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Lecture 30

Cowpea (*Vigna Unguiculata*)



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30.1 Common name : Cherry bean/ Blackeye pea/barbati/Southern pea

Plant characters and uses:

- Annual /perennial bushy climbing herb.
- Trifoliate leaves with fast and quick growth.
- It is tolerant to shade.
- Roots penetrate to 55 cm.
- Readily accepted by animals at all stages of crop growth.
- Protein content is 16-18%



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30.2 Origin, and Distribution :

Cowpea is considered as native to central africa, though it is claimed to be indigenous to india as well. It is has been cultivated from very early times for human consumption in the Mediterranean region by the greeks, romans and spaniards.

Climate & soil:

Cowpea can be grown in all tropical, subtropical and temperate regions between 30° N-S and on wide range of soils, but Sandy loam soil with pH 5-6.5 are the best for this crop. Saline, alkaline and water logged soils not suitable. Heavy clay soils encourage vegetative growth with less seed production. It can withstand moderate drought and heavy rains.



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30.3 It can also grow under the shade of tall trees, but cannot survive cold or frost. In fact no other legume can grow so well under such a variety of soil and climatic conditions , with so little attention, as cowpea.

Land preparation: Plough the field once with iron plough and twice or more with the country plough to obtain good tilth. Form ridges and furrows 6m long and 30cm apart of beds of 5x 4m depending on the availability of water and slope of the land. Form irrigation channels suitably.

Varieties: Russian giant, (EC-4216), IGFRI 450, IGFRI 985, IGFRI-8503 CO-5, CO-8, UPC 5286, UPC-287 and HFC-42-1,S-450,S -457, FOS-1, Bundel lobia-1 &2, Shewta 988,GFC-1&2.



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30.4 Season: Under irrigated condition throughout the year it can be cultivated June - July is preferred or the onset of spring. In rainfed areas October – November months are suitable: January – February. Months or suitable for summer sowing Cowpea is not so season bound as some other pulses and so it can be grown in any months of the year, except some hottest summer months.

Seeds & sowing:

Seed rate: Under irrigated conditions 20-25 kg/ha; for rainfed areas 40kg/ha in south and 45 to 55 kg/ha in north. Spacing is 30 x10 cm.



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30.5 Seed treatment: Treat the seed with 3 packets of rhizobium using the starch binder. Sowing: sow to a depth of 3cm on one side of the ridge or sow above the fertilizer band at 2cm depth and cover with soil.

Manures Fertilizers: Apply 10 t/ha of FYM or compost after the second ploughing. The recommended nitrogen- applied 25kg/ha, phosphorus-40kg/ha and potassium 20kg/ha. Fertilizer mixture should be applied prior to the sowing. 1/2 N, total P&K as basal, 1/2 N at 25 DAS.

Irrigation: Irrigate immediately after sowing and give light irrigation on the 3rd and thereafter can be irrigated at 10-15 days interval depending upon the climate for soil, moisture status.



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30.6 Weeding: Cowpea is having smothering effect. Hence weeding may not be economical . If weed problem is there, one hand weeding 20 DAS. With soil mulch is sufficient to eliminate existing the emerging weeds..

Plant protection: If sucking pests are noticed spray methyl dematon 25EC 500ml or dimethoate 30EC 500ml or phosphomidon 85WSC 250ml/ha in 250 litres.of water. stop spraying 15-20 days before harvest..

Harvesting: As a fodder crop, cowpea can be cut in 60-75 DAS or at 50% flowering to formation of pods.



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30.7 Yield: 20-30 t/ha under irrigated conditions and about half this quantity under rainfed conditions can be obtained.

Cropping systems:

Inter cropping at 1:1 ratio with maize, jowar or bajra or 2:1 with grasses or cereal fodder crops will help to improve fodder yield as well as fodder quality. Cowpea-sorghum+cowpea-berseem.