

Kutki

**PICRORHIZA KURROOA AUT.NON. ROYLE FAMILY - SCROPHULARIACEAE**

Kutki is a small nearly hairy perennial herb with a elongate creeping stolons from root stock; leaves spathulate, serrate; flowers white or bluish in dense terminal spicate raceme; dried rhizome cylindrical, deep greyish brown in colour and longitudinally wrinkled with annulations at the tip. It is found in the Himalayas, from Kashmir to Sikkim at an elevation of 2,700-4,500 m.

**COMMON NAMES:** Katuka, Kuru, Katvi, Katurohini & Katki

**LOCATION:**

Hills of Himachal Pradesh, Uttaranchal, Uttar Pradesh, Jammu & Kashmir, Sikkim & Arunachal Pradesh.

**PART USED:** Root and Rhizome

**CULTIVATION:**

**SOIL AND CLIMATE**

Sandy textured loam soil is observed best for the cultivation of *P. kurrooa*. Site rich in organic carbon and high moisture content is needed for its cultivation. Further partial shade areas (Canopy of small shrubs) is found good for maximum growth and productivity. It can be cultivated between 1800 m to 2800 m. altitude.

**NURSERY RAISING AND PLANTING**

Seeds sown in upper soil surface in Styrofoam seedling trays and covered with thin layer of moss increases the germ-inability of seeds. Moss layer retain moisture and avoid water splash of the seeds sown. This condition enhanced the seed germinability upto 52 and 58% at lower altitude inside polyhouse. Seeds are sown during November-December in polyhouse at lower altitude, during March-April in beds at middle altitude (2200m) and during May in alpine area. Seedlings raised at lower altitude are transplanted in nursery beds at least for 6 months by raising seedlings at lower altitude in winter and transplanting them at higher altitude during spring.

About 44,000 plants are usually planted plantation in one acre of land. Intercropping with 'Saunf' can give better yield, which provide suitable microclimate to growing plants of *P. kurrooa* by providing moisture for long time under its canopy. Intercropping with economically viable plants for the area viz. potato and *Foeniculum vulgare* (sanuf) were most suitable. Further intercropping with *Digitalis purpurea* is suggested.

Vegetative propagation was done successfully through stolon segments by simple method viz., water dip treatment and use of high moisture trenches for rooting of stolon cuttings which can be easily used for cultivation purpose by local growers. Top

segments of stolons were found more suitable for multiplication. Cuttings were kept under soil in trenches or covered with moss with high moisture content, 90% rooting was observed in top segments after 2 weeks.

## **MANURE**

Manuring is recommended during winter months or before transplanting. In general, maximum manure 60-70 q/acre is required at lower altitude and 40-46 q/acre at middle altitude to achieve best production for three years. However, at sites rich in organic matter only 18.04 q/acre manure is required for three years.

## **IRRIGATION**

Beds needed excessive watering/irrigation to decrease the mortality rate. At early developmental stage of seedlings in beds, as well as stolon cuttings need watering after every 24 hrs at lower altitude (1800 m. ) Generally watering should be done at two days interval during winter months.

## **WEEDING**

Generally weeding is done at weekly interval during first year of cultivation and at monthly interval during the second and third year at both the altitudes. It also depends on the condition of soil and presence of weeds.

## **HARVESTING/POST-HARVESTING**

After completion of reproductive phase plants become mature for harvesting and contains good percentage of active contents. Time of completion of reproductive phase differs with the difference in altitude where the plants are growing. Generally the plants in alpine areas complete their reproductive phase during the month of September-October while the plants at lower altitude complete their reproductive phase during the month of September. During senescence of serial parts plants should be harvested to achieve the high quantity of active content. To take the maximum amount of bio-active ingredients harvesting should be done during the months of September at lower altitude while in the months of October at higher altitude.

## **YIELD**

The average yield is 450 kg/ha and maximum 612 kg/ha from high dose of forest litter treated field.

## **ECONOMICS**

The rate for a kg. of rhizome /roots ranges from Rs. 100-150. (YEAR-2001)

**NOTE:** MARKET FOR MEDICINAL PLANTS IS VOLATILE AND THE ECONOMICS MAY VARY.

## **INSTITUTE TO BE CONTACTED:**

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