

**Model Nursery** of Arid Forest Research Institute (AFRI) is located at Krishna Nagar near M/S Narpat Petrol pump New Pali Road (NH 62), Jodhpur about one kilometer away from AFRI main campus. Modern nursery complex area is 6.4 hectares. Topography of the nursery site is flat and the soil is loamy sand. The nursery is protected by barbed wire fencing and 6 feet stone wall. It is having state-of art infrastructures and facilities to produce quality planting stocks of arid and semi arid zones forestry species, important medicinal plants, ornamental plants and many fruit bearing tree species.

Every year about 50,000 plants of dry areas species, ornamentals, avenue trees and about 10,000 medicinal plants are being produced in the nursery. These plants are mainly being supplied to user agencies like State Forest Departments, various government organizations, NGOs, farmers and numerous educational institutes located in Rajasthan and neighboring states. Trainings on nursery techniques, plantation techniques and planting stock improvement are also being imparted to all these user agencies regularly by the scientists and forest officers. On the initiative of present Director, AFRI, organically high quality Neem leaves and mixed leaves compost is also being prepared and sold in the nursery.

**Infrastructure and Facilities**

**Shade Houses:** Total five shade houses using agro net (70:30) on angle iron structure have been constructed with sprinkler system of irrigation to facilitate proper and uniform watering to the seedlings. Shade houses are earmarked for the types and uses of the plants.

**Organic Compost Unit:** Compost is being produced from Neem leaf and other litter using aerobic method of decomposition. Compost is being sold after testing in the lab for nutrient status and branding. The nursery also has a vermi-compost unit.

**Concrete Seed or Mother Bed Structure:** Permanent raised bed structures of the dimension 10 m x 1 m x 1.8 m are available in the AFRI Model Nursery. These beds are filled with suitable mixtures for seed germination.

**Glass House:** A glass house equipped with temperature and moisture control system has been constructed for cuttings/grafting purposes.

**Cactus and Succulent Plants Garden:** This facility is being established recently (2019-20) as per the present Director's vision. It is enriched with more than 200 species of Cactus and Succulent species collected from various parts of country.



**Arboretum:** 85 important tree species of arid and semi-arid regions have been planted in 2.5 ha area adjoining to nursery.

**Medicinal plant Garden:** A germplasm bank of 79 species of medicinal plants has been established along with display of botanical names and their uses. This medicinal plant garden is being used in training for Forest Department personnel, students and farmers. Medicinal plants are mass propagated and sold to public on demand basis.



**Vegetative propagation:** Vegetative propagation is a tool for multiplication of genetically identical plants of superior varieties called clones. At AFRI nursery vegetative propagation methods like rooting of stem cuttings using plant hormones, air layering and bud grafting are practiced to propagate species like Gugal, Nimbu, dwarf and thornless Thar-Sobha Khejri.

**Production of seedlings and sale**

Superior planting stocks of various forestry species, medicinal plants, ornamental and fruit bearing plants are being produced regularly and sold to various user agencies within and outside state.

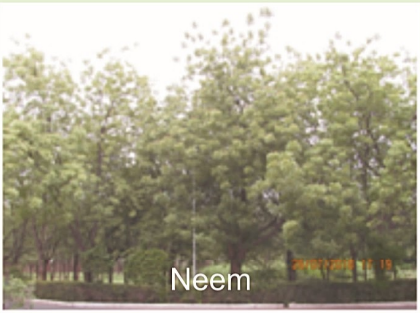
**\*Seedlings of various sizes are sold at following rates:**

Species	Polybag Size	Seedling height	Rate (Rs.) of Seedlings
All Plants Species	10 cm x 10 cm	< 1.0 Feet	15
	10 cm x 20 cm	1.0-2.0 Feet	40
	15 cm x 25 cm	> 2 Feet tall	80



**I. Common Forestry tree species seedlings available in the Nursery**

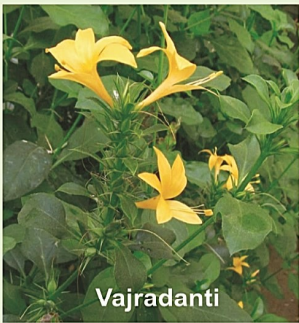
S. No	Local Name	Botanical Name
1	Desi babool	<i>Acacia nilotica</i>
2	Khair	<i>Acacia catechu</i>
3	Satvan	<i>Alstonia scholaris</i>
4	Neem	<i>Azadirachta indica</i>
5	Shisham	<i>Dalbergia sissoo</i>



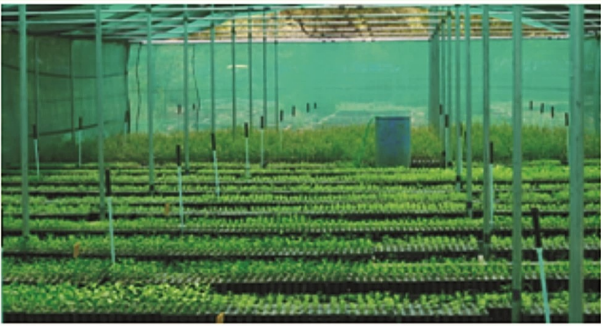
S. No	Local name	Botanical name
6	Gulmohar	<i>Delonix regia</i>
7	Gamhar	<i>Gmelina arborea</i>
8	Barh	<i>Ficus benghalensis</i>
9	Pipal	<i>Ficus religiosa</i>
10	Karanji	<i>Pongamia pinnata</i>
11	Khejri	<i>Prosopis cineraria</i>
12	Lal chandan	<i>Pterocarpus santalinus</i>
13	Chandan	<i>Santalum album</i>
14	Rohida	<i>Tecomella undulata</i>
15	Arjun	<i>Terminalia arjuna</i>
16	Jaal	<i>Salvadora</i> spp.
17	Kumat	<i>Acacia senegal</i>



**II. Medicinal plants sold in Nursery**



S. No	Local name	Botanical name
1	Gwarpatha	<i>Aloe vera</i>
2	Guggul	<i>Commiphora wightii</i>
3	Ashvagandha	<i>Withania somnifera</i>
4	Bansa	<i>Adhatoda vasica</i>
5	Mopane	<i>Colophospermum mopane</i>
6	Patta ajwain	<i>Plectranthus amboinicus</i>
7	Tulsi	<i>Ocimum sanctum</i>
8	Meetha neem	<i>Murraya koenigii</i>
9	Vajradanti	<i>Barleria prionitis</i>
10	Shatavari	<i>Asparagus racemosus</i>
11	Bhakar aak	<i>Calotropis gigantea</i>



III. Fruit yielding plants/Horticulture/ornamental plants sold in nursery

Local Name	Botanical Name	Local Name	Botanical Name
Aonla	<i>Emblica officinalis</i>	Bougainvillea	<i>Bougainvillea spp.</i>
Goonda	<i>Cordia myxa</i>	Harsingar	<i>Nyctanthes arbortristis</i>
Sitafal	<i>Annona squamosa</i>	Semal	<i>Bombax ceiba</i>
Nimbu	<i>Citrus limon</i>	Saptapami	<i>Alstonia scholaris</i>
Jamun	<i>Syzygium cumini</i>	Paraspipal	<i>Thespesia populnea</i>
Imli	<i>Tamarindus indica</i>	Sahjan	<i>Moringa oleifera</i>
Khari Badam	<i>Terminalia catappa</i>	Chandini	<i>Tabernemontana divaricata</i>
Ber	<i>Ziziphus mauritiana</i>	Kaner lal	<i>Nerium indicum</i>
Khirni	<i>Manilkara hexandra</i>	Adenium	<i>Adenium obesum</i>
Shahatoot	<i>Morus alba</i>	Kathal	<i>Artocarpus heterophyllus</i>

IV. Rates of various types of composts sold at AFRI Model Nursery \*

Quantity of purchase	One kg to 100 kg ( retail )	101 to 200 kg bulk	201 kg & above bulk
Simple Neem Leaf Com-post manure Rate (Rs)	20	16	14
Value added Neem com-post ( Trichoderma, PSB/ AM etc) rate ( Rs )	25	20	15
Mixed leaf compost rate (Rs)	15	12	10
Particular	Sold in branded packed bag 5kg	Bulk sales done in bigger bags or without bags. Loading will be done by nursery staffs at free of cost.	

\*Rates of seedlings/compost manure are subject to revision from time to time



Purchase of Neem Leaf Compost and Seedlings of various plant species by farmers



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# MODEL NURSERY AFRI



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