

TC 16767/2018

Directorate of Agricultural Development  
And Farmer Welfare  
Thiruvananthapuram  
Dated 4/5/-2018

**CIRCULAR**

Sub:- Annual Plan 2018-19-**Scheme for Development of Tuber crops and Pulses** - Working Instruction issued- regarding

Ref:- 1.GO(Rt)No: 378/2017/AD dated 04/04/2017

2. Order No. TP(2) 16286/2018 dt. 11/04/2018

As per the references cited above Administrative sanction has been accorded for the implementation of the scheme for Development of Tubers and Pulses during 2018-19. An amount of Rs. 250 lakhs is provided under the Head of Account 2401-00-112-96(P) during the current year for implementing various components under the scheme.

**A. Development of Tubers**

Cultivation of tuber crops is gaining popularity in the state due to the increase in income to the farmers and also due to the acceptance of tubers for culinary purpose by the people of Kerala. Owing to drought tolerance or drought avoidance, wide flexibility to adverse soil, nutrient and management conditions, these tuber crops are considered as important food security crops. Tuber crops include short duration species which mature from three to eleven months, depending upon the crop and varieties. Tapioca, Coleus, Colocasia, Elephant Foot Yam, Sweet potato & Yams are important tuber crops cultivated in Kerala. A large number of varieties with high yielding potential, disease resistance and desirable processing qualities have been developed and released for the benefit of farmers by research institutions, mainly CTCRI. It is further facilitated by the availability of good quality planting material of these developed varieties. Considering the different maturity periods of released varieties, they suit well to the various mixed cropping patterns followed by farmers of Kerala.

It is proposed to provide assistance for Development of Tubers during 2018-19.

**Objectives**

The main objective of the scheme is to promote cultivation of tuber crops such as tapioca, amorphophallus, greater yam, lesser yam, colocasia and sweet potato as pure crop and as intercrops in plantations.

- To improve production and productivity of tuber crops.
- To popularise promising tuber crop varieties developed by CTCRI.
- To popularize cultivation of underutilized tuber crops.
- To increase farmers income through high returns per unit area.
- To make available starchy and calorific food items to the starving section of the society.
- To support the associated food processing industry.

**1) Production and supply of source planting materials by CTCRI, Sreekaryam, Thiruvananthapuram (Rs.25.00 lakhs)**

Planting materials of new and promising varieties of tuber crops such as **tapioca, amorphophallus, greater yam, lesser yam, colocasia, sweet potato, arrow root** etc will be procured from CTCRI and distributed to farmers for further multiplication through **Seed Villages**. Source Planting materials required by the Department will be produced and supplied by CTCRI for enabling time bound cultivation, based on indent placed by the Department. An amount of **Rs.25.00 lakhs** earmarked for this purpose .

**2) Seed Multiplication through Seed Villages (Rs.112.50lakhs)@15000/ha**

The source planting materials of promising varieties of tuber crops will be multiplied in a scientific manner in selected panchayats of the State through farmers' collectives - "**Tuber Clusters**", with the technical guidance of CTCRI to produce adequate quantities of quality planting materials for further distribution for area expansion. Such panchayats will be designated as "**Seed Villages**". It is proposed to select around 22 **Seed Villages** across the State in appropriate locations for scientific multiplication of various tuber crops, utilising seed material procured from CTCRI or authorised progressive farmers . Preference will be given to traditional tuber growing areas.

It is proposed to multiply the tuber crops in an area of **750 ha** in appropriate locations across the State by providing assistance **@ Rs.15000/- per ha which includes the cost of planting materials.**, Planting materials can be purchased



directly from CTCRI or from the selected progressive farmers of CTCRI or from the farmers who produced seed material from the resource planting material supplied by CTCRI during 2017-18 . . An amount of **Rs.112.50 lakhs** is set apart for this purpose.

(List of seed villages is given in Annexure I )i

### 3) Seed Multiplication in Tribal Areas (Rs. 25.00 lakhs)

The seed multiplication programme will also be carried out in various tribals areas of the State under the close supervision of department and CTCRI. Empahsis will be given to multiplication of less water requiring tuber crops. Eco friendly crop management methods like **Vrukshayurveda, PPFM technologytraditional cultivation, etc alone will be adopted in tune with tribal culture**, after taking them into confidence. Necessary observations from planting to harvest will be taken and recorded by the agricultural officers concerned to evaluate the performance of different varieties and their suitability to various locations.

It is proposed to multiply the tuber crops in an area of **125 ha** in tribal areas of the State (Palakkad, Idukky, Malappuram and Wayanad) by providing assistance @ **Rs.20000/- per ha**, including free supply of planting materials. An amount of **Rs.25.00lakhs** is set apart for this purpose.

( The list of tribal seed villagesselected given as Annexure II)

The planting materials produced under this programme will be procured by the department for popularisation across the State through area expansion programme.

### 4) Training

In order to create awareness among farmers on the scientific management practices to be followed for seed multiplication of tuber crops, it is proposed to organise field oriented training programmes with the participation / guidance of CTCRI. Such training programmes will be organised as part of the Vegetable Development Programme 2018-19.

### Mode of implementation

. Beneficiaries will be identified and Tuber Clusters formed under the initiative of the Agricultural Officer of selected panchayaths. Agricultural

Officers and Agricultural Assistants will conduct field verification of farmer's field and give necessary directions for successful cultivation of crops. They will also systematically maintain record of field observations ready for verification at any time. Awareness programme will be conducted to popularize the scheme and to make aware of the impact of scheme in co-ordination with CTCRI. Documentation of entire activities and yield data and other impact parameters will be recorded.

### Financial Outlay

An abstract of the programme for Development of Tubers is furnished below.

Sl. No.	Component	Physical Target	Amount (Rs. In lakhs)
1	Production and supply of source planting materials by CTCRI, Sreekaryam, Thiruvananthapuram	(LS)	25.00
2	Seed Multiplication through 22 Seed Villages (Rs.15000/ha)	750 ha	112.50
3	Seed Multiplication in Tribal Areas (Rs.20000/ha)	125 ha	25.00
4	Training (will be taken up under VDP)		0.00
	<b>TOTAL</b>		<b>162.50</b>

(Rupees One Hundred and Sixty Two Lakhs and Fifty Thousand Only)

During 2018-19 an amount of **Rs.250.00 lakhs** is set apart for the scheme 'Development of Pulses and Tubers' under head of account **2401-00-112-96**. The required amount of **Rs.162.50 lakhs** will be met from this budget provision.

### B. Development of Pulses

The major food crops of our state comprise paddy and pulses. But the area under rice and pulses have been declining consistently and many of the indigenous varieties are seldom available indicating the loss of biodiversity. One of the main reasons for such loss of germplasm attributed by the farmer is the high cost of labour and inputs and situations aggravated by the drastic changes in the climate. Pulses are the important source of protein to the mankind. But the area under pulses cultivation has been declining consistently over the last several years.



From the above facts, it is understood that there is a tremendous decline of cultivation of food crops. Instability in farm production is causing serious shocks to supply and farm income. As a result food grains production is not in tune with the plan estimates, which affect the livelihood and nutritional status of the people.

### Objectives:-

The main objectives of the scheme are the following.

1. To promote pulses cultivation in the traditional pulse growing tracts of the state to bring back the original status of production
2. To increase the income from farming by way of utilising the rice fallows after the second and third crop.
3. To serve as the catch crop in paddy fields after cultivation.
4. To enrich the soil with rhizobium and organic matter by way of cultivating leguminous crops.
5. To promote fodder cowpea in summer rice fallows to ensure nutritive feed for the cattle utilizing residual soil moisture and also replenish soil fertility

### Technical Programme:-

#### 1. Crops proposed

The crops proposed for the programme are Black gram, Cow pea, French bean, Green gram, Horse gram, Red gram and Soya Bean.

#### 2. Varieties suited for the programme

The important varieties are listed below:

1	Black Gram	Syama, Sumanjana, T-9, Co-2, S-1, TAU-2, TMV-1, KM-2
2	Cowpea	Kanakamony, Krishnamony, Shubhra, Amba, Fodder Cowpea, etc
3	French Beans	Kentucky Wonder, Contender, Premier,

		Arka Komal etc.
4	Green gram	Pusa Baisakhi, NP-24 etc.
5	Horse Gram	Pattambi local
6	Red gram	SA 1
7	Soybean	Bragg, EC-2661 etc.

### 3. Management of the crop

Suitable management practices as per the Package of Practices of Kerala Agricultural University would be followed for maximising yield and income. Seed treatment with Rhizobium would also be carried out. The crop residues after harvest would be ploughed in to the field for nutrient enrichment.

### 4. Season of implementation

The main season of planting would be summer season where the rice fallows could be utilised. However for cowpea when grown as a rainfed crop the season would be the month of June. But the crop can be grown throughout the season. Cow pea could be sown as a fringe crop during the second crop season also. But since this programme aims mainly at increasing the production, growing cowpea as pure crop is suggested. French beans are proposed for the high altitude regions such as Attappady hills of Palakkad region. The main cropping season suggested for the programme is during the summer season.

### 5. Promotional incentives.

The crucial input regarding pulses cultivation is the seeds. It is estimated that about ₹ 20,000/- is required for cultivating an area of one hectare including the cost of seeds, fertilisers, manures and land preparation. About half of the estimated cost of cultivation amounting to ₹ 10,000/- per ha may be provided as subsidy. All the practising small and marginal farmers only are eligible for receiving assistance. It is proposed to cover an area of **875 ha** under pulses cultivation in Kerala, utilizing an amount of Rs.87.50 lakhs.

### 6.. Mode of implementation

The selection of beneficiaries would be carried out by giving wide publicity of the programme throughout the district and inviting applications. Field inspection by the field functionaries would be carried out. This programme would be implemented in a 'Campaign Mode' wherever possible. Efforts should be made for the selection of a contiguous area as far as possible to serve a demonstration value. Promotion of cultivation of fodder cowpea in summer rice fallows will be taken up in co-ordination with dairy development department/dairy co-operatives. **The**



variety-wise, Krishi Bhavan-wise seed requirement will be assessed by the Principal Agricultural Officers and can be purchased from Government agencies like NSC, KAU, KSSDA etc well in advance for effecting the supply of seed in time.

The physical and financial targets allotted for the districts are furnished as Annexure 111

### 7. Monitoring, evaluation and documentation

The Principal Agriculture Officers of the respective districts would be in charge of the district level implementation of the programme. Deputy Director (WM) would be the nodal officer. The Block level Assistant Directors would be monitoring the programme at the field level. Agricultural Officers of the Krishi Bhavans are in charge of the implementation of programme at the field level.

Additional Director (CP) will monitor and review the scheme. Monthly progress reports should be sent in the name cover of Additional Director (CP) in the proforma attached (Annexure IV). The completion report and Utilization Certificate should be forwarded to this office immediately on completion of the scheme in the given proforma

### Financial Outlay

It is proposed to cover an area of 875 ha under pulses cultivation in Kerala. The total fund requirement would be ₹ 87.5 lakhs

During 2017-18 an amount of Rs.250.00 lakhs is set apart for the scheme 'Development of Pulses and Tubers' under head of account 2401-00-112-96 (Plan). The required amount of Rs.87.5 lakhs will be met from this budget provision.

Sl. No.	Component	Physical Target	Amount (Rs. In lakhs)
A	<b>Development of Tubers</b>		
1	Production and supply of source planting materials by CTCRI, Sreekaryam, Thiruvananthapuram	(LS)	25.00
2	Seed Multiplication through 22 Seed Villages (Rs.15000/ha)	750 ha	112.50
3	Seed Multiplication in Tribal Areas (Rs.20000/ha)	125 ha	25.00

4	Training (will be taken up under VDP).		0.00
	SUBTOTAL		162.50
B	Development of Pulses	875 ha	87.50
	Grand total		250.00

#### **Timeline for implementation**

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

As per the Continious Administrative Sanction received for the scheme Development of Pulses and Tubers during 2018-19, an amount of Rs. 250.00 lakhs (Rupees Two Hundred And Fifty Lakhs only) is set apart under the Head of account 2401-00-112-96 plan .The Principal Agricultural Officers should ensure that the target assigned is achieved in full during the current year itself. The payment of assistance is to be effected through e-transaction to farmers accordingly .

Monthly progress report should invariably contain component wise physical and financial targets and achievements and the stage of implementation of each component. Panchayathwise target allocation has to be communicated to this office along with the details of convergence if any with LSGD. Maximum efforts have to be made to include women beneficiaries and should be separately shown in the monthly progress report. .

Receipt of this circular should be acknowledged.

Sd/-

**Director of Agriculture**

**To**

**All Principal Agricultural Officers**

**Copy to**

CA to Director of Agriculture

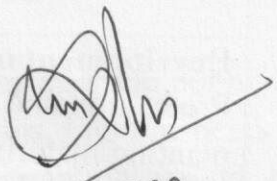
CA to all Addnl. Directors of Agriculture

Planning section for allotting funds to the Districts.

DDA.IT Cell for publishing in the website

CTCRI

Stock file/Spare

  
**SREEKALA S.**  
 Assistant Director of Agriculture (Biogas)  
 Directorate of Agriculture  
 Vikas Bhavan, Thiruvananthapuram-33



# ANNEXURE - I

## List of seed villages proposed for Seed Multiplication Programme @ 15000/ha

Sl No	Name of District	Name of seed village	Area HA	Amount lakh
1	Thiruvananthapuram	1.Pothencode	35	5.25
		2.Pallikkal	35	5.25
2	Kollam	1.Sooranad South	30	4.50
3	Pathanamthitta	1.Thonnallur	35	5.25
		2.Ayiroor	35	5.25
4	Kottayam	1. Kooroppada	35	5.25
		2. Madappally	35	5.25
5	Allappuzha	1Thamarakulam	35	5.25
6	Idukky	1.Karinkunnam	35	5.25
7	Ernakulam	1. Mudakuzha	30	4.50
8	Trichur	1.Kuzhoor	35	5.25
		2.Varantharapilly	35	5.25
9	Palakkad	1.Vellinezhy	35	5.25
		2.Thachanatukara	35	5.25
10	Malappuram	1Puzhakattiri	30	4.50
		2.Koottilangadi	30	4.50
11	Kozhicode	1.Mukkam	35	5.25
		2.Koorachundu	35	5.25
12	Kannur	1.Chakkarapadam	35	5.25
		2. Kurumatur	35	5.25
13.	Kasarakod	1.East Eleri	35	5.25
14	Wayanad	1.Thirunelly	35	5.25
		<b>TOTAL</b>	<b>750</b>	<b>112.5</b>

## Annexure -II

### List of Tribal villages selected for seed multiplication under Tuber Crop Development Scheme 2018-19

SL NO	DISTRICT	PANCHAYATH	Area ha	Amount
1	Palakkad	Sholayur	35	7 lakhs
2	Malappuram	Urangattiri	30	6 lakhs
3	Idukky	Mankulam	30	6 lakhs
4	Wynad	Thavinjal	30	6 lakhs
	<b>TOTAL</b>		<b>125ha</b>	<b>25 lakhs</b>



ANNEXURE -III

**Physical And Financial Targets of Pulses Development Scheme for 2017-18**  
**Assistance @10000/ha**  
**Head of Account 2401-00-112-96 plan**

Sl No	Name of District	Physical Ha	Target Financial @10000/ha	Target
1	Thiruvananthapuram	30 ha	3 lakhs	
2	Kollam	60 Ha	6 lakhs	
3	Pathanamthitta	40 Ha	4 lakhs	
4	Alapuzha	65	6 .5lakhs	
5	Kottayam	80	8 lakhs	
6	Idukky	50	5 lakhs	
7	Ernakulam	70	7 lakhs	
8	Thrissur	70	7 lakhs	
9	Palakkad	100	10 lakhs	
10	Malappuram	70	7 lakhs	
11	Kozhicode	60	6 lakhs	
12	Wayanad	40	4lakhs	
13	Kannur	70	7 lakhs	
14	Kasarakod	70	7 lakhs	
	<b>TOTAL</b>	<b>875 Ha</b>	<b>87.5 lakhs</b>	

