



Kuzhivedichan

INTRODUCTION:

Kuzhivedichan rice variety is a drought resistant and some what saline tolerant Red rice variety. It is a local variety cultivated traditionally in costal areas of some of the Villages of Vedharanyam Taluk (Vellapallam, Kovilpathu) and Keevalur Taluk (Manalmedu Hamlet – Vizhunthamavadi post, Melakadu Hamlet – Kamesvaram West post). Grain type of this variety is Bold. Duration of this variety is 110 days. It is sown during October first week before onset of monsoon. No input is required for cultivating this variety. Harvested grains are marketed to Kerala. Yield of this variety is 700 to 1500 Kgs / acre. In this crop, Pest incidence is less and no disease incidence and crop can come up well and yield with very low moisture. Seed rate of this variety is 45 to 65 kg/ acre.

Irrigation is not required for this variety. Farmer can get profit with less input cost. This variety is highly preferable for consumption.

Since this variety is a drought resistance and saline tolerant and requires less input, suited for cultivating in coastal type of soils and also tasty for consumption, fetching moderate price in Kerala market, farmers of this region used to cultivate Kuzhivedichan Rice variety in this region.

Kuzhivedichan Rice Variety - Details & Descriptions

1. Name of the Crop : Paddy
2. Name of Cultivar : Kuzhivedichan
3. Nature of Cultivar (Variety / Hybrid / Composite / Synthetic) : Variety
4. Scientific Name of the Crop : ***Oryza sativa***
5. Pedigree (Plant – Wise for Hybrids) : ----
6. Method of Breeding / Selection : Selection
 - a) Variety – Pureline / Pedigree / Backcross / Recurrent / Any Other Specify : Local variety
 - b) (i) Hybrid – Parental line b-Pure line



	/ Pedigree / Back cross / Recurrent / Any other (Specify)	:	Nil
	(ii) Parent line R-Pure line / Pedigree / Backcross / Recurrent / Any other (Specify)	:	Nil
	a) Method of propagation – self pollinated / Cross pollinated / Vegetative / Tissue culture	:	Self pollinated
	b) Probagation	:	Through seed
7.	Recommended regions / areas	:	Coastal areas
8.	Areas of adoption (regions where the cultivar was / is widely grown)	:	Some of the Villages of Vedharanyam Taluk (Vellapallam, Kovilpathu) and Keevalur Taluk (Manalmedu Hamlet – Vizhunthamavadi post, Melakadu Hamlet – Kamesvaram West post)
9.	Type of Grain	:	Bold
10.	Rice Colour	:	Red
11.	No. of Grains / panicle	:	92 to 121
12.	No. of Spikelets / panicle	:	95-124
13.	Special attributes, if any	:	Drought Resistance and Saline tolerant
14.	Potential yield	:	1,500kg / acre
15.	Average yield	:	1200kg / acre



	<p>✓ Light green</p> <p>Green 2</p> <p>Dark green 3</p> <p>Purple tips 4</p> <p>Purple margins 5</p> <p>Purple blotch (Purple mixed with green) 6</p> <p>Purple 7</p> <p>Others 99</p>	<p>✓ 1</p>
5.	<p>Leaf pubescence</p> <p>✓ Glabrous</p> <p>Intermediate 2</p> <p>Pubescent 3</p> <p>Others 99</p>	<p>✓ 1</p>
6.	<p>Leaf length (cm)</p> <p>Quantitative</p>	<p>29 to 33</p> <p>Cm</p>
7.	<p>Leaf width (cm)</p> <p>Quantitative</p>	<p>0.7 to 0.8</p> <p>Cm</p>
8.	<p>Days to flowering</p> <p>Days to 50% flowering</p> <p>Quantitative</p>	<p>75 days</p> <p>80 days</p>
9.	<p>Panicle exertion</p> <p>✓ Well exerted</p> <p>Moderate exerted 3</p> <p>Just exerted 5</p> <p>Partly exerted 7</p> <p>Enclosed 9</p> <p>Others 99</p>	<p>✓ 1</p>
10.	<p>Stigma colour</p> <p>White 1</p> <p>Light green 2</p> <p>Yellow 3</p> <p>Light purple 4</p> <p>Purple 5</p> <p>Others 99</p> <p>Since we inspected in harvesting stage this character is not recorded</p>	
11.	<p>Apiculus Colour</p> <p>White 1</p> <p>Straw 2</p>	



	Brown	3	
	Red	4	
	Red apex	5	
	Purple	6	
	Purple apex	7	
	Others	99	
	Since we inspected in harvesting stage this character is not recorded		
12.	Number of effective Tillers Quantitative	8 - 14	
13.	Plant height (cm) Quantitative	100 - 120cm	
14.	Panicle length (cm) Quantitative	17.5 - 23.4 cm	
15.	Panicle type		
	Absent	0	
	Compact	1	
	✓ Intermediate		✓ 5
	Open	9	
	Others	99	
16.	Awning (AWN)		
	Short and partly awned	1	
	Short and fully awned	5	
	Long awned	7	
	Long and fully awned	9	
	Others No AWN	99	
17.	Days to maturity Quantitative	110 days	
18.	Seed coat colour (kernel colour)		
	White	1	
	Light brown	2	
	Speckled brown	3	
	Brown	4	
	✓ Red		✓ 5
	Variable purple	6	
	Purple	7	
	Others	99	
19.	Single Plant Yield in gms	27.77	
20.	100 grain weight (g)	3.21	



	Quantitative	
21.	Hull colour (husk colour) Straw Golden Golden brown Brown furrows on straw Purple Purple furrows on straw ✓ Brown (tawny) Black Others	1 2 3 4 5 6 ✓ 7 8 99
22	Grain(Rice) Length , Grain (Rice) Width Grain Length and Width ratio	6.14 mm 2.85mm 2.15
23.	Threshability Easy ✓ Intermediate Difficult Others	1 ✓ 2 3 99
24.	Aroma ✓ Absent Present	✓ 0 1
25.	Biotic stress susceptibility ✓ Very low or no visible sign of susceptibility Low Intermediate High Very high	✓ 1 3 5 7 9
26.	Biotic notes Text	Drought Resistant and Saline tolerant
27.	Remarks Text	Variety performance is Good

Some of the farmers contacted and surveyed about cultivation of Kuzhivedichan Rice Variety



Sl. No.	Village Name	Taluk	District	Farmers Name
1.	Vellapallam	Vedharanyam	Nagappattinam	Govindasamy Kanchiappan
2.	Manalmedu (Vizhunthamavadi Post)	Keevalur	Nagappattinam	V.Sri Raman - 2 Acre T. Chinnasamy – 2 Acre K.Murugaiyan – 2 Acre K. Muniyappan – 1 Acre Seeniammal – 1 Acre Nagarasan – 1 Acre Krishna Amirthavalli – 3 Acre
3.	Melakadu (Kameswaram West Post)	Keevalur	Nagappattinam	P.Dhanasekaran
4.	Kovilpathu	Vedharanyam	Nagappattinam	R.Balasubramanian

Kuzhivedichan Rice variety – Survey Details

Crop Name : Kuzhivedichan Paddy
Scientific Name : *Oryza sativa*
Duration : 110 days
Crop Nature : Drought resistant, saline tolerant
Years from which this variety is cultivated : 60

Sowing Time : October First Week
Harvesting Time : January last Week
Yield Kg/ha : 900 – 1500 Kg / acre

Cultivation aspects of Kuzhivedichan Rice Variety

Method of Sowing : Direct of sowing
Seed Rate : 45 – 65 kg / acre
Seed Treatment : Nil
Spacing : No spacing is used, since this is an Direct sowing variety

Nursery : Nil (Direct sowing variety)

No. of plants/m² : 30

Land Preparation :-



- Ploughing** : Ploughing of land: 4 times with country plough / Tractor
- Fertilizer application:-**
- a) Basal** :
- * Farm Yard Manure 5 Bullock cart load / acre
 - * DAP 50kg / acre
- b) Top Dressing :-**
- 30th day Urea : 50 Kg / acre
 - Potash : 25 Kg/ acre
 - 45 – 50th day Urea : 25 Kg / acre
 - Potash : 50kg / acre
- Date of Transplanting** : ----- (Direct sowing variety)
- Days to Gap filling** : 30-35 days old seedlings will be transplanted and filled in the gaps
- Irrigation from sowing to Harvesting** : No irrigation is required (rainfed only)
- Bio fertilizer Application** : Nil
- Bio Pesticide Application** : Nil
- Weedicide application:-** No Application of Weedicides .Seed rate of this variety is more . Hence the density of the population of crop is more and also there is very less incidence of weeds and so there is no requirement of any Hand weeding or application of weedicides.
- Pests** : Leaf folder, Stem Borer
- Pesticides** : Monocrotophos – 250 ml / ac (Some farmers may apply Monocrotophos but most of them wont apply pesticides)
- Green Manure** : --
- Diseases** : --
- Harvesting** : At 110 days crop will be harvested
- Marketing** : Local Trader, Procurement centre Kerela
Cost = 400 to 450 Rs./ Grains
1 kg of Grain = 6.60 to 7.50 Rs.
- Machinery using** : Some farmers using Tractor for Ploughing
- Input** : Less input
- Minimum yield (Kg / acre)** : 700 Kg / acre
- Potential yield (Kg / acre)** : 1500 Kg / acre
- Average yield (Kg / acre)** : 1100 Kg / acre

Cost of cultivation for Kuzhi vedichan Red Rice per acre

	Particulars	Amount
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	Time (or) Dosage	Men labour (Rs.60)	Women labour (Rs.30)	Rs.
1) Land Preparation				
Country ploughing 1 time – Rs.250	4 times	--	--	1000.00
Total				1000.00
2) Seeds and Seed sowing				
a). 1 Kg seed cost – Rs.9.00 Seed rate	55 Kg / acre	--	--	495.00
b) Ploughing after seed sowing (Rs.250 / plough) Bullock cart	1 time	--	--	250.00
Total				745.00
3) Manures and Fertilizer application				
a) Basal - manuring				
i. 5 Bullockcarts load FYM 1 Bullockcart load– Rs. 75.00	5 Cart load	--	--	375.00
ii. DAP	50 Kg /acre			490.00
for application labour cost		1		60.00
b) Top dressing				
Chemical Fertiliser				
First Top Dressing				
Urea (Rs.5.00 / kg)	50 kg/ac	--	--	250.00
Potash (4.60 / kg)	25 kg/ac	--	--	115.00
Second Top Dressing				
Urea (Rs.5.00 / kg)	25 kg/ac	--	--	125.00
Potash (4.60 / kg)	50 kg/ac	--	--	230.00
for application labour cost (First and Second Topdressing)		2		120.00
Total				1765.00

4) Plant protection



If Pests appear(Leaf folder,stemborer)				
Monocrotophos	250 ml/ac	--	--	75.00
Spray application labour cost	--	1		60.00
Total				135.00
5) Harvesting and Processing				
Harvesting Charges: 13 Kg of Grains per person is given to men labour &10kg of Grains per person is given to women labour as harvesting charge Cost of 1 kg Grains =Rs.7.00 Cost of of Grains144 kg = Rs.1008.00	--	8	4	1008.00
Total	1008.00			

Abstract

a) Expenditure

Sl. No.	Particulars	Expenditure Rs.
1.	Land Preparation	1000.00
2.	Seeds & sowing	745.00
3.	Manures and fertilizer	1765.00
4.	Plant Protection	135.00
5.	Harvesting	1008.00
		4653.00

b) Income:

Yield of Kuzhivedichan Rice variety = 1200 kg / acre (approximately) 1kg of Grain-Rs.7/- 1100

kg of Grain cost = Rs. 7700.00

Income / Acre = Rs. 7700.00

Profit = Income – Total expenditure

= 7700 – 4653 = **Rs. 3047.00**

Income 7700

c) Cost Benefit Ratio = ----- = ----- = 1.65



Expenditure 4653

Remarks

Cost of Cultivation

1. Seeds:-

Normally they used to sow seeds what they got from previous year, so there is no requirement of expenditure for seed.

In the table it is given the seed cost is given for calculation (Rs.9.00 / kg of seed). But for Kuzhivedichan Rice variety growers, no need of spending seed cost as they have their own seeds.

2. Fertiliser Application:-

If the rainfall occurs, they used to apply fertilizer. Otherwise they won't apply fertilizer.

3. Pesticide application:-

Maximum they don't apply pesticides. If there is any pest incident, they would apply only one spray. So that cost of Pesticide application has been given just for calculation.

Hence without adding seed cost, fertilizer cost & pesticide cost & application (labour) cost for fertilizers and pesticides, farmers can get = Rs. 5692 / acre profit.

Since this variety requires only less input, drought resistance & saline tolerant suited for cultivating in coastal type of soils & also tasty for consumption having moderate price in Kerala market, farmers of this region used to cultivate Kuzhivedichan in this region.