for Head of Institutions, the heads of Private/Public Institutions undertaking Project Based Cultivation may also be considered.**
- Krishi Bhavans and Panchayats can also nominate farmers for awards.
- Notice for publicity should be exhibited in Krishi Bhavan, Panchayath Office, Village Office, Co-operative Society Notice Board etc.
- Farm Information Bureau will give wide publicity through leading dailies, All India Radio etc.
- IITMK should give publicity for the awards through Kissan Krishi Deepam Programme.
- There will be only one District Level Award Committee for finalization of nominations at district level and one State Level Committee for finalization of awards at state level.
- The date of visit conducted and details of members included in the Committee along with recommendations made by the District Level Committee with nominations and supporting documents, if any, should be furnished to State Level

Award Committee after conducting field inspection. The nominations received without the recommendation of District Level Award Committee will not be considered by the State Level Committee.

- Care should be taken to submit only the best one nomination for each category of Award to the State Level Committee. Best one nomination selected should be an eligible applicant for the concerned award as per the eligibility criteria fixed. The District Level Committee should ensure that the crop of the nominee is maintained scientifically and is free from pest and diseases. Supporting documents like photographs, CD etc. should be attached with nomination.
- Correct Official Name, Postal Address and Contact No. should be included in the application.
- It should be ensured that number of awards in each category is limited to 3 nos. i.e., Ist, IInd, and IIIrd. As far as possible sharing should be avoided.
- *In the case of awards for institutions the District Level Authorities should take special attention to ensure that the nominations are classified in the correct category. Government aided institutions may be classified as Government Institutions.*

Field Verification of district level and State level awards will be documented utilizing the fund provided for documentation for districts and State HQ.

5) Development Support to Graded Clusters (Rs. 1000.00 lakhs)

During the current financial year, **Rs. 1000.00 lakhs** is earmarked for this component. Cluster based development is the key component in the vegetable initiative and strengthening of potential clusters is essential for the evolution of an efficient vegetable scenario in the state.

a) Support for 50 New 'A' Grade Clusters – Rs. 315.00 Lakhs

Fifty numbers of **(50) new 'A' Grade Clusters** will be selected for 2018-19 with an outlay of **Rs. 630.00 lakhs**. The rate of assistance will be Rs. 6.30 lakhs per graded cluster.

The clusters established in 2015-16, 2016-17 and 2017-18 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 provided for those clusters covering support for establishing nurseries, collection centers, pre cooling centers, input centers and other need based project based support.

Objectives

- a) Effective organization, development & strengthening of graded clusters.
- b) Empowering the graded clusters for taking up new technologies.
- c) Improving the cohesion of cluster members.
- d) Providing proper infrastructure for the development of graded clusters.

Technical Programme

The selection criteria prescribed during 2017-18 will be followed this year also for the grading of new clusters. The new 'A' Grade Clusters (50 Nos.) alone will be assisted at the rate of Rs. 6.30 lakhs per cluster. The assistance will be disbursed in 2 equal installments. An MoU will be signed in this line. 'A' Grade clusters will be designated as Lead Clusters (Haritha Leader Sanghom). Total amount per cluster should not exceed Rs. 6.30 lakhs.

The following group of activities is proposed for the grading of clusters.

a. Cluster Dynamics	-	30 Points
b. Economic Dimension	-	30 Points
c. Technical Dimension	-	24 Points
d. Innovative Activities	-	16 Points
Sub total	-	100 Points

The parameters included under each activity for grading are shown in Table. The grading criteria to be followed for each activity and the parameters to be ranked are shown below.

	Particulars	Points	Maximum Points
I	Cluster Dynamics		
a.	Size of Cluster (Nos. of Farmers)	3	Less than 25 Members – 2 Points Above 25 – 3 Points
b.	Frequency of the Meetings	5	1 Meeting per month for the last year – 5 Points 1 Meeting for 2 months – 3 Points
c.	Accounting	5	Keeping well maintained Account Books – 5 Points
d.	Proximity of the Members	4	Located in Contiguous Area – 4 Points
e.	Attendance in the Meeting	5	More than 90% - 5 Points
f.	Good Leadership/ Communication	8	If the leader is very good with good communication among cluster members - 8 Points
II	Economic Dimension		
a.	Infrastructural Facility	8	Any infrastructure for the cluster – 8 Points
b.	Profitability	8	If profitable as per records of the members – 8 Points
c.	Marketing	8	Regular marketing arrangements made – 8 Points
d.	Period of Cultivation in the Locality	3	If regularly cultivated for the last 3 years in the same locality - 3 Points
e.	Use of Credit	3	If availed credit for the group/members – 3 Points

III Technical Dimension			
a.	Use of Hybrids	4	If hybrids are cultivated – 4 Points
b.	Types of Crops/No. of Crops	4	Less than 4 – 2 Points More than 4 – 4 Points
c.	Safe to Eat and Organic Production	8	Safe to eat/organic mode of production – 8 Points
d.	Open Precision Farming/ Protected Cultivation	8	Adoption of open precision farming/Protected cultivation in the cluster – 8 Points
IV Innovation and Recognition			
a.	Collective Input Arrangement	4	If collective arrangements for inputs – 4 Points
b.	Awards	4	If any awards received for the cluster – 4 points
c.	Innovative Practices/Trials	4	Any innovative practices/trials done in the cluster – 4 Points
d.	Fund Mobilisation from Members/Others	4	Any fund mobilised from members or other organisation other than Department of Agriculture – 4 Points

(Appropriate marks should be given for other clusters proposed for grading depending on the maximum marks indicated above.)

Grading Criteria

The grading criteria are indicated below.

- 'A' Grade - 60 Points and above
- 'B' Grade - 50-60 Points
- 'C' Grade - Less than 50 Points

The required components can be selected from the cafeteria model below, provided the assistance is limited to Rs.6.30 lakhs per cluster as done during previous years.

Sl. No.	Items	Rate (Rs.)	*Maximum amount that can be spent (Rs. in lakhs)
1	Setting up of collection centres, infrastructure facilities, computer systems, furniture etc.		2.00
2	Purchase of bio-control agents, pheromone traps, bio-fertilisers, micronutrient mix etc.		0.25
3	Procurement/Arrangement of inputs		0.30
4	Production and distribution of seedlings		1.00
5	Distribution of curry leaf, papaya, drumstick etc to farmers/homesteads		0.25

6	Transportation subsidy @ Re. 1 per kg including support to satellite clusters	Re.1 per Kg.	1.00
7	Micronutrient Testing		0.20
8	To take up new technologies as demonstration	LS	0.75
9	Training programmes to members of clusters and satellite clusters		0.30
10	For conducting meetings		0.05
11	Any other innovations	250	0.25
12	Other Contingencies including insurance premium of farmers		0.20
TOTAL			6.55

Each 'A' Grade Cluster selected for assistance should prepare a plan of action for assistance duly approved by Agricultural Officer concerned and the amount could be released to the clusters. A monitoring mechanism should also be introduced by the District Level Committee.

A minimum of three clusters surrounding the lead cluster should join the lead clusters for technical and marketing support. These clusters will be called satellite clusters. Lead clusters should be registered under the Charitable Societies Act. It is preferable to restrict the activities of the lead clusters within a Panchayat. At least 200 farmers should be benefited by the activities of the lead clusters through marketing, distribution of inputs and other technological interventions. Sustainability of the clusters should be ensured.

b) Revolving Fund for Existing Clusters – Rs. 685.00 Lakhs

In addition to the 50 new 'A' Grade Clusters, an amount of Rs.685.00 lakhs is set apart for providing need based support for balance clusters developed in previous years in a need based manner. This will be provided as revolving fund @ Rs. 1.00 lakh per cluster. The entire responsibility of management of revolving funds will be vested with the clusters. The role of the department officers will be limited to guidance on utilisation of the revolving fund.

6) Documentation (Rs. 50.00 lakhs)

An amount of Rs. 50.00 lakhs is set apart for the State and district level visual documentation of vegetable development programme. Out of this Rs. 28.00 lakhs will be utilised for block and cluster level documentation consolidated at district Level, Rs. 20.00 lakhs for digital documentation at State Level to be done by external agency or FIB. Activities at block and cluster level will be provided for State HQ, which can be utilized for documentation of field visits for State Level Awards.

7) External Monitoring (Rs. 40.00 lakhs)

A concurrent monitoring and evaluation of the scheme implementation will be carried out utilizing the services of an external agency. An amount of **Rs. 40.00 lakhs** set apart for the component will be utilized for the conduct of external monitoring activity.

8) Support to Block Level Federated Organisations (Rs. 200.00 lakhs)

Financial support will be provided to Block Level Federated Organizations established during the last three years and good and well performing Block Level Federated Organizations for specific infrastructure support.

a) Need based Support for 4 Well Performing Block Level Federated Organizations (Rs. 40.00 lakhs)

Assistance will be provided to 4 good and well performing block level federated organizations for specific infrastructure support limited to a maximum of 10 lakhs per BLFO as one time assistance on a project mode, including honorarium of data entry operators. Preference will be given to support biopharmacy, ecoshop, onfarm production of pseudomonas/ trichoderma etc with the support of NIPHM trained officers An amount of **Rs. 40.00 Lakhs** is earmarked for this component. Necessary projects will be submitted by districts for implementation of this component.

b) Establishment of new block level federated organisations (Rs. 100.00 lakhs)

It is proposed to set up 10 new block level federated organisations during 2018-19, providing assistance @ Rs. 10 lakhs per BLFO. An amount of Rs. 100.00 lakhs will be utilised for this purpose.

c) Training to BLFO functionaries (Rs.15.00 lakhs)

Training will be imparted to BLFO functionaries on accounting, management and key areas of organisational development for effective functioning, utilising the services of accredited institutions. An amount of Rs.15.00 lakhs will be set apart for this purpose.

d) Revolving fund to BLFOs (Rs. 45.00 lakhs)

Revolving fund will be sanctioned to 9 best performing BLFOs in a need based manner on a project mode, limited to a maximum of Rs.5.00 lakhs per BLFO. The entire responsibility of utilising the revolving fund will be vested with the registered BLFOs. The role of department officers will be restricted to guidance on the utilisation of the revolving fund. An amount of **Rs.45.00 lakhs** is set apart for this purpose.

Ranking of Block Level Federated Organisations

The Block Level Federated Organisations established in 2015-16, 2016-17 and 2017-18 will be ranked on the basis of the following criteria.

- Volume of business/turn over - minimum of 3 to 5 MT per week.
- New Technologies like Hybrids, Micro-nutrients, Micro-irrigation, Rainshelters/ Polyhouses etc.
- Adoption of Good Agricultural Practices like Safe-to-Eat Organic Mode of Production and Organic Certification.
- Soil test based Nutrient Management
- Financial Literacy and credit arrangements including Kissan Credit Card
- Improvement of productivity of at least 1-2 T per ha.

- Innovations like cool chambers for cold storage
- Seedling Production Unit/Nurseries
- Marketing Units
- Biopharmacy Units
- Group dynamics- cohesion, leadership, linkage with Panchayath Level Clusters, regular meetings etc.
- Support from LSGIs and convergence with ongoing schemes like SHM, HADA, NRLM, NREGS etc.
- Production Plan and Database Compilation
- Farmers Participation
- The new innovations introduced will be considered as one of the success criteria of the organisation. The selected performing Block Level Federated Organizations should qualify at least 80% of the criteria proposed. Block level market outlet and seedling production unit are mandatory selection criteria for performing Block Level Federated Organizations.
- The selection process/ranking of performing BLFOs should be initiated only after providing ample time for the performance of the existing organisations. The ranking criteria should be strictly adhered to. The matter should be discussed in the District Level Committee for Vegetable Development Programme and the proceedings of the meeting should be recorded. A copy of the minutes should be submitted to the Director of Agriculture.

Implementation and Monitoring

The activities of both Farmer Clusters as well as Block Level Federated Organizations will be monitored by the Principal Agricultural Officer assisted by Deputy Director of Agriculture (NWDPR) with the active co-ordination of activities by Assistant Director of Agriculture of the concerned block and Assistant Director of Agriculture (M). The Agricultural Officer/Agricultural Field Officer will implement the programme at the grass root level with the assistance of Agricultural Assistants. Monitoring, supervision and support will be provided at the district as well as directorate level based on the report from grass root level.

There should not be any duplication of the block level federated organisations of the department and markets established by VFPC at ward level in panchayats. In potential panchayats, both the organisations could also work together.

The selection and approval of activities in respect of each performing Block Level Federated Organizations will be done by the District Level Committee chaired by PAO with DDA (NWDPR) and DDA (H) as compulsory members.

9) Establishment of Nurseries (Rs. 200.00 lakhs)

The component aims at production of sufficient quality vegetable seedlings to cater the demand of the general public.

Objectives

- To ensure supply of quality planting materials of vegetables.
- To enhance the production and thereby income of farmers.
- To teach farmers the importance of using quality planting materials.
- To increase the trust of farmers in the planting materials supplied through Department of Agriculture as of true quality.
- To control unscrupulous practices in private sector in seeds and seedling production of vegetables, avoiding farmers getting cheated.

The project involves 2 components programmes, viz. Establishment of Nurseries in Corporation & selected Municipalities and providing Revolving Fund to Block Level Nurseries.

a) Establishment of Small Nurseries in Corporations/ Municipalities/ Panchayat (Rs. 80.00 Lakhs)

With the successful implementation of Vegetable Development Programme there is huge demand for vegetable seedlings in the urban area. Seedlings are largely required for the preparation of growbags and rejuvenation of growbags supplied earlier.

Nurseries of 40 to 400 sq.m area (1 to 10 cents) with insect proof net/ shade net/ rainshelter to protect the seedlings from insects, rain, heat etc. will be established as per requirement to ensure local availability of quality planting materials. Seedlings will be raised in protrays and as far as possible soil less media should be used as the planting medium. Assistance will be provided at the rate of Rs. 1000/- per sq.m for establishing the nurseries and Rs.400/- per sq. m as revolving fund. A total nursery area of 5714 sq.m will be established in the current year, utilising an amount of Rs.80.00 lakhs. Beneficiaries can be individual or groups. Seeds for this purpose can be procured from VFPCCK/KAU/Departmental Farms and such other agencies.

Institutional support should be provided for nurseries by establishing them preferably with the support of Agro Service Centres, Kudumbasree Units, Clusters etc. so as to make them self sustainable. In Corporations where institutional support is not available, institutional support from Municipalities can be resorted to.

The selection of Municipalities/Corporations for setting up of nurseries should be done by the District Level Committee for Vegetable Development Programme in consultation with the Officers concerned.

b) Need Based Support for Block Level Nurseries (Rs. 50.00 Lakhs)

For resolving critical gaps identified for effective functioning of nurseries in achieving their objective of production of quality planting materials, need based support up to a maximum of Rs. 2.00 lakhs per nursery will be provided as revolving fund on a

project mode to 25 Block Level Nurseries established in previous years. A total amount of Rs. 50.00 lakhs is set apart for this purpose.

c) Establishment of New Block Level Nursery (Rs. 70.00 Lakhs)

It is proposed to set up 10 new Block Level Nurseries during 2017-18 providing assistance @ Rs. 7.00 lakhs per nursery. Rs. 5.00 lakhs for establishing the nurseries and Rs. 2.00 lakhs for revolving fund.

The entire responsibility of management of revolving fund will be vested with the beneficiaries. The role of the department officers will be limited to guidance on utilisation of the revolving fund.

Implementation & Monitoring

At District Level Scheme will be implemented and monitored by the Principal Agricultural Officer assisted by Deputy Director of Agriculture (NWDPPRA) with active participation of Assistant Director of Agriculture at the block level. Necessary guidance for the establishment of the nursery would be provided by Assistant Director of Agriculture of the concerned block with technical guidance from Kerala Agricultural University. The AO/AFO will implement the Scheme at the grassroot level. Monitoring, supervision and support will be provided at the district as well as directorate level based on the report from grassroot level.

The District Level Committee for Vegetable Development Programme should ensure that the Revolving Fund is provided only for those nurseries which are functioning properly and whose performance is ensured by the Agricultural Officer concerned. The Committee will also scrutinize and accord sanction for infrastructure projects.

Additional Director of Agriculture (Farms, Biogas & Veg.) will co-ordinate all the activities of the project at the state level.

Block Level nurseries can be established as part of a Cluster or as part of Block Level Federated Organisations.

10) Promotion of Rain Shelter (Rs.700.00 lakhs)

The concept of 'Rain shelter cultivation' gains importance in conditions where crops are to be protected from extreme climate (Severe summer & heavy rains). Rain shelter is a low cost structure with frame work and roof cladding. Frame work can be made up of GI pipes or low cost materials like bamboo or palm poles. The roof cladding is done with transparent U.V. stabilized polythene film. The sides of the structure are kept open to ensure ample ventilation. It helps year-round cultivation of vegetables by protecting from heavy rain and extreme solar radiation that affect plant growth adversely.

Objectives

- a) To popularize the concept of Rain Shelter cultivation of Vegetables.
- b) To enhance production of vegetables through increased number of crops taken per year.
- c) To increase yield per unit area cultivated.
- d) To popularize physical and biological methods of pest control within a small manageable area.
- e) To utilize available spaces like terraces which are not utilized in traditional cultivation.
- f) To strengthen the concept of 'Family Farming'.
- g) To bring additional income to farmers during lean season.
- h) To utilize available space and time effectively.

Technical Programme

It is proposed to give financial assistance for construction of rain shelters as a permanent structure. The framework will be constructed using GI pipes fixed to the ground using concrete. The roof will be covered using UV stabilized sheet of 200 microns. All four sides will be covered upto 1m height using insect proof net to prevent straying of cattle etc. This will be done above a base made of one-brick thickness.

Cost estimate for rain shelter

The total cost for constructing a 100 m² rain shelter will be approximately about Rs. 67,000/- as shown below

Sl. No.	Item	No./ quantity	Rate/Unit cost (Rs.)	Total cost (Rs.)
1	GI pipes fixed with concrete (3 m length)	30 Nos.	Rs.1000/-	30000/-
2	UV-stabilised Polythene sheet (200 microns)	20m x 7m	50/sq.m	7000/-
3	Insect proof net (for sides)	50sq.m.	50/sq.m.	2500/-
4	Wages for labour	40no.	600	24,000/-
5	Miscellaneous (Floor preparation, coir, Copper wire etc.)			3500
	Total			67,000/-

Operationalization and activities

It is proposed to set up 1400 no. of rain shelters, each of 100 sq.m. area, during this financial year in farmers fields with 75% financial assistance. Type of rain shelters using GI pipes are only included. Details of assistance is given below.

Sl. No.	Type of Rain Shelter (100 sq.m.)	Total Estimated Cost (Rs)	Financial Assistance proposed	No. of units	Total outlay required (Rs lakhs)
	Frame work with GT pipes fixed using concrete	67000	75% of total cost limited to 50,000/-	1400	700.00
	Total			1400	700.00

Selection of beneficiaries and technical advice will be done at Krishi Bhavan level in consultation with Asst. Director of Agriculture at the block level. Progressive farmers in each locality will be selected from among the vegetable cultivators. All activities like construction of rain shelter, selection of crops and their cultivation can be monitored at Krishi Bhavan level and necessary suggestions given wherever necessary. Good quality materials for construction can be arranged through RAIDCO, KAICO and other government agencies in order to avoid farmers getting cheated by private agencies. At the district level, the programme will be monitored by DDA (NWDPR), in consultation with Principal Agricultural Officer and at the State level by Vegetable Cell of Directorate headed by Addl. Director (Farms, Biogas Development and Vegetables).

The following directions shall also be complied with

- a) Wide publicity should be given for inviting applications and selection of beneficiaries through media.
- b) Selection should be through a transparent process.
- c) Changes in specification for smaller rain shelters may be made, if required, within the budget provision and rate of assistance.

11) Micro irrigation and fertigation (Rs.400.00 lakhs)

- a) Promotion of Micro-irrigation and Fertigation Units (Rs.375.00lakhs)

Fertigation is the method of applying fertilizers, soil amendments and other soluble products required by plants during their various growth phases through irrigation water in combination with Drip irrigation system. It forms an efficient method of precisely applying required quantity of nutrients and water directly to the root zone. With Fertigation, water use is reduced, nutrient application is precise and disease incidence is less as the foliage remains dry. Nutrient use efficiency is increased by reducing loss of nutrients by leaching to ground water. Thus combining irrigation and fertilizer application through 'Fertigation' method will help in the judicious use of these two valuable inputs.

Components of a Fertigation System

i. *Drip Irrigation Unit*

Consisting of main pipe, laterals, sub-laterals and drippers (emitters). The system is laid out according to the topography of the land, crops cultivated etc. and connected to the irrigation pumpset and perennial water source. Cost of installing a unit in 0.20 ha. comes to Rs.40,000/-

ii. *Fertigation Unit Equipments*

- **Ventury Injector** - It is a simple and low cost device. A partial vacuum is created in the system which allows suction of fertilizers, prepared solution of which is kept in a container, into the irrigation system through ventury action. Vacuum is created by diverting a percentage of water flow from the mains and passing it through a constriction which increases velocity of flow thus creating a drop in pressure. This pressure drop causes fertilizer solution to be sucked into ventury through suction pipe from tank and from there enters irrigation system. Suction rate of ventury is 30-120 litres/hour. Liquid fertilizers can be ideally used in this equipment. Others may cause clogging of the equipment. Cost of one equipment comes to Rs. 2,500/-

- **Fertilizer Tank** - A part of irrigation water is diverted from mainline and flow through a tank containing fertilizers in a liquid or soluble solid form, before returning to the mainline. Pressure in the tank and mainline is same normally, but a slight dip in pressure is created between off take and return pipes for the tank using a pressure reducing valve. This causes water from main line to flow through tank causing dilution and flow of diluted fertilizer into irrigation stream. With this system, concentration of fertilizer entering irrigation water changes continuously with time, starting at high concentration A 30 litre tank costs Rs. 8,000/-.

Fertilizer tank is made of mild steel with powder coating of more than 70 microns both inside and outside to prevent corrosion and weather effects. Turbulent inlet ensures thorough mixing of chemicals/fertilizers. Separate inlet and outlet valve to control injection rate is provided with provision of strainer on outlet and drain port to flush the tank. Both solid and liquid fertilizers can be used here.

- **Fertilizer Injection Pump** – this equipment is used very small holdings, say 0.10 ha or less where water pressure will not be sufficient to suck fertilizers from the container. It is a piston/diaphragm pump which are driven by water pressure of irrigation system such that the injection rate is proportional to the flow of water in the system. Its advantages are that a high degree of control over fertilizer injection rate is possible with no serious head loss and low operating cost. If inflow of water stops, fertilizer injection also stops automatically. It is an ideal equipment for accurate fertigation. Liquid fertilizers are ideal for use here also. Cost of an injection pump comes to Rs. 6,500/-.

Price Rates are arbitrary and changes are likely to occur.

Fertilizers Suitable for Fertigation

Only compatible fertilizers containing water-soluble nutrients can be used for fertigation. Others cause precipitation of salts by chemical reaction which clogs irrigation lines and emitters.

N (nitrogen) and K (potassium) nutrients are water soluble. Commonly used N-fertilizers like Urea, Ammonium sulphate, Ammonium nitrate and Calcium nitrate can be used. K-fertilizers like MOP (Potassium chloride), Potassium sulphate, Potassium nitrate are also suitable. Among Phosphorous containing chemicals, only phosphoric acid is suitable. Various NPK complex fertilizers like 19-19-19, 20-20-20, 13-3-43 can also be used. It is cheaper to prepare tailor-made solutions of NPK at farmer's field to find out compatible combinations.

To avoid precipitation of salts by chemical reaction in the fertilizer tank, it is advisable to keep at least 2 tanks, one containing phosphatic and sulphate compounds and the other containing Ca, Mg and micro nutrients.

Objectives

The Scheme proposes to encourage and provide financial assistance for installing Micro Irrigation with Fertigation unit for open vegetable cultivation in plots of unit size 0.2 ha. It is proposed to establish 1400 units in 2018-19.

Pattern of Assistance

Sl. No.	Type of Cultivation	Unit	Components	Cost per Unit (Rs)	Rate of assistance (Rs)	No. of Units	Amount (Rs. in lakhs)
1.	Open Cultivation	0.20 ha.	Drip Irrigation Unit +Ventury Injector/ Fertilizer Tank/ Fertilizer Injection Pump+Plastic Mulch+Labour Cost	40000	30000	1250	375.00
	TOTAL						375.00

Benefits

- Efficient use of fertilizers and irrigation water.
- Maintain soil fertility.
- Avoids leaching and loss of nutrients.
- Pest and disease incidence is reduced as the plant foliage and stem as well as inter row areas remain dry.

- e) Increase in yield upto 30% is obtained.
- f) Avoid wastage of water.
- g) Helps to achieve savings of time, labour and energy.
- h) Increase farmer's income thereby attracting more people to take up vegetable cultivation.

Operationlisation

It is proposed to install Micro Irrigation cum Fertigation Unit in a unit area of 0.20 ha (50 cents) in open cultivation of vegetables. However a minimum of 0.1 ha (25 cents) can also be considered for which corresponding subsidy limited to Rs. 15,000/- can be given. Innovative farmers will be selected from Krishi Bhavan area by Agricultural Officer in consultation with Assistant Director of Agriculture. Implementation and valuation of the fertigation unit will be done by Agricultural Officer of the Krishi Bhavan/ Assistant Director of Agriculture with random field verification by Deputy Director of Agriculture (NWDPR) concerned.

Assistance to the tune of 75% of the total cost limited to Rs. 30,000/- per 0.2 ha size as mentioned above can be sanctioned.

b) Promotion of Family Drip Irrigation System (Rs.25.00lakhs)

It is proposed to promote low cost Family Drip Irrigation System with over head tank and distributors, especially in terraces and condominiums of urban areas and in appropriate locations in rural areas for effective utilization of irrigation water in line with the objective of Haritha Keralam programme. It is proposed to provide 75% assistance limited to Rs.7500/-per unit for setting family drip irrigation units. Beneficiaries will be selected from clusters based on performance evaluation, with the approval of District level Committee. The lay out will be executed by approved agency and subsidy sanctioned, based on plan and estimate approved by the Engineering Wing of the Department. It is proposed to install 333 no.s of family drip irrigation units utilizing a provision of Rs.25.00lakhs.

12) Additional Support to Best Performing 'A' Grade Clusters (Rs. 50.00 lakhs)

Additional support of Rs. 5.00 lakhs/cluster will be provided to 10 clusters from the existing 'A' Grade Clusters based on further grading of the existing 'A' Grade Clusters. The assistance will be given on project mode. Best performing 'A' grade clusters with biopharmacy, nurseries, markets etc, with a minimum turnover of Rs.5.00 lakhs will be selected as Super Clusters under this component. The State Level Committee may modify the existing norms as per requirement to encourage best A Grade Clusters.

13) On Farm Production of Bio-control Agents (Rs. 25.00 lakhs)

- a. Support for establishment of onfarm production units of Trichoderma (Rs.14.00 lakhs)

Trichoderma has been found to be an effective bio control agent against many fungal diseases. Establishing small units of Trichoderma production by vegetable clusters for their own use can meet the local requirements to a very extent. The essential materials required for the unit are the following.

On-farm Production of Trichoderma at Farm Level

Sl. No.	Item	Quantity	Rate (Rs)	Amount (Rs)
1	Pressure cooker (10 litres capacity)/Autoclave(mini)	1	7000	7000
2	Incubation chamber for inoculation	1	3000	3000
3	Stove	1	4000	4000
4	Plastic trays	10	70	700
5	Autoclavable bags	500 nos	4/bag	2000
6	Absorbant cotton	1 bundle	200	200
7	Non absorbant cotton	1 bundle	150	150
8	PVC pipe pieces for making plugs			100
9	Rubberband			100
10	Packaging bags			1000
11	Spirit lamp/ candle	1 no	100	250
12	Miscellaneous if any			1500
	Grand Total			20000

One test tube of mother culture can be used for inoculating the medium which will develop fully as a green mass within a week. This can be powdered, packed and distributed for large scale multiplication in suitable substratum like cowdung. Depending on the nature of medium used, only Rs.5-20 is required as cost of medium for preparing 1 kg. of Trichoderma 100 % culture. This can be mixed with talc @50g. culture in 1 kg.talc, for producing 20 kg of Trichoderma.

On-farm production unit should be implemented through VDP Cluster. The secretary/Convenor of the samithi will be incharge of the equipments and other assets created. Agricultural officer should conduct periodic verification, give necessary technical guidance and see that the unit is running smoothly.

The following operational guidelines are to be followed

- Mother culture of Trichoderma has to be obtained from KAU / NIPHM /NCRMI
- Never use cultures from any other source without permission.

- Before using a culture the genetic purity of the culture should be studied. Steps are being taken at Directorate to sign MOU with NCRMI for the supply of cultures and for quality analysis of bio control agents produced by farmers at regular intervals.
- Always start mass production of Trichoderma from original mother culture.
- Random checking of the purity of bulked Trichoderma must be done once in four months to confirm the purity of the isolate.
- If the purity of the biocontrol agent is in doubt, then the centre should restart the production only after complete sterilization of the unit is done under the supervision of trained officers.
- Mass multiplied Trichoderma can be distributed to farmers in sorghum grains with or without powdering. It can also be distributed after enriching it.
- Never "sell" bio control agents after printing MRP on the packet. Instead print "For distribution among the farmers". As far as possible never distribute using printed packets. A bit notice giving the details such as date of production, source of the mother culture used, method of application, etc. can be kept inside the packet.
- Bio control agents shall be produced only under the supervision of Agricultural officers who have been trained in onfarm production. Once the trained Agricultural officer is transferred from the Panchayath where a production centre is functioning, then the unit must stop production until the service of a trained officer is ensured to oversee the production.
- Safety precautions to be followed at the production centre should be strictly adhered to. A chart should be prepared and exhibited in all the centre.
- The bio control agent produced should not be stored for more than two months.
- All the production centres should keep a register showing all the details related to production of bio control agents such as name of bio control agent, source of culture, date of production, quantity produced etc.
- A register should be maintained at Krishi bhavan also showing the details of VDP Clusters engaged in on farm production of bio control agents.
- The Agricultural Officers having NIPHM Diploma for the districts will be in charge of establishing the production units in selected Panchayaths.

b) On farm production of Mycorrhiza (VAM) (Rs.8.00 lakhs)

Mass production of Mycorrhiza (VAM) can be taken up by the individual farmer or farmer groups. On farm production makes the economic and environmental benefits of VAM Fungi available to a larger number of farmers covering larger area besides reduced use of chemical fertilisers.

Expenses for the Mass Production of Mycorrhiza (VAM)				
Sl No	Item	Quantity	Rate (Rs)	Amount (Rs)
1	Plastic pots of medium size	100 nos	50	5000
2	Starter inoculams	200 gm	1000/ 200 gm	1000

3	Seed material of rice/ragi/maize/sorghum	250 gm		100
4	Carrier material- vermicompost	500 kg	Rs 12/kg	6000
5	Labour charges	10 mandays	Rs 500/ manday	5000
6	Miscellaneous			2900
	Grand Total			20000

c) Training programme (Rs.3.00 lakhs)

An amount of Rs.3.00 lakhs will be utilised for imparting training on the production of bio control agents.

Abstract of the component is furnished below.

Sl. No.	Name of Bio control agents	No. of on-farm units	Financial Assistance proposed (Rs)	Total outlay required (Rs. in lakhs)
1.	(Trichoderma/ VAM etc.)	110 no.s	20,000	22.00
2.	Training on production of bio control agents			3.00
	TOTAL			25.00

14) Promotion of Small Scale Value Addition Units through Graded Clusters (Rs. 75.00 lakhs)

Assistance will be provided for establishing small scale value addition units with the support of KVKs/KAU for empowering the clusters. Project based assistance will be provided to graded clusters/ farmer entrepreneurs recommended by such clusters for this purpose. Assistance to the tune of 75% of the total cost limited to Rs.1.50 lakhs per unit will be provided for this purpose. The projects received through Principal Agricultural Officer, will be scrutinized at the Directorate of Agriculture by the State Level Evaluation Committee chaired by Additional Director of Agriculture (Farms, Biogas & Vegetables) with Joint Director of Agriculture (VC) and Assistant Director of Agriculture (VC) as members. This component will be implemented in a loan linked manner with back ended subsidy. Funds will be released through the Principal Agricultural Officer concerned after the formal sanction of the project proposal. An agreement in this line will be executed with the beneficiaries concerned.

It is proposed to establish **47 value addition units** of vegetables utilizing an amount of **Rs.70.50 lakhs**. An amount of **Rs.4.50 lakhs** will be utilized to impart training

to enterprising clusters/ farmer entrepreneurs through KVK/ KAU. A total amount of **Rs. 75.00 lakhs** is set apart for this component.

15) Operational Expenses (Rs. 80.00 lakhs)

Travel allowance, fuel, oil and lubricant charges (POL) and other operational expenses including conducting of meetings of officers, hire charges of vehicles, purchase of computers etc. will be met from this component. Part of the fund will be used for organizing campaigns. A total amount of **80.00 lakhs** is set apart for this purpose.

Sl. No.	Items	Amount (Rs. in lakhs)
1.	Travelling Allowances *	8.00
2.	POL*	15.00
3.	Other operational Expenses (OC)	57.00
TOTAL		80.00

* TA and POL are as per the detailed budget estimates.

Financial Outlay

An abstract of the total financial outlay is furnished below.

Sl. No.	Component	Amount (Rs. in lakhs)
1	Promotion of urban clusters and waste management	850.00
2	Vegetable cultivation through institutions	103.00
3	Cluster development in districts	784.50
4	Awards / incentives	75.00
5	Development support to graded clusters	1000.00
6	Documentation	50.00
7	External monitoring	40.00
8	Block level federated organizations (Block Sangamaithries)	200.00
9	Establishment of nurseries	200.00
10	Rain shelter cultivation	700.00
11	Micro-irrigation with fertigation	400.00
12	Additional Support to best performing 'A' Graded Clusters for filling critical gaps based on volume of business.	50.00
13	On farm production of bio control agents trichoderma / VAM etc. for distribution within the cluster	25.00

14	Small value addition units through clusters	75.00
15	Operational expenses	80.00
	Total	4632.50

(Rupees Forty six crores thirty two lakhs and fifty thousand only)

In the circumstances mentioned above, Continuous Administrative Sanction is hereby accorded for the implementation of the scheme 'Vegetable Development during 2018-19' for an amount of Rs.4632.50 lakhs **(Rupees Forty six crores thirty two lakhs and fifty thousand only)**, debiting the expenditure to the head of account **2401-00-119-85 (Plan)** from current year's budget provision. The scheme shall be implemented abiding by the terms and conditions stipulated in the Government Orders read above.

Separate proposal for the balance amount of Rs.550.00 lakhs set apart for amber book components (Vegetable producer Company – Rs.500.00 lakhs, Safe-to-eat branding – Rs.50.00 lakhs) shall be submitted to Government seeking Administrative Sanction.

Since agriculture is a season based activity, timely implementation of the scheme has to be ensured by arranging the required inputs in time, and this should be reflected in the monthly booking of expenditure from April 2018 onwards.

Monthly progress report should invariably contain component wise physical and financial targets and achievements, number of beneficiaries and the stage of implementation of each component.

Since the Government is giving emphasis to women participation and gender budgeting, maximum efforts have to be made to include women beneficiaries in the scheme. The number of women beneficiaries and the amount utilised for such beneficiaries (component wise) should also be separately shown in the monthly progress report.

Sd/-

Director of Agriculture

Deputy Director of Agriculture (Plg.)

Deputy Director of Agriculture (Plg.)
Directorate of Agriculture
Thiruvananthapuram

To

VC section of the Directorate for issue of detailed working instructions

Copy to

TA to Director of Agriculture, CA to All Additional Directors of Agriculture of the HQ, State Agricultural Engineer, Senior Finance Officer for information
IT section of the directorate for posting on the website