Foxglove

*Digitalis purpurea* Linn.

**Family: Scrophulariaceae**

A perennial or biennial herb grows up to a height of 1-2 m. and hard in nature. Stem usually unbranched, white pubescent above. Leaves are long lanceolate, somewhat ciliate or smooth, sessile. Inflorescence is axillary raceme. Flowers are whitish or yellowish or bluish in colour, borne in one sided raceme, closely many-fid, downy with many long soft hairs. Fruit is an ovoid capsule with many very small, light and numerous seeds in it.

**Distribution:**

Foxglove is a native of west Europe, UK, Europe soviet and Russia. It is under Cultivation in France, Germany, UK and in India mainly in Kashmir at Tagmarg and Krishtwar at 2000-2500 m. and also cultivated at Mungpoo in Darjeeling District and in the hills of Nilgiris.

**Varieties:**

EC-115996, D-76, D-21 and DYF

**Agro-climatic requirements:**

Foxglove can grow well under hot and humid climate with a range of temperature from 20-30°C is suitable. It flourishes at an altitude of 1200m. Well distributed rainfall and good sunshine during winter. It thrives well in sandy or clayey loam soils or limestone soil, rich in organic matter and which has good drainage.

**Cultivation:**

Digitalis is propagated through seeds. It can be done by direct sowing of seeds in the field by broadcasting or by drilling. For a good yield seedlings are raised in the nursery and transplanted in the field. One gram contains about 1500 seeds; germination percentage of seeds reduces when they become 2-3 yrs old. For direct sowing seeds required at the rate of 5-8 kg per hectare. Seeds at the rate of 1-2 kg. per hectare is enough to prepare seedlings.

**Manure and fertilizers:**

To get good yield, providing balanced nutrients is important. During preparatory stage land is manured adequately with farmyard manure or compost 40-60 tons per hectare, Nitrogen 100-150 kg/ha, 50 kg/ha of phosphorous and 25-30 kg/ha of potash. Nitrogen is given in 4 divided doses, first dose at sowing and subsequent doses at an interval of 60 days.
Intercultural and pruning:

Plant requires repeated weeding and hoeing. During summer (April-June-July) plantation is irrigated at an interval of 7-10 day and 2 to 3 times from Aug to Nov. From December till harvesting of leaves plant requires 2-3 times irrigation per month. During rainy season irrigation is not required.

Plant protection:

Digitalis crop is relatively free from damage due to pests and diseases. It gets affected by Albarneria fungi, which causes drying of leaves. By spraying of 0.1-0.2% of copper containing fungicide infection can be controlled. Diseased plants are to be plucked along with root and thrown away.

Harvest and yield:

After 5 months of sowing when plants attains a height of 8-10 cm harvesting begins, subsequent harvesting done at an interval of 6-8 weeks. Leaves are harvested during day time because it contains more of glycoside in sun shine and in midnight glycoside percentage reduces. Second year first harvesting carried out in Mar-April and next and last harvesting done after 2 months.

Leaves are dried under sun light for 3 days by turning side of the leaves at regular interval or artificially dried at about 50-60°C and are stored under air tight container and dark places.

EC 115996 variety yields about 15 tons per hectare of fresh leaves (3 tones of dried leaves).

Inputs:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Materials</th>
<th>Per acre</th>
<th>Per hectare</th>
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<tbody>
<tr>
<td>1</td>
<td>Seeds (kg)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Direct sowing</td>
<td>2.0</td>
<td>5</td>
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<tr>
<td></td>
<td>b) Nursery raising</td>
<td>0.8</td>
<td>2</td>
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<tr>
<td>2</td>
<td>Farm Yard Manure (t)</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Fertilizer (kg)</td>
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<td></td>
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<tr>
<td></td>
<td>N</td>
<td>60</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>P_2O_5</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>K_2O</td>
<td>12</td>
<td>30</td>
</tr>
</tbody>
</table>

Parts used: Leaves

Medicinal uses:

Leaves cardiac stimulant and tonic; rich source of digoxin, an active cardiac glycoside, and official drug in pharmacopoeia; useful in the treatment of congestive heart failure associated with
or without high or low blood pressure, fibrillating flutter, tachycardia and valvular defects also in renal obstruction and dropsy. External application is useful in burn wounds.