

Catharanthus roseus (Linn.) G. Don

Syn. *Vinca rosea* Linn.

Fam. Apocynaceae

Ayurvedic name	Nityakalyani (S)
Unani name	Sada Bahar
Hindi name	Bara Massi/ Sada Bahar
English name	Periwinkle
Trade name	Sada Bahar
Parts used	Root/ Leaves



Catharanthus roseus

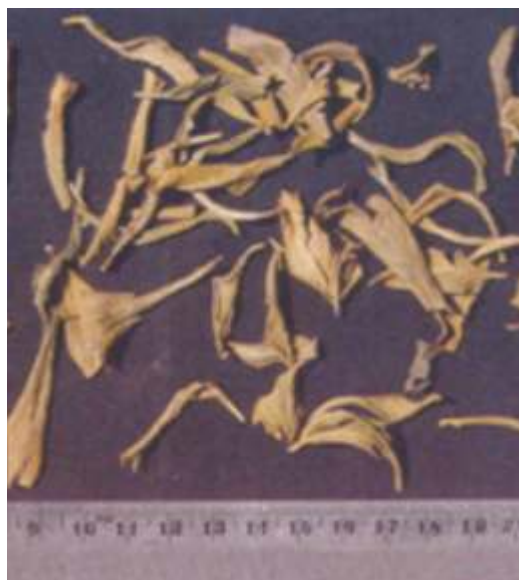
Morphological Characteristics

Catharanthus roseus is a perennial small herb or sub-shrub, up to 90 cm in height. Stem is erect, lax branching with flexible long branches, purple or light green. Leaves are simple, cauline, opposite, ex-stipulate, petiolate, elliptic ovate to oblong, 4-10 by 2-4 cm glabrous to pubescent, base acute or cuneate, apex obtusely apiculate and lateral nerves 10-12 pairs. Petiole is 1.0- 1.5 cm long.

Floral Characteristics

Inflorescence is racemose axillary or terminal cyme or solitary/paired and shortly pedicellate. Flower colour is pink/white and tubular, swollen in the region of anthers, throat of corolla-tube hairy.

Androecium contains 5 stamens included in the corolla tube, filaments are very short, epipetalous, anthers forming a cone-like structure above the stigma. Gynoecium contains two



Dried leaves



Transplanting is done at 45X30 cm spacing. One hectare requires about 74,000 seedlings.

Planting in the Field

- **Land Preparation and Fertilizer Application:** The field should be ploughed thoroughly followed by harrowing to bring the soil to a fine tilth and free from weeds. After the green manure crop is ploughed in or after the application of farmyard manure, as the case may be, the land is prepared as usual practices for any other agricultural crop. A basal dose of 250 kg of superphosphate and 65 kg muriate of potash are also incorporated in the soil. 110 kg urea is applied to the crop in two splits. First application is made 10-15 days after transplanting and the second application is made one month later. This is for an irrigated crop. When the crop is grown under rainfed conditions, half the quantities of manure and fertilizers mentioned above should be applied.
- **Green Manuring:** Farm yard manure at the rate of about 10 t/ha is applied in those areas where it is available at reasonable rate. If irrigation is available, it is advantageous to grow a leguminous crop, such as sunhemp or horsegram, prior to sowing or transplanting and ploughing it when it attains flowering stage. When this is done, application of farmyard manure may be dispensed with. This helps in building up the fertility of the soil. The green manure seeds should preferably be treated with bacterial inoculum, prior to sowing, to increase the development of root nodules which absorb atmospheric nitrogen and fix it in the soil. For treating seeds with inoculums jaggery solution is prepared by dissolving about 50 gm of jaggery in 500 ml of water, boiled, cooled and green manure seeds are wetted with this solution. Then, rhizobium culture (@ 300 gm/ha) is sprinkled and mixed well. The stickiness of the jaggery helps the rhizobium culture to adhere to the seeds.
- **Irrigation and Intercultural Operations:** Places where rainfall is evenly distributed throughout the year, the plants do not require any irrigation. However, the areas where the monsoon is restricted to a particular period, 4-5 irrigations once in fifteen days during February, March and April months are needed to get optimum yield. The first weeding is done after about 60 days from sowing or transplanting and the second after additional 60 days.
- **Diseases and Pest Control:** The plant is generally resistant to the attack of various pests and diseases. Occasionally, some plants have been found to suffer from 'Little-leaf' disease, resulting in stunted growth of the plant. The disease can be checked from spreading by uprooting and destroying the affected plants and spraying organic phosphorus insecticides once in 15 days when the infection is prevalent. A, die-back, caused by *Pythium aphanidermatum* Edson Fitzp., has been found to affect the crop during the monsoon. It is observed that mulching between the rows with any straw

