

Kharif Arhar (Pegion Pea)

Package of practices for Pegion pea cultivation

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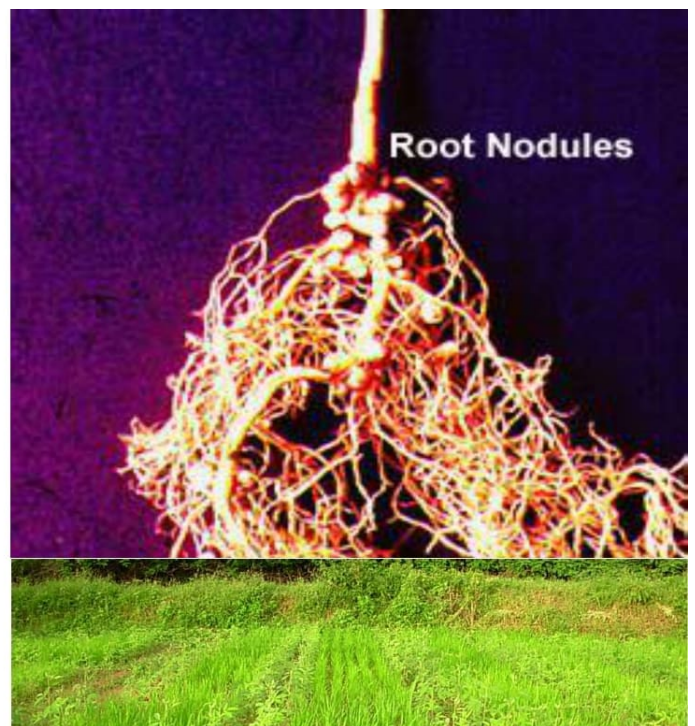
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Kharif Arhar (Pigeon pea)
cajanus cajan



Why Pigeon pea

- It is a drought resistant crop due to deep tap root system (upto 1.5 m)
- It fixes nitrogen in the root nodules from air and hence supply nitrogen to plant
- It can be grown in hilly sloppy land whose water holding capacity is very low
- It can be grown with other



Seed

Good quality seeds
suitable in Kharif

- Maruti- 170 days
- Asha- 165 days
- Laxmi- 175 days
- Selective local variety
- Seed priming with
cow urine mixed with
water.....



Seed treatment-

Seed disinfection:

4-5 g *Trichoderma viridae*- Wet seed with little water and mix 4-5 g of *Trichoderma viridae* per kg of seed. Use stickers like gur or peja

Or

2-3 g of carbendazim/Thiram per kg of seed

Land

- Upland and
Medium upland
- 2-3 ploughs



Apply lime or dolomite @
2.5 to 4 Q per 1 acre of
land during ploughing (
depending on soil pH)

Nutrient

Seed application

seeds are inoculated with a particular *Rhizobium* and phospho bacteria culture. This is mixed with jaggery solution & applied to seed and dried in shade. It increases nodulation & thereby N fixation.

Dose: 20 g of Rizobium and phospho bacteria culture per kg of seed



Nutrient

- Soil application as basal
 - Compost/FYM as per the availability (20 Q per acre)
 - Inorganic fertilizer per acre
 - DAP - 35kg
 - MOP- 13 kg
 - Urea -4 kg
- Or
- Gromer (14-35-14)-46 kg
 - Urea-3 kg
 - MOP-3 kg



In case of Boron deficiency

Spray @ 1.5 g of Boron per liter of water during flowering

Seed Sowing

Seed rate- 4-4.5 kg per acre



Variety < 140 days

Row to Row:-30-45 c.m.

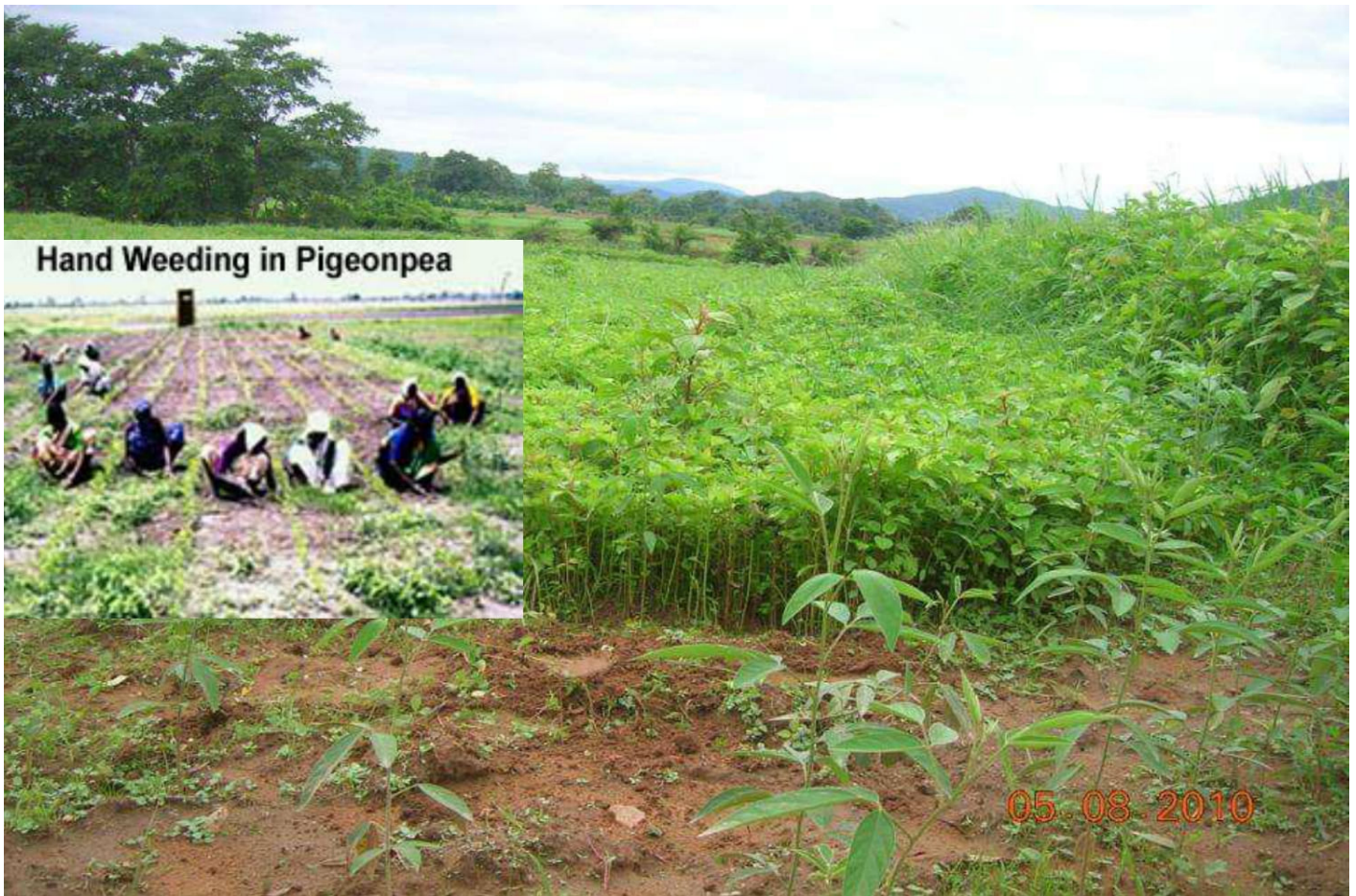
Plant to Plant: 15-20 c.m.

Variety > 140 days

Row to Row 60 c.m.

Plant to Plant 20 C.m.





1st weeding between 21-25 days

Arhar as Inter crop



- Arhar + Paddy- 2:5 , Arhar + Maize – 1:1, Arhar + Fingermillet – 2:4
- Arhar: Ground nut -1:3, Arhar + Mung/Black gram- 1:3

Integrated Pest management

- Summer ploughing
- Application of balanced nutrients
- Mannnual picking and killing to control Blister beetle
- Use of Light traps to kill
 - Pod borer and legume pod borer
- Use of Pheromone trap
- Use of Organic and bio pesticides



Manually picking by hand or collecting with an insect net and crushing them without touching them with hand when it occurs as per the stage of crop.



NPV and pheromone trap

- Helicoverpa Nuclear Polyhedrosis Virus (HNPV) to control **Pod borer**
 Dose & Application method:-Use of HNPV with adjuvant like 200ml teepol, tinopal and 500 gms of jaggery at a rate of 500 larval equivalents (LE) per ha repeat the spraying at 15-20 days intervals
- 5 pheromone traps per acre at the time of flowering. Change the Heli leur in every 15 days
- Organic and Bio pesticides
 - Handikhat in every 10 days interval- control pod borer
 - Apply 1 kg of *Beauveria bassiana* with 200 litre of water per acre to control sucking pests
 - Apply neem pesticides to control leaf hopper, mealy bugs and pod borer
- Biological control
 - Cocoons of *Chrysopa* sps @ 20-40 thousands at an interval of 10 days for 3 to 4 times to control hoppers and mealybugs
 - Eggs of *Trichogramma chilonis* , *Bracon hebetor* @ 20 thousand per acre at an interval of 7-10 days for 2 times to control leaf eating caterpillar



Chrysopa sp



Bracon hebetor



Trichogramma chilonis

Chemical control



Blister beetle

10 kg of Chloropyriphos or
Carabryl powder per acre

Pod borer



Systemic pesticides like
Asatuf (Acephet) @2 gm/ltr



Aphids



400 ml Dimethoate/
Methyl demeton or 40
ml of Imidacloprid or
40 g of Thio
methoxam in 200 liter
of water per acre

Wilting disease

1.5 g carbendazim/ Metalyxyl per lt of water

Cercospora leaf spot

3 to 3.75 g of Mancozeb / Cupper oxychloride or 1.5 g of carbendazim



Sterility Mosaic disease



Light and dark green mosaic pattern on leaves.

Destroy sources of sterility mosaic inoculum on perennial or ratooned pigeonpea.
Uproot infected plants at an early stage of disease development and destroy them.
Spray of Dicifol to control nematode, one of the carrier of the disease



Sterility mosaic infected plant (right side) without flowers and pods compared to normal plant (left side)

Phytophthora Blight

Spray fungicide like Saaf or
Ridomil @ 1 gm per ltr of
water @200ltr of water per
acre



Production



8-10 Q
per acre