

Cowpea

Common name: Lobia

Botanical name: *Vigna unguiculata* L.

Cowpea is a quick growing leguminous forage crop. It is usually grown mixed with cereal fodders and grasses to improve the nutritive value of the herbage. It contains 20 – 24 % crude protein, 43 - 49 % neutral detergent fibre, 34 – 37 % acid detergent fibre, 23– 25 % cellulose and 5 – 6 % hemicelluloses on dry matter basis. The digestibility of cowpea fodder is above 70%. Cowpea can be grown under partial shaded conditions. It is an excellent cover crop, which suppresses weeds and enriches the soil. Cowpea requires warm climate with good atmospheric humidity. It can be grown in *kharif* as well as in *zaid* season.



Soil and its preparation

Cowpea can be grown on variety of soils. The plants prefer light soils. Loam and sandy loam soils with good drainage are most suitable for good crop growth. Field should be prepared by two cross harrowing and planking so as to get a leveled and weed free seed bed for quick germination and faster initial growth.

Varieties

Varieties	Areas of cultivation	Green fodder (t/ha)
EC-4216	North zone	30-35
UPC-5286	Whole country	35-40
IFC-8503, EC-4216	North, West and Central India	30-40
UPC-5287	North zone	30-45
FC-8	Tamil Nadu	30-45
UPC-4200	North-East region	30-35
GFC-1, GFC-2, GFC-3, GFC-4	Gujarat	25-35
Sheweta	Maharashtra	35-40
Bundel lobia-1	Whole country	30-35
Bundel lobia-2	North west zone	35-40
UPC-618, UPC-622	North- west, North-east and Hill zone	35-45

Sowing time

In irrigated areas sowing can be done during summer while in rainfed areas, it can be done after commencement of rains. Its sowing time extends from March to middle of July. In southern region, sowing of crop for fodder may be done throughout the year.

Seed rate and sowing method

A seed rate of 35-40 kg/ha is sufficient for its proper plant population. The sowing should be done in lines at an inter row spacing of 25-30 cm. The seed should be sown with seed drill or behind the plough at a depth of 2-3 cm.

Cropping systems

Promising cropping systems	Green production (t/ha)	fodder potential
Central and western region		
Cowpea – Sorghum + Cowpea – Berseem (semi arid sandy soil)	211	
Sorghum + Cowpea – Berseem + Mustard- Sorghum + Cowpea (sub humid, black soil)	168	
Eastern region		
Pearl millet + Cowpea – Maize + Cowpea – Oats (Sub humid, red acidic soils)	102	
Maize + Cowpea – Sorghum + Cowpea – Berseem + Mustard (sub humid, red acidic soils)	96	
Southern region		
Sorghum + Cowpea – Maize + Cowpea – Maize + Cowpea	110	

Nutrient management

Cowpea is a leguminous crop and has capacity to fix atmospheric nitrogen. However, for good growth 20 kg N and 60 kg P₂O₅/ha should be applied at the time of sowing for good crop growth. In sulphur deficient soil (below 10 ppm), 20-40 kg sulphur per hectare is recommended for quality fodder biomass production.

Water management

Normally the *Kharif* season crop does not require irrigation except in case of long dry spells in which the crop should be irrigated at an interval of 10-12 days. But, summer crop requires 6-7 irrigations at 8-10 days interval.

Weed management

In general *kharif* crops are densely infested with weeds due to conducive situation for growth. In cowpea, the weed problem is severe in early stages. After 30 days the crop covers the land area and thus, problem of weed infestation is minimized. One manual weeding or hoeing with weeder

cum mulcher at 3 weeks crop stage is effective to check weed growth. Pre-plant soil incorporation of Trifluralin or Fluchloralin @ 0.75 kg a.i. /ha has been found useful chemical weed management method to arrest weed growth.

Harvesting management

Rainy season crop is harvested after 50-60 days of sowing at 50% flowering stage whereas summer crop requires few more days and should be harvested after 70-75 days of sowing. Under irrigated condition, cowpea crop yielded 25-30 t/ha green biomass. But under rainfed condition only yield level are low i.e. 15-20 t/ha.