

## TECHNOLOGY DEVELOPED

**Improved varieties of Small Millets released by HMRS, NAU, Waghai for Gujarat state:**

Crop	Variety	Grain Yield (kg ha <sup>-1</sup> )	Year of Release	Special attributes
<b>Finger millet (Nagli)</b>	<b>Guj. Nagli-1</b>	2000	1976	<ul style="list-style-type: none"> <li>• Red seed</li> <li>• Non lodging</li> <li>• Suitable for rainfed cultivation</li> </ul>
	<b>Guj. Nagli-2</b>	2200	1982	<ul style="list-style-type: none"> <li>• Red seed</li> <li>• Non shattering</li> <li>• More numbers of fingers</li> <li>• Medium duration</li> </ul>
	<b>Guj. Nagli-3</b>	2365	1990	<ul style="list-style-type: none"> <li>• Red seed</li> <li>• Long well filled and more numbers of fingers</li> <li>• Medium duration</li> <li>• Moderately resistant to blast</li> </ul>
	<b>Guj. Nagli-4</b>	2900	2006	<ul style="list-style-type: none"> <li>• Red seed</li> <li>• Non shattering</li> <li>• More numbers of fingers</li> <li>• Medium duration</li> <li>• Moderately resistant to blast</li> <li>• Non lodging</li> </ul>
	<b>Guj. Nagli-5 (White)</b>	3200	2009	<ul style="list-style-type: none"> <li>• White seeded Medium duration</li> <li>• Stable and moderately resistance to blast</li> </ul>
	<b>Guj. Navsari Nagli-6</b>	2536	2014	<ul style="list-style-type: none"> <li>• Brown seed, Early to medium duration</li> <li>• Compact large ear head</li> <li>• Moderately resistant to blast and foot rot</li> </ul>
	<b>Guj. Navsari Nagli-7</b>	2477	2016	<ul style="list-style-type: none"> <li>• White seeded bold grain size</li> <li>• Medium duration and non lodging type</li> <li>• Moderately resistance to blast and foot rot</li> </ul>
	<b>Guj. Nagli-8</b>	3065	2018	<ul style="list-style-type: none"> <li>• Red seeded bold grain size</li> <li>• Early duration with erect and non-lodging plant type</li> <li>• Moderately resistance to blast and foot rot</li> </ul>

<b>Vari (Little millet)</b>	<b>Guj. Vari-1</b>	1300	1978	<ul style="list-style-type: none"> <li>• Long duration.</li> <li>• Yellow grain colour.</li> <li>• Non lodging</li> </ul>
	<b>Guj.Vari-2</b>	1700	2006	<ul style="list-style-type: none"> <li>• Medium duration.</li> <li>• Yellow grain colour.</li> <li>• Long panicle with more number of grains.</li> <li>• Tolerant to lodging and shattering.</li> </ul>
	<b>Guj. Navsari Vari-3</b>	2864	2016	<ul style="list-style-type: none"> <li>• Multi-tillering and non lodging type</li> <li>• Medium gain size</li> <li>• Early maturity</li> </ul>
<b>Barnyard millet (Banti)</b>	<b>Guj. Banti-1</b>	2200	1984	<ul style="list-style-type: none"> <li>• Draught tolerant</li> <li>• Non lodging</li> </ul>
<b>Kodra (Kodo millet)</b>	<b>Guj. Kodra-1</b>	1800	1976	<ul style="list-style-type: none"> <li>• Medium duration</li> </ul>
	<b>Guj. Kodra-2</b>	2200	1993	<ul style="list-style-type: none"> <li>• Medium duration</li> <li>• Resistance to Pest and diseases</li> </ul>
	<b>Guj. Kodra-3</b>	2450	2016	<ul style="list-style-type: none"> <li>• High yielding</li> <li>• Early maturing and resistance to pest and Disease</li> </ul>

## Most popular improved varieties

### Finger millet GN-4 (Red seeded)

Duration	:	125-130 days
Average grain yield	:	2900 kg ha <sup>-1</sup>
% increase over GN-3	:	20.9 %
Popping percentage	:	77.2 %



#### Salient features

- Non shattering nature on staking
- Attractive grain colour with more numbers of fingers and grains per earhead
- Medium duration and tolerant to lodging
- Stable and resistance to blast
- High yielding and input responsive
- Palatable straw

### Finger millet GN-5 (White seeded)

Duration	:	120-125 days
Average grain yield	:	3200 kg ha <sup>-1</sup>
% increase over GN-3	:	24.9 %
% increase over GN-4	:	18.9 %



#### Salient features

- Bold attractive white seeded and having more numbers of fingers per earheads.
- Medium duration, high yielding and input responsive.
- Stable and moderately resistance to blast
- Palatable straw

### Finger millet GNN-6 (Brown seeded)

Duration : 125 days  
Average grain yield : 2536 kg ha<sup>-1</sup>.  
% increase over : 17.8 %  
GN-4  
% increase over : 30.5 %  
VR-708



#### **Salient features**

- Bold attractive dark brown seeded
- Early to medium maturing, high yielding potential and input responsive.
- Have good nutritional properties particularly
- Stable and moderately resistance to blast and foot rot diseases
- Palatable straw

### Finger millet GNN-7 (White seeded)

Duration : 125 days  
Average grain yield : 2477 kg ha<sup>-1</sup>.  
% increase over : 19.5 %  
GN-5  
% increase over : 18.4 %  
VL-149



#### **Salient features**

- Bold attractive white seeded
- Medium maturing, high yielding potential and input responsive.
- Have good nutritional properties particularly mineral matter, Ca and Fe
- Moderately resistance to blast and foot rot diseases
- Palatable straw

## Finger millet GN-8 (Red seeded)

Duration	: 105 days
Average grain yield	: 3065 kg ha <sup>-1</sup> .
% increase over VL-352 National check	: 13.7 %
% increase over VL-149 National check	: 21.3 %



### **Salient features**

- Red coloured and bold attractive seeded
- Erect and non-lodging plant type
- Early maturing, high yield potential and input responsive.
- Have good nutritional properties particularly mineral matter, Ca and Fe
- Moderately resistance to blast and foot rot diseases
- Palatable straw

## Little millet GV-2

Parentage	: Mutant from GV-1
Duration	: 115-130 days
Average grain yield	: 1700 kg ha <sup>-1</sup>
% increase over GV-1	: 32.6 %



### **Salient features**

- Medium duration.
- Bold attractive yellow grain colour.
- Long panicle with more number of grains.
- Tolerant to lodging and shattering.
- Grains quality suitable for value addition.
- Palatable straw

### Little millet GNV-3

Parentage	:	Pure line selection
Duration	:	120 days
Average grain yield	:	2864 kg ha <sup>-1</sup>
% increase over GV-1	:	8.77%



#### **Salient features**

- Early maturing and multi tillering
- Bold attractive yellow grain colour.
- Tolerant to lodging and shattering.
- Grains quality suitable for value addition and Palatable straw
- Resistance to pest and disease.

## Research Recommendations:

1. To get more yields from ragi crop, it is recommended to use seedling of 20 days old and transplant them by keeping the distance 30 cm between two rows and 7.5 cm between two plants ultimately it gives a population of 6 lakhs plants per hectare.
2. In The Dangs district, seed treatment of Nagli (Ragi) with 3 gm of *Azospirillum* per Kg of seed and 20 Kg nitrogen gives more benefit of Rs. 1552/-.
3. The farmers of AES I of South Gujarat heavy rainfall agroclimatic zone growing Nagli (Ragi) (GN-3) are advised to apply N @ 40 kg/ha along with bio-fertilizers 4.0 kg/ha soil application (*Azospirillum*+*Phosphobacteria* or *Azospirillum* alone or *Phosphobacteria* alone) for getting about 45 % more net income than application of N alone. In the soils with high available P status, its application was not found beneficial. (2009)
4. The farmers of AES-I of South Gujarat Heavy Rainfall Zone growing Nagli (Ragi) GN-4 (WN-228) are advised to apply N @ 40 kg ha<sup>-1</sup> + FYM @ 10 t ha<sup>-1</sup> along with *Azotobacter* @ 4 kg ha<sup>-1</sup> besides basal application of P<sub>2</sub>O<sub>5</sub> @ 20 kg ha<sup>-1</sup> for higher production. (2010)
5. Finger millet (Nagli) growing farmers of south Gujarat (AES I) are advised three spray of *Pseudomonas aeruginosa* Rambhas Strain 2 x 10<sup>9</sup> cfu/ml 0.6% (60ml/10lit of water) or *Pseudomonas aeruginosa* Navsari Strain 2 x 10<sup>9</sup> cfu/ml 0.6% (60ml/10lit of water) at 15 days interval, starting at 21 days of transplanting for effective and economical management of the leaf blast. (2012)
6. Nagli (Finger millet) growing farmers of South Gujarat (SGHRZ-I AES-I) are recommended to treat seedlings with 200 ml/ha liquid biofertilizer of native *Azotobacter chroococcum* ABN-1 (N.A.U.) (1 x 10<sup>8</sup> cfu/ml) or AAU commercial strain (1 x 10<sup>8</sup> cfu/ml) mixed in 1 % jaggery solution for 30 minutes and soil application of 1000 ml/ha bio-fertilizer of liquid native *Azotobacter chroococcum* ABN-1 (N.A.U.) or AAU commercial strain mixed with pulverized soil (20 Kg/ha) as spot application at the time of transplanting to save 50 % nitrogen fertilizer and get higher yield. (2012)
7. The farmers of South Gujarat heavy rain fall zone (AES-III) growing Paddy are advise to adopt SRI method (10-12 days) old seedling per hill at 25 cm X 25cm spacing to realize higher grain yield and net income (42,383 Rs/ha.) with CBR of 1:2.47) Alternatively from soils and water saving (40%) point of view, they are advised to adopt aerobic sowing (irrigated drill) of rice at a row spacing of 30 cm to get higher cost benefit ratio (1:2.30) as compared to conventional paddy cultivation. (2012)
8. Finger millet growing farmers of South Gujarat are advised for three sprays of Tricyclazole 75 WP @ 0.6 g/litre (0.045%; 225 g a.i./ha) of water starting from initiation of disease and two subsequent sprays at an interval of 15 days for effective and economical management of blast disease. PHI for this fungicide is 35 days. (2014)
9. The farmers of South Gujarat heavy rain fall zone I (AES-I) growing finger millet variety GN-5 during *kharif* season are recommended to fertilized the crop with 75%

RDF (40:20:00 NPK kg/ha) + vermicompost @ 2 t/ha for getting higher yield and net income. (2017)

10. The farmers of South Gujarat heavy rain fall zone I (AES-I) growing little millet (GV-2) during *kharif* season are advised grow their crop with application of 40 kg N/ha and 20 kg P<sub>2</sub>O<sub>5</sub>/ha for getting higher yield and net income. (2017)
11. Finger millet growers of south Gujarat (AES I) are advised to treat the seed with *Pseudomonas fluorescence* (CFU- 10<sup>8</sup>/ml), 10 ml/kg and two sprays of *P. fluorescence* @ 6ml/l first at initiation of disease and second after 15 days after the first spray for effective management of blast. (2017)
12. Seed treatment with Carbendazim 50 WP @ 2g/kg seed and two sprays of Tricyclazole 75 WP @ 0.6g/l of water or Tebuconazole 25.9 EC @ 1ml/l first immediately after the appearance of disease and second 15 days after the first spray is suggested for the management of finger millet blast. (2017)
13. The finger millet genotypes/varieties viz; GN-5, GPU-28, GPU-48, KOPN-235, KMR-204 and MR-6 having maximum amount of total phenols were found resistant to the blast disease. (2017)
14. Farmers of South Gujarat heavy rainfall zone I (AES I & III) and South Gujarat Zone II (AES I) growing finger millet are advised to adopt integrated nutrient management system for getting higher yield and net profit. (2018)

Component of Integrated Nutrient Management are:

- Seed treated with Thirum @ 3-4 g/kg seeds + seedling dipping in bio-fertilizer (*Azotobacter*) for 30 minutes.
  - Hand weeding/ use weedicide Pretilachlor @ 1.0 kg a.i./ha.
  - 30 kg N, 20 kg P<sub>2</sub>O<sub>5</sub> and bio compost 2 t/ha.
  - Apply *Azotobacter* 2 kg/ha + PSB 2 kg/ha as soil application.
  - Use chemical insecticides-pesticides
15. The farmers of South Gujarat heavy rainfall zone (AES-I) growing finger millet are advised to seed treatment with 30 % ZnO @10 ml/ kg seed and root dipping @ 0.5% ZnSO<sub>4</sub> with recommendation dose of NPK. However, in case of unavailability of ZnO they are also advised to go for soil application of ZnSO<sub>4</sub> @ 25 kg /ha. (2018)
  16. The farmers of South Gujarat heavy rain fall zone I (AES-I) growing finger millet variety GN-4 during *kharif* season are recommended to fertilize the crop with 50 % Nitrogen through FYM + 25 % Nitrogen through biocompost + 25 % Nitrogen through castor cake + *Azotobacter* @ 2 l/ha + PSB @ 2 l/ha for getting higher yield and net income. (2018)



## **PRODUCTION TECHNOLOGY OF FINGER MILLET** *(Eleusine coracana (L.) Gaertn)*

Finger millet also known as ragi in India is one of the important minor millets occupies highest area under cultivation. It is a staple food crop in many hilly regions of the country. It requires small quantity of water, matured early and well suited for cultivation under scarcity conditions. In Gujarat, it is cultivated over an area of 14161 ha. Major finger millet growing districts are The Dangs, Valsad, Navsari and Panchmahal.

Finger millet is known for their unique nutritional properties particularly high fibre content, quality protein and mineral composition. It is a rich source of dietary calcium (300-350 mg/ 100 g). Ragi is a suitable diet for diabetic and obese people. In this way, ragi has enormous health benefit and also a good source of valuable micro-nutrients along with the major food components. Certain value added food products from ragi i.e. chapatti, papad, puffing or popping, bakery product- *i.e.* biscuits, extruded products *i.e.* kurkure etc. are being produced.

### **Recommended varieties of Finger Millet for Gujarat State**

<b>Name of variety</b>	<b>Days to maturity</b>	<b>Grain colour</b>	<b>Production (kg/acre)</b>	<b>Salient features</b>
GN-4	125-130	Red	<b>1200</b>	Large earhead size with more number of grains, medium duration, blast resistant
GN-5	120-125	White	<b>1250</b>	Incurved larger earhead, blast resistant
GNN-6	120-130	Brown	<b>1100</b>	Compact earhead and moderately resistant to blast and foot rot disease
GNN-7	125	White	<b>1100</b>	Semi Compact earhead, Medium Duration and non lodging type. Moderately resistant to blast and foot rot.
GN-8	105	Red	<b>1225</b>	Semi compact earhead Early durational, erect and non-lodging plant type Moderately resistant to blast and foot rot.

### **Cultivation Practices of Finger Millet**

1	Recommended variety	Guj. Nagli - 4 (Red seeded) Guj. Nagli - 5 (White seeded) Guj. Navsari Nagli -6 (Brown seeded) Guj. Navsari Nagli -7 (White seeded) Guj. Nagli - 8 (Red seeded)
2	Climatic requirement	➤ Tropical and subtropical climate ➤ Can be grown hilly areas as well as in plains.
3	Soil	➤ Grown on a wide variety of soils ranging from very poor to fertile soil. ➤ It thrives best on well drained loam or clay loam soils.

4	Field preparation	Ploughing should be done immediately after the harvest of previous crop. Seed bed for ragi is thoroughly prepared, which should be free of weeds, friable and smooth for better germination and crop growth.
5	Seed and sowing	
	(a) Time of sowing	Onset of monsoon.
	(b) Seed rate	4 to 5 kg ha <sup>-1</sup> .
	(c) Seed treatment	Seed should be treated with Thirum @ 2.5 g / kg of seed + bio-fertilizer <i>Azospirillum</i> 3 gm / 1 kg of seed.
	(d) Method of sowing	Nursery bed :- 10 x 1 m (raised bed) Age of seedling :- 3 to 4 weeks old seedling Transplant spacing :- 22.5 cm x 7.5 cm
6	Manures and fertilizers	F.Y.M or Compost: - 5 to 10 tones / ha. Fertilizer:- 40:20:00 NPK kg ha <sup>-1</sup> (Basal- 20:20:00 NPK kg ha <sup>-1</sup> + <i>Azotobacter</i> @ 4 kg ha <sup>-1</sup> at the time of puddling, Remaining 20 kg N at 30 days after transplanting
7	Water management	Rainfed crop If rains stop for a long spell, then irrigation would be required to obtain good yield.
8	Weed control	2 to 3 hand weeding.
9	Plant protection & their control measures.	
	(a) Diseases	The main disease of finger millet is blast. <b>(i) Blast :-</b> ➤ Grow blast resistance variety ➤ Treat seed with Thirum @ 2.5 g/kg of seed ➤ Spray Tricyclazole 75% WP (Doze:-0.6g/lit. of water ) or Carbendazim 50% WP (Doze: 1g/1lit of water)
	(b) Pest	<b>Stem borer :-</b> ➤ Spray the crop with Phosphomidon 0.0.3% or Trizophos 0.04 %
10	Harvesting & Threshing	➤ The crop matures in about 120-135 days. ➤ Mature earheads are harvested. ➤ Dry three to four days & threshed with hand or bullocks. ➤ Cleaning , packaging and stored.
11	Yield	Grain yield :- 28 to 32 quintals/ha Fodder yield :- 60 to 80 quintals/ha

## **PRODUCTION TECHNOLOGY OF LITTLE MILLET** *(Panicum miliare L.)*

Little millet (*Panicum miliare* L.) is important small millet cultivated both in the tropics and subtropics. The seeds of little millet are smaller than those of other small millets. The straw is good for cattle. Little millet is well known for its drought tolerance and is considered as one of the least water demanding crops. Being the first crop to be harvested in the season, it produces the much needed food grain among the tribal and is staple food for millions in many parts of India. It is a good source of protein, minerals and vitamins.

### **Recommended varieties of Little Millet for Gujarat State**

<b>Name of variety</b>	<b>Days to maturity</b>	<b>Grain colour</b>	<b>Production (kg/ha.)</b>	<b>Salient features</b>
GV-1	125-130	Brown	1050	<ul style="list-style-type: none"> <li>➤ Panicle is medium, semi compact and branched with medium bold grains.</li> <li>➤ More number of grains per earhead and productive tillers.</li> <li>➤ Moderately resistant to lodging and shattering.</li> <li>➤ Long duration.</li> </ul>
GV- 2	120-125	Attractive yellow	1100	<ul style="list-style-type: none"> <li>➤ Panicle is long, semi compact and branched with bold grains.</li> <li>➤ More number of grains per earhead and productive tillers.</li> <li>➤ Resistant to lodging and shattering.</li> <li>➤ Long duration,</li> </ul>
GNV-3	110-115	Attractive yellow	1200	<ul style="list-style-type: none"> <li>➤ Multi-tillering and non lodging type</li> <li>➤ Medium gain size</li> <li>➤ Early maturity, high yielding.</li> </ul>

### **Cultivation Practices of Little Millet**

1	Recommended variety	Guj. Vari - 1 (Brown seeded) Guj. Vari - 2 (Attractive yellow) Guj. Navsari Vari - 3 (Attractive yellow)
2	Climatic requirement	<ul style="list-style-type: none"> <li>➤ Tropical and subtropical climate.</li> <li>➤ Can be grown in hilly areas as well as in plains.</li> </ul>
3	Soil	<ul style="list-style-type: none"> <li>➤ Grown on a wide variety of soils ranging from very poor to fertile soil.</li> <li>➤ It thrives best on well drained loam or clay loam soils.</li> </ul>
4	Field preparation	Ploughing should be done immediately after the harvest of previous crop. Seed bed for ragi is thoroughly prepared, which should be free of weeds, friable and smooth for better germination and crop growth.

5	Seed and sowing	
	(a) Time of sowing	On set of monsoon.
	(b) Seed rate	3 to 4 kg ha <sup>-1</sup>
	(c) Seed treatment	Seed should be treated with Thirum @ 2.5 g / kg of seed
	(d) Method of sowing	Nursery bed :- 10 x 1 m (raised bed) Age of seedling :- 3 to 4 weeks old seedling Transplant spacing :- 30 x 10 cm
6	Manures and fertilizers	F.Y.M or Compost:- 5 tones / ha. Fertilizer :- 40:20:00 NPK kg ha <sup>-1</sup> (seed inoculation with <i>Agrobacterium radiobacter</i> and <i>Aspergillus awamouri</i> improves the seed yield)
7	Water management	Rainfed crop If rains stop for a long spell, then irrigation would be required to obtain good yield.
8	Weed control	2 to 3 hand weeding.
9	Plant protection & their control measures.	
	(a) Diseases	The main disease of little millet is blast. <b>(i) Grain smut :-</b> ➤ Treat seed with Thirum or Carbendazim or Carboxin @ 2 kg ha <sup>-1</sup> of seed
	(b) Pest	<b>Shootfly :-</b> ➤ Early sowing with the onset of monsoon is an effective and cheapest method of control. ➤ Sowing early in the season, reducing nitrogenous fertilizer application by about 25 per cent and replacing it with farm yard manure or compost or green manuring. ➤ Use disease free seeds.
10	Harvesting & Threshing	➤ The crop matures in about 120 days. ➤ Mature panicles are harvested. ➤ Dry three to four days & threshed with hand or bullocks. ➤ Cleaning , packaging and stored.
11	Yield	Grain yield :- 17 to 20 quintals/ha Fodder yield :- 50 to 60 quintals/ha

## **PRODUCTION TECHNOLOGY OF KODO MILLET** *(Paspalum scrobiculatum L.)*

Kodo millet is a highly drought resistant crop. It is the coarsest of all food grains. The grain is covered with a horny seed coat which should be removed before cooking. Immature and molded grains are supposed to be poisonous. Kodo grain is easily preserved and proves as a good famine reserve. The grain is recommended as a substitute for rice to patients suffering from diabetes disease. The grain contains 8.3 per cent protein, 1.4 per cent fat, 65.6 per cent carbohydrates and 2.9 per cent ash. Straw is very poor in quality and harmful to horses.

Kodra is cultivated in the eastern district of Gujarat. It is mostly grown as mix crop with pulses in *kharif*. In India it is grown in AP, Maharashtra, Karnataka, TN and UP states.

### **Recommended varieties of Kodo Millet for Gujarat State**

Name of variety	Days to maturity	Production (q/ha)	Salient features
G. Kodra - 1	110-115	12-15	<ul style="list-style-type: none"> <li>➤ Selection from local germplasm</li> <li>➤ Highly adaptable to hilly areas</li> <li>➤ Early maturing and gives 27% higher yield than local.</li> </ul>
G. Kodra - 2	100-105	16-18	<ul style="list-style-type: none"> <li>➤ Tolerant to head smut</li> <li>➤ Wide adaption.</li> </ul>
G. Kodra - 3	100-105	18-20	<ul style="list-style-type: none"> <li>➤ High yielding</li> <li>➤ Early maturing</li> </ul>

### **Cultivation Practices of Kodo Millet**

1	Recommended variety	Guj. Kodra- 1 Guj. Kodra - 2 Guj. Anand Kodra – 3
2	Climatic requirement	<ul style="list-style-type: none"> <li>➤ Grown in warm and dry climate.</li> <li>➤ Highly drought tolerant and therefore, can be grown in areas where rainfall is scanty and erratic.</li> </ul>
3	Soil	<ul style="list-style-type: none"> <li>➤ Grown on a wide variety of soils ranging from very poor to fertile soil.</li> <li>➤ It thrives best on sandy loam to loam soils.</li> </ul>
4	Field preparation	Land should be prepared properly by ploughing and harrowing.
5	Seed and sowing	
	(a) Time of sowing	Onset of monsoon.
	(b) Seed rate	10 kg ha <sup>-1</sup>
	(c) Seed treatment	Seed should be treated with Thirum or Ceresan@ 2.5 g / kg of seed
	(d) Method of sowing	Nursery bed :- 10 x 1 m (raised bed) Age of seedling :- 3 to 4 weeks old seedling Transplant spacing :- 45 x 10 cm
6	Manures and	F.Y.M or Compost :- 5 to 10 tones / ha.

	fertilizers	NPK kg ha <sup>-1</sup> :- 40:20:20
7	Water management	Kodo sown in <i>Kharif</i> season generally does not require any irrigation. It is mostly grown as a rainfed crop. If rains stop for a long spell, then irrigation would be required to obtain good yield.
8	Weed control	2 to 3 hand weeding.
9	Plant protection & their control measures.	
	(a) Diseases	The main disease of kodo millet are Ergot, Smut and Rust <b>Control measures</b> ➤ Use healthy seeds of improved variety ➤ Treat seed with Thirum or Ceresan@ 2.5 g/kg of seed ➤ Spraying of 0.2% solution of Mancozeb 75 WP for rust
	(b) Pest	The main pests of kodo millet are White ants and stem borer <b>Control measures</b> ➤ White ants- 5% Malathion @ 20-25 kg ha <sup>-1</sup> in the soil before sowing ➤ Stem borer- Phorate (Thimet) 10 per cent granules @ 15 kg ha <sup>-1</sup>
10	Harvesting & Threshing	➤ The crop matures in about 110-115 days. ➤ Mature plants are cut close to the ground, bundled and stacked. ➤ Dry stacks for three to four days & threshed with hand or bullocks. ➤ Cleaning , packaging and stored.
11	Yield	Grain yield :- 12 to 15 quintals/ha Fodder yield :- 30 to 40 quintals/ha