

7.2.4. Rauwolfia

Rauwolfia or sarpagandha is an evergreen plant and is also known as **black snakeroot** or **Indian snakeroot** or **devil pepper**. In India, roots and rhizomes of *Rauwolfia serpentina* have been in use for hundreds of years. The plant is named after its discoverer, a German doctor and traveller, **Leonhard Rauwolf**. Due to its immense therapeutic properties, it is used in Ayurvedic, Unani, and Homeopathy.

Rauwolfia can be propagated by seeds, roots, cutting, root stumps, etc. However, seed propagation is the most commonly adopted method. In nursery beds, the healthy seeds of rauwolfia are sown at the break of monsoon or in the month of May. Since the germination rate of seeds is very low, seeds are sown in sufficient quantity. In the month of August, seedlings are transplanted at a distance of 16-30cm.

About 5kg of seeds are required to produce seedlings which cover an area of one hectare after transplantation. The average yield which depends on climatic conditions, soil, and plant-age is 1200kg roots/hectare.

Rauwolfia has satisfactory growth in shade, while it flourishes in hot humid climate also. Other climatic conditions required for splendid growth of rauwolfia are:

- 1) **Soil:** Humus rich, clay loamy soil of sufficient drainage is best for its cultivation.
- 2) **pH:** Soil pH should be acidic (around 4).
- 3) **Temperature:** 10-38°C.
- 4) **Rainfall:** It ranges from 250-500cm.

Many chemical fertilisers (e.g., ammonium sulphate and urea) and manures (e.g., bone-meal) are given to the plants. Protection of plants from weeds is very necessary.

Plants are uprooted after 3-4 years of transplantation. Roots are washed to remove earthy matter and properly cut into small pieces followed by air drying.

7.2.5. Digitalis

Digitalis is a biennial herb growing wild but good quality of the drug is obtained especially from cultivated plant. The plant will flourish best in well-drained loose soil, preferably of siliceous origin, with some slight shade. The plants growing in sunny condition possess the active qualities of the herb in a much greater degree than those shaded by trees, and it has been proved that those grown on a hot, sunny bank, protected by a wood, give the best results.

It grows best when allowed to seed itself; if it is desired to raise it by sown seed, 2Lb of seed to the acre are required. For cultivation, special strains of the seeds are selected which would produce disease-resistant plants with maximum activity. Attention is especially paid to the structure of the soil in seed beds. As the seeds are so small and light, they should be mixed with fine sand in order to ensure even distribution. Before sowing, the soil is sterilised, and the seeds should be thinly covered with soil.

The seeds are uncertain in germination, but the seedlings may be readily and safely transplanted in damp weather and should be picked out 6-9 inches apart. Sown in spring, the plant will not blossom till the following year. Seeds must be gathered as soon as they ripe. In dry season, sufficient water is supplied to the plant. In the first year, a long stalk with rosette of leaves is produced. The flowers of the true medicinal type must be pure, dull pink or magenta, not pale-coloured, white or spotted externally.

Collection of these leaves is carried out from September to November by hand, and thus other organic matter and discoloured leaves are avoided. After collection, the leaves should be dried as soon as possible at 60°C. By quick drying characteristic green colour of the leaves is maintained. Drying is carried out till moisture is not more than 5%. Leaves are packed under pressure in airtight containers. (32)