

# Spring Sapling Sowing/Propagation Season In Afghanistan



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**USAID**  
FROM THE AMERICAN PEOPLE

**Guzargah Nursery**



**Paghman Nursery**



**Dehmurah Khan Nursery**



## Positive Observations/Leadership

**Dedicated, knowledgeable:**

- Administrators
- Nursery managers
- Nursery foremen
- Advisors





## Positive Observations/Site Preparation



**Agropyron seed production in  
Nursery seedbeds**

**Mechanical site preparation/  
Deep plowing**







**Seed orchards being planted on Nursery grounds**

## **Positive Observations/Seed**



**Seed storage facility**



**Seed collection, processing and storage training**

## **Positive Observations/Sapling Inventory**



**Inventory of native Afghan saplings for 2008 and beyond look promising**



**Every effort is being made to meet the contracted quantities**



## Positive Observations/Seeding



**Species with short/no stratification are being sown in the spring (Ulmus)**

**Species with long stratification are being sown in the fall (Cercis)**



## **Positive Observations/Transplanting**

**Conifer transplanting done in the fall**



**Polybag conifers transplanted**



## Positive Observations/Populus production



**Second year shoot growth used for producing cuttings**



## Positive Observations/Polybag Production



- Germination
- Growth and Development
- Transplanting



**Areas Needing Improvement:**  
**Ensure Adequate Sapling Root Development**



**Transplant root length 20 cm**

**Prepare seedbeds to depth of 30 cm for root development, drainage**



## **Areas Needing Improvement:**

### **Match the Nursery to the Sapling Crop**



#### **Deciduous:**

- **Finer soils**
- **Can tolerate some flooding**



#### **Conifers:**

- **Well-drained, coarse soils**
- **Slightly acidic soil**



#### **Cold Frames:**

- **High-maintenance (irrigation, preparation, harvest)**
- **Lacking plastic/glass covering**



**Areas Needing Improvement**  
**Determine Effectiveness of Nursery Operations**

- 1. Determine Provincial Sapling Production Goals**
- 2. Identify species and age-classes**
- 3. Identify stock type needs (bareroot or polybag)**
- 4. Determine individual nursery production targets**
- 5. Re-direct inefficient nurseries**
- 6. Limited funding**



## **Areas Needing Improvement** **Provide Training**



**Short-Term:** Workshops on techniques

**Long-Term:** Detail Assignments on technology



## **Sowing/Propagation Summary: Quality Control**

**Establish annual calendar of events**

**Time-Critical**

**Establish Minimum Standards**

**Production goals**

**Shoot height (minimum/maximum)**

**Root length (minimum)**

**Sapling diameter at harvest (minimum/maximum)**

**Cultivation depths**

**Provide Training Prior to Practice**

**You demonstrate and explain**

**They demonstrate, you explain**

**They demonstrate and explain**

**Have Right Tools**

**Deep cultivators for site preparation (>30 cm)**

**Seed to meet production goals**

**Enforce Standards**

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رياست عمومي جنگلات و علف چرها

نهال شبه به طفل بوده  
نيازه حفاظت و پرورش دارد.

(USAID)