

TC(1)8412/20

Directorate of Agricultural Development
and Farmer Welfare
Thiruvananthapuram
Dated 25 .06.2020

CIRCULAR

Sub:-Annual Plan 2020-2021- **Scheme for Development of Tuber crops and Pulses -**
H.O.A 2401-00-112-96 P Working Instruction issued- regarding

Ref:-

1. G.O (Rt) No. 378/2017/AD dated 04-04-2017
2. Order No. TP(2) 12923/19 dated 23-05-2019
3. Annual Plan 2020-2021
4. Circular No. S.S.1/132(1)/2020/Fin dt 30.03.2020
5. Circular No. 21/Fin/2020 Dt 08.04.2020
6. G.O(Rt) No.393/2020/Agri dated 22.04.2020
7. Order No.ADFW/486/2020-TP2 dated 25.02.2020

Government of Kerala, vide-order read 1st above accorded Administrative sanction for the implementation of the scheme- **Development of Pulses and Tubers**, during the year2017-18 and vide reference 2nd cited above continuous sanction was accorded during 2019-2020 by Director of Agriculture, for an amount of Rs.186.687Lakhs.

As per the annual plan, 2020-21, the scheme is proposed to be continued during the current financial year with a budget allocation of 150 Lakhs abiding by the norms and conditions of the Government order read 1st above. Out of this, an amount of Rs.0.5766Lakhs was allotted for encashment of the bills, not e-submitted to treasury upto 31.03.2020 and submitted on or before 18.04.2020 as per circular cited (4) above and an amount of Rs.108.48565Lakh was allotted for encashment of 'Queue' Bills & WAMS clearance bills of 2019-20, as per circular cited (5) above. Hence the balance available for issuing Administrative sanction during 2020-21 is only 40.93775Lakhs as stipulated in the above mentioned circulars.

The details of components are given below.

A. Development of Tubers (Rs.30.93775 lakhs)

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 **Rs. 30.93775 lakhs** for Development of Tubers during 2020-2021

Objectives

The main objective of the scheme is to promote cultivation of tuber crops such as tapioca, amorphophallus, greater yam, lesser yam, colocasia, sweet potato etc. 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.

The scheme will be implemented by the Agriculture Development and Farmer's Welfare Department in association with CTCRI.

Components of the Scheme

1) Production and supply of source planting materials by CTCRI, Sreekaryam, Thiruvananthapuram (Rs.5.93775 lakhs)

Planting materials of new and promising varieties of tuber crops such as **tapioca, amorphophallus, greater yam, lesser yam, colocasia, sweet potato, arrowroot** 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.5.93775 lakhs** earmarked for this purpose.

2) Seed Multiplication through 10 Seed Villages (Rs.15.00 lakhs)@15000/ha

The source planting materials of promising varieties of tuber crops procured from CTCRI 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 10 **Seed Villages** across the State in appropriate locations for scientific multiplication of various tuber crops, utilising seed material procured from CTCRI. The seed multiplication will be carried out in appropriate locations as demonstration plots following all scientific management practices with the technical guidance of CTCRI. 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 **100 ha** in appropriate locations across the State by providing assistance @ **Rs.15000/- per ha** including free supply of planting materials. Preference will be given to traditional tuber growing areas. The cost of cultivation of tuber crops comes to around Rs. 50000/per hectare and assistance will be provided to the farmers @ Rs. 15000/ per hectare, which is 30 % of the cost of cultivation. An amount of **Rs.15.00 lakhs** is set apart for this purpose.

(List of seed villages is given in Annexure I)

3) Seed Multiplication in Tribal Areas (Rs. 10.00 lakhs)

The seed multiplication programme will also be carried out in various tribal areas of the State under the close supervision of department and CTCRI. Emphasis will be given to multiplication of less water requiring tuber crops. Eco friendly, crop management methods like the Vrikshayurveda, **PPFM technology, traditional 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 **50 ha** in tribal areas of the State (Palakkad, Idukky, and Wayanad) by providing assistance @ **Rs.20000/- per ha**, which includes free supply of planting materials. An amount of **Rs.10.00lakhs** is set apart for this purpose.

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

(The list of tribal seed villages selected given as Annexure II)

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 Krishipadasala scheme of 2020-21

Mode of implementation

Seed villages will be finalised through mutual discussion between department and CTCRI. 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		5.93775
2	Seed Multiplication through 10 Seed Villages (Rs.15000/ha)	100 ha	15.00
3	Seed Multiplication in Tribal Areas(Rs.20000/ha)	50 ha	10.00
	TOTAL		30.93775

(Rupees Thirty lakh ninety three thousand seven hundred and seventy five Only)

B. Development of Pulses (Rs.10.00 lakh)

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.

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
1. To increase the income from farming by way of utilising the rice fallows after the second and third crop.
2. To serve as the catch crop in paddy fields after cultivation.
3. 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

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:

Sl. No.	Crop	Varieties
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 maximizing 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 utilized. 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 Rs.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 Rs.10,000/- per ha may be provided as subsidy. All the practicing small and marginal farmers only are eligible for receiving assistance. It is proposed to cover an area of 100ha under pulses cultivation in Kerala, utilizing an amount of Rs.10.00 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, KrishiBhavan-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 -III**

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 KrishiBhavans 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 invariably contain component wise physical and financial targets and achievements 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.

Financial Outlay

During 2020-21 out of the total budget outlay of Rs. 150.00 lakhs, an amount of Rs. 109.06225 lakh was allotted for the encashment of bills submitted on or before 18.04.2020, Queue bills & WAMS clearance bill of 2019-20. Hence the amount available for the implementation of the scheme for Development of Tubers and Pulses is **Rs. 40.93775 lakhs during 2020-2021 under the Head of Account 2401-00-112-96(P)** .

Scheme for Development of Tubers & pulses 2020-21

H.O.A 2401-00-112-96 P

Rs. 40.93775 Lakhs

Sl. No.	Component	Physical Target	Amount (Rs. In lakhs)
A	Development of Tubers		
1	Production and supply of source planting materials by CTCRI, Sreekaryam, Thiruvananthapuram		5.93775
2	Seed Multiplication through 10 Seed Villages (Rs.15000/ha)	100 ha	15.00
3	Seed Multiplication in Tribal Areas (Rs.20000/ha)	50ha	10.00
4	Training (will be taken up under ATMA)		0.00
	SUBTOTAL		30.93775
B	Development of Pulses @ Rs. 10000/ha	100ha	10.00
	Grand total		40.93775

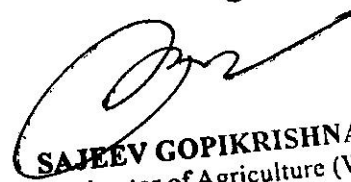
Receipt of this circular should be acknowledged.

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


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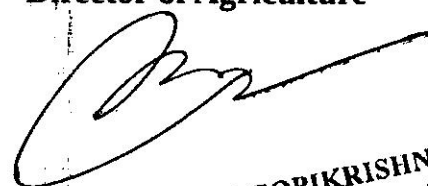
Annexure I

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

Sl No	Name of District	Name of seed village	Area HA	Amount lakh	Total amount
1	Thiruvananthapuram	1.Manikkal	10	1.50	1.5
2	Kollam	1.Sooranad South	10	1.50	1.5
3	Pathanamthitta	1.Panthalam Thonnallur 2.Pallickal	10 10	1.5 1.5	3.00
4	Alappuzha	1.Noornad	10	1.5	1.5
5	Kottayam	1.Vazhoor	10	1.5	1.5
6	Idukki	1.Erattayar	10	1.5	1.5
7	Trichur	1.Thricker	10	1.5	1.5
8	Palakkad	1.Agali	10	1.5	1.5
9	Kasaragod	1.Pilikkode	10	1.5	1.5
		TOTAL	100	15	15.00

Sd/-

Director of Agriculture



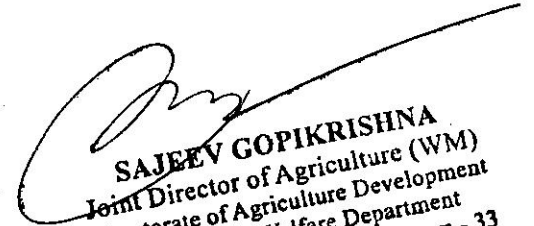
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Annexure -II

List of Tribal villages selected for seed multiplication under Tuber Crop Development Scheme 2020-2021

SL NO	District	Panchayath	Area ha	Amount (Rs. In lakhs)
1	Palakkad	Pudhur	20	4.00
2	Idukki	Mamkulam	15	3.00
3	Wayanad	Panamaram	15	3.00
	TOTAL		50 ha	10.00 lakhs

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9/10/2020