

TH (2) 15117/16

Directorate of Agriculture Development and
Farmers Welfare Department
Vikas Bhavan, Thiruvananthapuram
Dt.. 12 . 04 . 2016

CIRCULAR

Sub: Annual Plan 2016-17- Scheme on " Production and distribution of quality planting materials through Departmental Farms – KERASAMRUDHI" for popularization of Dwarf and hybrid varieties in Kerala to sustain coconut cultivation as a profitable and manageable venture-working instructions issued-reg.

- Ref: 1.G.O (Rt) No.1562/2014/AD dt 25/08/2014
2. G.O (Rt) No.84/2016/AD dt 29/01/2016
3. G.O (MS) No. 28/2016 /AD dt 03/02/2016
4. No.TP (2) 10507/16 dt 01/04/2016 of Director of Agriculture Development and Farmers Welfare Dept
5. No. TP(2) 10507/16 dt 04/04/2016 of Director of Agriculture Development and Farmers Welfare Dept

Vide GO 1st cited in the reference, Government have accorded administrative sanction for the implementation of the project proposal for "Production and Distribution of Quality planting materials- KERASAMRUDHI" with following objectives.

1. To bring an additional 25% area under cultivation of dwarf varieties of coconut that is fit for both culinary purpose and oil extraction.
2. To bring 10% area under cultivation of hybrid varieties of coconut.
3. To raise mother gardens of promising dwarf coconut palms in 50 ha in selected departmental farms for seed nut production.
4. To raise germplasm of promising dwarf palms in 5 ha in selected department farms for hybridization programme.
5. To generate skilled labour for hybridization programme.
6. To supply WCT coconut seedlings to meet the existing demand.
7. To increase the production and productivity of coconut in the State.

As per GO cited vide 3rd reference, Government have approved the implementation of "Kerasamrudhi" during 2016-17. **Rs. 700 lakhs** has been **earmarked** for the implementation of the scheme. Accordingly, the following working instructions are issued for the implementation of the scheme

Kerasamrudhi" during 2016-17.

1. **Identification and marking of dwarf mother palms and procurement of seed nuts**

Good and well managed coconut plantations in the State will be identified at the Krishi Bhavan with the help of Kerasamithies and a basic data of dwarf palms

will be prepared. The Assistant Director of Agriculture will verify the selected palms by conducting field visit and consolidate the block wise basic data. The district wise basic data will be finalized by the Deputy Director of Agriculture (YP) of the District. An undertaking will be taken from the owner of the garden to the effect that such garden will be properly maintained and the nuts will be harvested carefully and

made available strictly as per the guidelines of the Department of Agriculture. It is expected to identify at least 50000 dwarf mother palms in the State through the survey.

An incentive @ Rs.20/- per palm will be paid to Kerasamithies for locating dwarf palms, on the basis of basic data submitted by the person authorized for the purpose. An amount of **Rs.10.00 lakhs** is set apart for this purpose

District wise physical target & financial allocation

Sl. No	Name of PAO	Dwarf mother palms to be identified	
		No. to be identified	Amount allotted
1.	Thiruvananthapuram	4500	0.90
2.	Kollam	4000	0.80
3.	Kottayam	1500	0.30
4.	Alappuzha	3000	0.60
5.	Ernakulum	2500	0.50
6.	Thrissur	12000	2.40
7.	Malappuram	7000	1.40
8.	Palakkad	8000	1.60
9.	Kozhikode	1000	0.20

10.	Kannur	4500	0.90
11.	Kasaragod	2000	0.40
	Total	50000	10.00

Selection of mother palms for obtaining quality seed nuts is of utmost importance in coconut cultivation. The selection of mother palms and procurement

of seed nuts should be as per the guidelines given in the Package of Practices, Kerala Agricultural University/Manual for Coconut Nurseries in Kerala.

The mother palms so identified in each garden should be given a circular band with yellow paint (5 cm width) around the tree at a height of about 1.5 M above the ground level so that the mother palms can be located from any part of the garden. The serial numbers of the trees and the garden numbers are to be written with red

paint on the band where yellow background is made circular having a diameter of 15 cm. As far as possible the numbering should be done in the side facing the entrance of the garden. Tree numbers should be written on the top and garden number below as shown.

Eg:-Tr No.

G.No

Garden number need be written only on trees for those having numbers in multiples of ten. For example, for garden No.5 should be 1/5,2,3,.....9,10/5, 11,18, 19, 20/5 and so on. However all the last tree number in the garden should have garden number. On completion of the above work, the details should be recorded in a mother palm register on the same day itself by the Agricultural Assistant. All the information required about the garden should be furnished in the mother palm register and entries attested by him.

Before marking the mother palms in a selected garden, the consent of the owners should be obtained in writing for supplying seed nuts as per the conditions specified and the price fixed by the Department.

Agricultural Assistants should prepare the extract of the relevant gardens allotted to them in Field note book from the mother palm register. While conducting harvest they should record the particulars of harvest of each mother palm in this note book then and there. At the time of inspection by the Agricultural Officer during harvest they must produce this note book. If any discrepancy or variation in tree

number actually harvested and the one recorded in the field note book or in the number of selected seed nuts found in the field and the number recorded in the note book is noticed, disciplinary action will be taken against them.

After the harvest of the day is over, the Agricultural Assistants should physically verify the total number of nuts recorded in the field note book. This must tally in all the cases. The Agricultural Assistants should post their entries in the mother palm register maintained in the office on the same day itself.

Under no circumstances this should be postponed. Over writing or erasing should not be made both in the field note book and in the mother palm registers.

Care should be taken in the selection of good quality seed nuts. Only fully matured, medium sized will be selected. Fruit weight should more than 400 g and spherical or oblong in size and shape. Undersized and oversized nuts should be rejected at the time of inspection of harvest and also while loading the seed nuts in Lorries for despatch.

As soon as the nuts are selected, the same should be sealed using sealing hammers on the entire segment at the distal end of the nuts. Seed nuts without sealing should not be taken for sowing and the same will be rejected and returned. In case the seed nuts are to be rejected the sealing should be cancelled by sealing cross wise over the seal already marked.

Harvesting of seed nuts by farmers will be done under the direct supervision of Agricultural Assistants in Krishi Bhavans and selected nuts should be sealed and stored as per the procedure at one point. The Agricultural Officers/ Agricultural Field Officers should monitor the programme at Panchayat/Municipality/Corporation level and inform the progress to the Assistant Director of Agriculture concerned. The Dwarf coconut seed nuts thus harvested will be procured from farmers@ Rs. 45/- per nut. Proper registers and records must be kept at the Krishi Bhavans in connection with the procurement of seed nuts and payment of seed nut cost to farmers.*

Since the seed nuts need to be sown within 15- 20 days, make sure that the dwarf seed nuts procured are reached in Coconut Nurseries/Farms where the nuts are sowing within this time limit. The Staff at Krishi Bhavan/ Assistant Director of Agriculture/ Farm Officers/ Deputy Director of Agriculture should be vigilant in this aspect at appropriate level. Transportation cost will also be provided for seed procurement based on store purchase rules.

2. Procurement of dwarf seed nuts

An amount of **Rs. 248.50 lakhs** is earmarked for the implementation of the component - Procurement of Dwarf seed nuts.

District wise physical target & financial allocation for the procurement of Dwarf seed nuts

Sl.No.	Name of PAO	Dwarf seed nuts to be procured	
		No. to be procured	Amount (in lakhs)
1	Thiruvananthapuram	52200	23.49
2	Kollam	15000	6.75
3	Pathanamthitta	20000	9.00
4	Kottayam	17400	7.83
5	Alappuzha	30000	13.50
6	Ernakulum	25000	11.25
7	Thrissur	150000	67.50
8	Malappuram	39622	17.83
9	Palakkad	92800	41.76
10	Kozhikode	81200	36.54
11	Kannur	22000	9.90
12	Kasaragod	7000	3.15
	Total	552222	248.50

3. Employing technical hands on contract basis to hand hold the selection process

In order to hand hold the process of identification and marking of superior dwarf mother palms for collection of seed nuts, it is proposed to engage the services of one technical person in each district on contract basis, preferably retired hands

the cadre of Agricultural Officer or above, for a period of 3 months by providing honorarium @ Rs.25000/- per month. Such persons will be engaged in all districts, except Pathanamthitta, Idukki and Wayanad, where the programme is not implemented. An amount of **Rs. 8.25 lakhs** is set apart for this purpose.

District wise target & financial allocation

Sl. No.	Name of PAO	Amount allotted (in lakhs)
1.	Thiruvananthapuram	0.75
2.	Kollam	0.75
3.	Kottayam	0.75
4.	Alappuzha	0.75
5.	Ernakulum	0.75
6.	Thrissur	0.75
7.	Malappuram	0.75
8.	Palakkad	0.75
9.	Kozhikode	0.75
10.	Kannur	0.75
11.	Kasaragod	0.75
Total		8.25 Lakhs

4. Production and distribution of dwarf coconut seedlings

The dwarf coconut seed nuts procured for seedling production can be raised in coconut nurseries and selected farms of the Department of Agriculture under the direct supervision of the Senior Agricultural Officer/ Superintendent in charge of the farm. An amount of Rs.10/- per seedling is set apart for the management of coconut seedlings. The financial requirement for management of 3.6 lakh numbers of coconut seedlings works out to **Rs. 36.00 lakhs**. The Dwarf seedlings thus produced will be distributed to farmers allowing 50% on the farm price fixed by Government. The amount will be allotted to the Principal Agricultural Officers separately.

5. Under taking hybridization in dwarf coconut palms for DXT hybrid seedling production

Hybrid coconut seedlings which exhibit high heterotic potential have a crucial role in stepping up the production and productivity of the crop in the State as they are capable of breaking the yield barrier in productivity. They are both high yielding and early bearing and grownup to medium stature. It is proposed to undertake hybridization activities in approximately 25000 numbers of dwarf coconut palms identified in Kerala State for procurement of hybrid seed nuts.

There is chance that mother palms selected for hybridization programme may be located in a scattered manner. It is also a fact that there is acute shortage of skilled labour force for hybridization. Moreover superior tall palms are to be identified for collection of pollen grains for the hybridization programme. Considering all the above factors, it is proposed to take up hybridization work on a project mode at district level. An amount of **Rs. 35.00 lakhs** is earmarked for this purpose.

Sl. No.	Name of PAO	No. of Dwarf palms to be identified for hybridization work	Amount Allotted (in lakhs)
1.	Thiruvananthapuram	2250	3.15
2.	Kollam	2000	2.80
3.	Pathanamthitta	250	0.35
4.	Kottayam	1000	1.40
5.	Alappuzha	1500	2.10
6.	Ernakulum	1250	1.75
7.	Thrissur	5500	7.70
8.	Malappuram	3500	4.90
9.	Palakkad	4000	5.60
10.	Kozhikode	500	0.70
11.	Kannur	2250	3.15
12.	Kasaragod	1000	1.40
Total		25000 Nos.	35.0 akhs

6. Procurement of hybrid seed nuts

During 2015-16, hybridization activities were carried out in superior dwarf coconut mother palms identified in farmer's field for the production of hybrid seed nuts. It is expected that approximately 2,00,000 nos. of hybrid seed nuts are expected to be available for procurement during 2016-17 as detailed below. An amount of **Rs.100.00 lakhs** is set apart for this purpose. The Agricultural Officers at Krishi Bhavan will procure the quality Hybrid seed nuts as per the as per the guidelines given in the Package of Practices, Kerala Agricultural University/Manual for Coconut Nurseries from the palms already hybridized in farmer's field @Rs.50 per hybrid seed nuts.

The district wise target is shown below;

Sl. No	Name of PAO	No. of hybrid seed nuts to be procured during 15-16	Amount allotted (in lakhs)
1	TVM	15000	7.50
2	KLM	6000	3.00
3	ALP	7000	3.50
4	KTM	7500	3.75
5	EKM	6500	3.25
6	TCR	40000	20.00
7	PKD	30000	15.00
8	MPM	25000	12.50
9	KKD	36000	18.00
10	KNR	22000	11.00
11	KSD	5000	2.50
	Total	2,00,000	100.00

7. Training programme to generate skilled labour force for hybridization programme

Since hybridization is a skilled work involving pollen collection, emasculation and pollination, a skilled labour force has to be generated locally by giving hands on training to active and enterprising youth who are willing to participate in the coconut hybridization programme. The expertise of CPCRI Kayamkulam/ Kasaragod / Kerala Agricultural University/ Coconut Development Board/ Department of Agriculture may be utilized for imparting two week hands on training to selected individuals in all aspects of the hybridization programme.

It is proposed to impart training of 2 weeks duration to 200 selected individuals across the State for which amount of **Rs.10.00 lakhs** is set apart for meeting the training expenses @ Rs. 5000/- per head. The target for trainings are re allotted as shown below.

Sl. No.	Name of PAO organizing the training	No. of trainings to be conducted	No. of individuals to be trained	Amount allotted (in lakhs)
1.	Thiruvananthapuram	1	20	1.00
2.	Kollam	1	20	1.00
3.	Kottayam	1	20	1.00
4.	Alappuzha	1	20	1.00
5.	Ernakulum	1	20	1.00
6.	Thrissur	1	20	1.00
7.	Palakkad	1	20	1.00
8.	Malappuram	1	20	1.00
9	Kozhikode	1	20	1.00
10.	Kannur (For the individuals from Kannur & Kasaragod)	1	20	1.00
Total		10 Nos.	200 Nos.	10.0 lakhs

8. Providing incentive to farmers for pollen grains

Pollen grains from tall palms having superior traits are important for a successful hybridization programme. In order to encourage farmers having superior tall palms to provide pollen grains for the hybridization programme, it is proposed to provide incentive to farmers @ Rs. 100/- per inflorescence. **Rs. 10.00 lakhs** is earmarked for this purpose is re allotted as follows

Sl. No.	Name of PAO	Funds allotted (in lakhs)
1.	Thiruvananthapuram	0.90
2.	Kollam	0.80
3.	Pathanamthitta	0.10
4.	Kottayam	0.40
5.	Alappuzha	0.60
6.	Ernakulum	0.50
7.	Thrissur	2.20

8.	Malappuram	1.40
9.	Palakkad	1.60
10.	Kozhikode	0.20
11.	Kannur	0.90
12.	Kasaragod	0.40
Total		10.0

9. Purchase of dwarf coconut seedlings from authentic sources for distribution to farmers

The additional requirement of dwarf seedlings may be met through the purchase from Government Farms and other authentic sources within and outside the State like CPCRI, KAU, other State Agricultural Universities, Coconut Development Board etc. and their distribution to farmers allowing 50% subsidy on department farm price. The cost of one dwarf seedling comes to Rs.200/-. It is proposed to purchase 10,000 Nos. of dwarf coconut seedlings at a total cost of Rs. 20.00 lakhs.

10. Raising Dwarf Coconut Mother Gardens in Department Farms for seed nut production

Coconut is a long duration crop showing high prepotency. Hence availability of quality mother palms is extremely important for quality seedling production. In order to ensure availability of quality seed nuts to meet the increasing demand among the farming community for dwarf and hybrid seedlings, it is proposed to plant dwarf seedlings in **50 ha (10000 nos.)** for seed nut production in selected department farms for during 2016-17, utilizing dwarf seed nuts procured from authentic sources. There is no financial commitment for this component. The

District wise target under the scheme is shown below;

Sl. No.	Name of PAO	Area to be planted with dwarf coconut seedlings (in ha)	No. of Dwarf Seedlings to be planted (Nos.)
1.	Thiruvananthapuram	5	1000
2.	Kollam	5	1000
3.	Pathanamthitta	1	200

4.	Kottayam	4	800
5.	Alappuzha	4	800
6.	Idukki	2	400
7.	Ernakulum	5	1000
8.	Thrissur	4	800
9.	Malappuram	6	1200
10.	Palakkad	4	800
11.	Kozhikode	5	1000
12.	Kannur	3	600
13.	Kasaragod	2	400
Total		50 ha	10000 Nos.

The Principal Agricultural Officers should reallocate to each farm in their respective district for planting dwarf seedling and report.

11. Raising germplasm of Dwarf Coconut Palms in Department farms for hybridization programme

In order to ensure the availability of various promising DxT coconut hybrids in adequate numbers in future, it is proposed to raise a germplasm of different dwarf coconut varieties in **5 ha (1000 nos.)** in selected department farms for utilization in hybridization programme. Dwarf coconut seedlings procured from authentic sources like the CPCRI, KAU, other State Agricultural Universities and other reliable sources will be utilized for the programme. An amount of **Rs. 2.00 lakhs** is set apart for this purpose @ Rs.200/- per seedling. The Principal Agricultural officers will select the farms for raising the germplasm and report.

Sl. No.	Name of PAO	Area to be covered	No. of dwarf seedlings to be planted	Amount allotted (in lakhs)
1.	Thiruvananthapuram	0.20	50	0.10
2.	Kollam	0.50	100	0.20
3.	Pathanamthitta	0.125	25	0.05

4.	Kottayam	0.50	100	0.20
5.	Alappuzha	0.50	100	0.20
6.	Idukki	0.25	50	0.10
7.	Ernakulum	0.375	75	0.15
8.	Thrissur	0.50	100	0.20
9.	Malappuram	0.625	125	0.25
10.	Palakkad	0.50	100	0.20
11.	Kozhikode	0.50	100	0.20
12.	Kannur	0.25	50	0.10
13.	Kasaragod	0.125	25	0.05
Total		5 ha	1000 Nos.	2.00 lakhs

12. Establishment of micro- irrigation system in selected Department Farms for raising seedlings

Micro-irrigation system not only ensures effective use of irrigation water, but also avoids wastage of resources including water, time and labour. It is proposed to install sprinkler/ drip system of irrigation in 20 ha. The estimated cost of installation of micro-irrigation unit is Rs.50000/- per ha. An amount of **Rs.10.00 lakhs** is earmarked for this purpose. The farms selected for the establishment of micro- irrigation system is shown below.

Sl. No.	Name of PAO	Name of Farms for installing micro-irrigation unit	Area (in ha)	Amount allotted (in lakhs)
1.	Kollam	DAF, Anchal	3.0	1.5
2	Alappuzha	DA F, Mavelikkara	3.0	1.5
3.	Kottayam	DAF, Kozha	1.0	0.5
4.	Idukki	DAF, Areekuzha	3.0	1.5
5.	Thrissur	DAF, Chelakkara	2.0	1.0

6.	Palakkad	Central Orchard, pattambi	1.0	0.5
7.	Malappuram	CN,Parappanangadi	1.0	0.5
		DAF, Chungathara	2.0	1.0
		S.G.C Munderi	2.0	1.0
8.	Kozhikode	DAF, Koothali	2.0	1.0
		TOTAL	20.0	10.00

13.Procurement of WCT seed nuts

Considering the longevity of tall coconut palms, yield and high oil content, there is constant demand among the farmers for WCT coconut seedlings. Moreover, the Department of Agriculture has been producing and distributing quality tall coconut seedlings every year as a part of its routine activities. During 2016-17, it is proposed to procure 3, 50, 000 nos. of WCT coconut seed nuts from authentic sources for production and distribution of quality seedlings. The cost of One WCT coconut seed nut is Rs.45/-. An amount of **Rs. 157.50 lakhs** is set apart towards the cost of WCT seed nuts.

Sl. No.	Name of PAO	No. to be procured	Amount allotted (in lakhs)
1.	Malappuram	30,000	13.5
2.	Thrissur	20,000	9.00
3.	Kozhikode	2,80,000	126.0
4	Kannur	20,000	9.00
	TOTAL	3,50,000 nos.	157.50 lakhs

14.Transportation Charges and Miscellaneous Expenses

Transportation of coconut seed nuts and seedlings and miscellaneous expenses like purchase of materials for marking of mother palms, pollination activities, preparation of data base etc. form essential part of the programme. An amount of **Rs. 35.00 lakhs** is set apart for meeting the transportation charges of seeds and seedlings, **Rs. 17.75 lakhs** for meeting the miscellaneous expenses.

Sl. No.	Name of PAO	Amount allotted (in lakhs)	
		Transportation charges	Miscellaneous expenses
1	Thiruvananthapuram	2.8	1.13
2.	Kollam	2.6	1.06
3.	Pathanamthitta	0.9	0.548
4.	Kottayam	1.1	0.96
5.	Alappuzha	1.7	0.67
6.	Ernakulum	2	0.6
7.	Thrissur	6.8	3.633
8.	Malappuram	3.8	2.48
9.	Palakkad	3.7	2.119
10.	Kozhikode	5.0	2.14
11.	Kannur	3.3	1.63
12.	Kasaragod	1.3	0.78
	Total	35.00	17.75

Supervision

All the palms selected under the programme should be periodically inspected by both Agricultural Officers and Agricultural Assistants. The Assistant Director of Agriculture at block level should closely watch the implementation of the programme and should ensure that a minimum of 10% of the plots are inspected by them. Deputy Director of Agriculture (YP) in charge of the scheme at District level should inspect 5% of the plots. The Principal Agricultural Officers of the districts should visit at least 1% of the gardens/plots. It should be ensured that the palms are selected according to the guidelines specified. In the case of erring officers, appropriate actions should be initiated/ recommended to higher officials at state level.

Additional Director of Agriculture (Farm,Veg &Biogas) is monitoring the scheme at state level. The Principal Agricultural Officers should submit fortnightly report of the programme to the Additional Director of Agriculture ((Farm,Veg &Biogas) in his name cover. Any difficulties or bottle necks in the implementation of the programme should be brought to the notice of the Director of Agriculture or

Additional Director of Agriculture (Farm,Veg &Biogas) or Joint Director of Agriculture (Farms) and get it cleared then and there.

An expert committee of Director of Agriculture, Chief, Planning Board, a representative of CPCRI and KAU, Shri. R. Hali, Former Director of Agriculture, Dr. Naik, KAU and a seasoned Farmer will scrutinise the implementation of the scheme. Abstract of the programme is also enclosed.

During the current financial year (2016-17), there is a budget provision of Rs. 1250 lakhs for implementation of the scheme ' Production & Distribution of Quality Planting Materials' under head of account 2401-00-104-91 (Plan). The expenditure towards the implementation of the scheme will be met from Rs. 700 lakhs earmarked for the component " Kerasamrudhi" under the Head of account: 2401-00-104-91 (Plan).

Sd

**Director of Agriculture Development and
Farmers Welfare Department**

To

All Principal Agricultural Officers

Copy to :

All Additional Directors of Agriculture
All Principal Agricultural Officers
All Joint Directors in HQ
Planning Section/ TA to Director of Agriculture
DDA (IT) for publishing the WI in website



K.R. VASANTHY
Joint Director of Agriculture (Farms)
Directorate of Agriculture
Vikas Bhavan, Thiruvananthapuram

Abstract of the programme – Kerasamrudhi 2016-17

Sl. No	Component	Physical target	Total Cost (Rs. In Lakhs)
1.	Identification and Marking of Dwarf Mother Palms	50,000 Nos.	10.00
2.	Procurement of dwarf seed nuts @Rs.45 per seed nut	5,52,222 nos	248.5
3.	Procurement of hybrid seed nuts @Rs.50 per seed nut	2,00,000 Nos.	100.00
4.	Employing technical hands to hand hold the selection process and marking of superior palms	11 Nos. (1No per district) for 3 months for 11 districts	8.25
5.	Production and distribution of dwarf coconut seedlings	3,60,000 nos.	36.00
6.	Undertaking hybridisation in dwarf coconut palms for DxT hybrid seedling production.	25000 nos.	35.00
7.	Training programme to generate skilled labour force for hybridisation activity.	8 nos. of 2 weeks duration	10.00
8.	Providing incentives to farmers for pollen grains		10.00
9.	Purchase of dwarf coconut seedlings@ Rs.200	10000 nos.	20.00
10.	Raising dwarf coconut mother gardens in department farms	50 ha (10000 nos.)	0
11.	Raising germplasm of dwarf coconut palms in department farms for hybridisation programme	5 ha (1000 nos.)	2.00
12.	Establishment of micro-irrigation system in selected department farms	20 ha	10.00
13.	Procurement of WCT seed nuts@Rs.45 per seed nuts	3,50,000 Nos.	157.05
14.	Transportation charges of seed nuts & seedlings (LS)		35.00
15.	Miscellaneous expenses (materials for marking of palms, pollination, preparing inventory etc.)		17.75
	TOTAL		700.00