

Spring Sapling Harvest Season in Afghanistan



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Chaman Nursery



Guzargah Nursery

BeBe Mehroo Nursery



Dehmurah Khan Nursery

Positive Observations/Soil Conditions

Nursery Soil Conditions:

- 1. Soil Temp 38-40 F**
- 2. Soil Moisture 75% of Field Capacity**



Positive Observations/Work Crews

- 1. Ample quantities of workers**
- 2. Seemed to enjoy their work**



Positive Observations/Leadership

Experienced, dedicated:

1. Administrators
2. Nursery Managers
3. Foremen
4. Laborers
5. Advisors



Positive Observations/Transportation



Transportation to move harvested saplings to the planting site.

Positive Observations



- Ample quantities of saplings for spring plantings projects
- Saplings were dormant at harvest
- Efforts made to minimize harvest season length
- Harvest began as soon as snow was off nursery ground

Areas Needing Improvement:
Protect Saplings' Roots from Drying Between Harvest and Planting



**Use tarps or soil to protect roots from drying.
Roots left exposed for more than 1 minute will dry out.
Loss of small roots will reduce sapling survival.**

Area Needing Improvement:
Ensure Root Length Minimum of 30 cm



Larger/longer root mass will increase survival by:

- 1. Greater uptake of nutrients**
- 2. Greater uptake of moisture**
- 3. Withstand periods of drying**
- 4. Anchor sapling**

Areas Needing Improvement:
Remove Polybags When Transplanting



**Production in Polybags No
More Than 2 Years:**

- 1. Restrict root development**
- 2. Cause spiraling of roots**
- 3. Decrease survival**



Areas Needing Improvement:
Modify Digging Tools for Greater Root Mass



**Standard shovels are designed:
shallow digging and cutting**

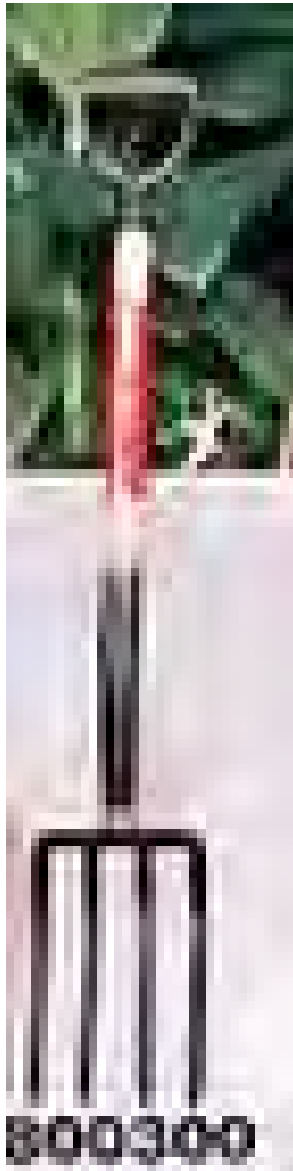
Maddocks are used to cut roots



Areas Needing Improvement:
Modify Digging Tools for Greater Root Mass

Heavy-bladed garden forks will harvest saplings with limited cutting of roots.

Narrow, long-bladed shovels (45 cm) will dig deeper than standard shovel.



Areas Needing Improvement
Grow the Right Sapling for the Right Place



**When growing saplings,
consider the sites
they will be planted:**

- 1. Aspect (north is
suitable for conifers)**
- 2. Soils (Calcium soil
are suitable for
deciduous)**
- 3. Urban areas (larger
saplings are
suitable)**
- 4. Rural areas (smaller
seedlings are
suitable)**



Sapling Harvest Summary: Quality Control

Establish Minimum Standards

Sapling shoot length

Sapling root length

Exposure time period for roots

Provide Training Prior to Practice

You demonstrate and explain

They demonstrate and you explain

They demonstrate and explain

Have the Right Tools

Long-bladed shovels

Spade Forks

Enforce the Standards