

**Title: Propagation of *Aconitum heterophyllum* (Patish).**

**Background:** The natural zone of occurrence of Patish (*Aconitum heterophyllum*) is from 2800 meters to 4500 meters MSL. While traversing through district Kullu on any hill side at average altitude of 2500 m, it is seen that 0.005 to 0.01% of flora growing is that of aforesaid species. This species being a native of the area, its propagation under the project is being proposed.

**Scheme:** Under the scheme suitable areas (Kasol, Jibhi, Shoja, Fozal, etc.) in the appropriate altitude in the Kullu District will be identified. CIGs of interested families will take up propagation through intercropping in the adjoining fenced forest plantation areas of VFDS or on village common land. After initial training, once the cultivation or propagation is initiated, a shed will be set up on village common land for storage and working on cleaning and packaging. Marketing will be carried out by the marketing committee set up at Cluster level of VFDS and under the aegis of Manager (Marketing) from PMU.

**Activities:** The suitable area has been ear-marked at Rupin Forest, village Neri, Fozal Block in Patlikuhl Range of Kullu FD (Distt. Kullu) under the batch-1 enlisted and raised VFDS. This area has already been planted with coniferous species (*Cedrus deodara*). It has been decided that the area will be taken for the above mentioned species for intercropping to be worked by the constituted CIG at village Neri including 10 HH or 20 persons. Before the activity details are taken up, a MoU will be signed with VFDS & DMU for allowing use of intercropping in the forest fenced plantations for specified number of years.

**Costs involved:** Estimated projections have been broadly worked out as below:

No.	Activities	Units	Quantity	Norms	Cost
1	Constitution of CIG from VFDS	1			
2	Grass Cutting in Fenced Area by machine	Sqm	4 Hac.	2.67	<b>1,06,800</b>
3	Preparation of Temporary nursery and filling of P-bags	100	20,000	218.3	<b>43,660</b>
4	Cost of Seed (NMPB)	Kg	1.5	10000	<b>15,000</b>
5	Agricultural Implements	LS		LS	<b>7,000</b>
6	Digging of pits (30x30x30) cm size	100	20,000	477	<b>95,400</b>
7	Planting of plants with naked roots	100	20000	183	<b>36,600</b>
8	Filling of pits (30x30x30) cm size	100	20,000	191	<b>38,200</b>
9	Manure cost/ NPK	LS		LS	<b>20,000</b>
10	Carriage of manure	LS		LS	<b>5,000</b>
11	Planting & Initial Watering Cost	LS		LS	<b>1,00,000</b>
12	Shed Construction	LS		LS	<b>1,50,000</b>
13	Carriage of extracted material to shed	LS		LS	<b>20,000</b>
14	Cleaning & Packing cost	LS		LS	<b>20,000</b>
15	Packaging material cost	Quintals	44	LS	<b>5,000</b>
16	Cost of labels				<b>1,000</b>
17	Sale & Auction	LS		LS	<b>-</b>
18	General Overheads	LS		LS	<b>50,000</b>
	Total				<b>7,13,660</b>

**Financial Returns:** Net profits from the above activities will be ploughed back to all working households (HH). Total yield (Roots) expected to be 11.0 Qtl./Ha which on the average market price of Rs. 200,000/- per qtl. may give a return of Rs. 88,00,000/- per three years.

**Cost Benefit Analysis:** The benefit : cost =  $88,00,000/7,13,660 = 12.33$ . Any project which on PNV gives a value of 12.33 times that of investment is highly sustainable.

**Sustainability:** The sustainability of the activity will depend on the motivation of the people after the project period, if they adopt the practice of cultivation of the above grass on the margins of their cultivable land, fallow land (Khretar) and village common lands. Therefore, the project should be sustainable and model replicable in number of other such VFDS in Kullu district during the project period and under VSJS of HP Forest Department thereafter.

**The project will be executed in PFM mode since it involves village communities residing near the identified forest areas.**