The Role of Medicinal Plants in Afghanistan’s Trade

Abdul Majid Wafiq
President of Afghan Plants Company,
Ministry of Commerce, Kabul

Technical Assistance of Mr. Shamsuddin Seddiqi (ICARDA) in Preparation of this Presentation is Greatly Acknowledged
Introduction

- Afghanistan has favourable climatic and soil conditions for the growth of diverse plant species
- Significant economic role
- First study of medicinal plants conducted during 1886/87
- Follow-up of this study during 1965-67
- Specialists have identified 3000 species
- 650 can be grown commercially
Marketing

- Ministry of Commerce is finding market for 46 species
- Export volume
- History of medicinal plants
- High quality of medicinal active ingredient
- Afghanistan is a major exporting country
Important Species

- Glycyrrhiza glabra (liquorice roots)
- Cuminum (cumin seed)
- Carum caravi (cumin seed)
- Ferola foetida (Asafoetida gum)
- Ziziphus vulgaris (Jube)
- Medicaco sativa (alfalfa seed)
- Thrfulium pretensis (clover seed)
- Corianderum sativum (coriander seed)
- Papaver somiferium (poppy seed)
- Coum copticum (anis seed)
- Foericiumlum vulgare (funnels seed)
- And few others ....
Quality Comparison With Eastern Asian Countries

- Highest active materials
- Can grow under diverse climatic and soil conditions
- Used locally, no processing plant in Afghanistan
- No post-harvest value addition
Export Figures

- Accounts for 30% volume of Afghan exports
- Total exports during 1975-1979 were 100,000 metric tons
Afghan Medicinal Plants Classified into 5 Categories

1- Flowers

Principle species are:

- Althaea officinales  Marsh mallow
- Althaea rosea  Holly hock
- Rosa centifolia  one of roses
2-Seeds

- **Principles Species are:**
  - Cumin cyminum  cumin seed
  - Carum caravi  caraway seeds
  - Medicago sativa  alfalfa seed
  - Citrullus vulgaris  watermelon seed
  - Trifolium species  clover seed
  - Sesamum indicum  sesame seed
  - Coriandrum sativum  coriander seed
  - Negella sativa  black cumin seed
3-Roots

Principle plants are:
- Glycyrrhiza globra  liquorice root
- Centaurea species  centaury
- Alkanna tinctoria  Alkanet root
- Anacylus pyrethrum  pellitory
4- Leaves

Principle Plants are:

- Anethum graveolens  Dill
- Mentha piperita L  Pepper mint
- Cichorium endive  Endives
- Nicotiana tobacum  Tobacco
- Thymus afghanicus  Thyme
5- Gums

- Ferulla assa-foetida gum
- Astragalus conifera
- Liquorice root
Description of Liquorice Roots

- Durable grassy plants with the stalks of 30-120 cm
- Disappears in winter and grows from rhizomes in spring.
- Flowering during July
- Have short stalk with long underground (80 cm) root
- 3-4 year old roots can be harvested in autumn and dried.
Contents of Liquorice

1- Glycerazine  6-18%
2- Glucose  1.4 - 2.8 %
3- Sucrose  2.4 - 6.8 %
4- Amodone  30.2 %
5- Albumin  variable
6- Spa violin  4.2 %
Utilization of Liquorice Roots

- Pharmaceutical
- Industrial
- Sweeteners
- Confectionery application
- Fire extinguishing fluids
- Traditional uses
Pharmaceutical

- Anti inflammatory
- As arthritis and mouth ulcer
- Roots are alterative, antispasmodic demulcent
- Diuretic
- Emollient
- Expectorant laxative moderately pectoral and tonic
- Have hormonal effects similar to the ovarian hormone
- Cough medicine, catarrhal infection of urinary tract
- Use for Addison, disease, asthma, bronchitis, peptic ulcer, arthritis, allergic complaint, and steroidal therapy
- Use for kidney disease.
- Use for herpes, eczema, shingles, gastric ulcer
Confectionary Application

- The extract is 50 times sweeter than sugar beet and 100 times sweeter than sugar cane.
- Flavouring agent.
- Used in pharmaceutical syrups, non-alcoholic and tonic.
- For chewing and excellent for children teething as well as tooth cleaner.
- Used for tea, roots excellent quencher.
## Key Importers of Unprocessed Liquorice Roots in 1979

<table>
<thead>
<tr>
<th>Country</th>
<th>Qty/MT</th>
<th>Value in million $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>2615</td>
<td>825</td>
</tr>
<tr>
<td>USA</td>
<td>1933</td>
<td>952</td>
</tr>
<tr>
<td>Japan</td>
<td>1700</td>
<td>816.4</td>
</tr>
<tr>
<td>Italy</td>
<td>963</td>
<td>462.5</td>
</tr>
<tr>
<td>India</td>
<td>188</td>
<td>506.5</td>
</tr>
<tr>
<td>UK</td>
<td>2028</td>
<td>1059.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>188</td>
<td>820</td>
</tr>
</tbody>
</table>
Cultivation

- Requires deep and fertile soils with moisture preferably sandy soils.
- Clay soil is not suitable for growth.
- Slightly alkaline condition produces the best plant.
- Need 15 degree C for growth during planting.
- Removing of flower promotes long root growth.
- After establishing roots, it is difficult to eradicate the plant.