

The Role of Medicinal Plants in Afghanistan's Trade

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**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)
- *Medicago sativa* (alfalfa seed)
- *Thrfulium pretensis* (clover seed)
- *Corianderum sativum* (coriander seed)
- *Papaver somiferium* (poppy seed)
- *Coum copticum* (anis seed)
- *Foericumlum 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 officinalis* 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

■ Citrullis 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 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 Licorice Roots in 1979

■ Country	Qty/MT	Value in million \$
■ Pakistan	2615	825
■ USA	1933	952
■ Japan	1700	816.4
■ Italy	963	462.5
■ India	188	506.5
■ UK	2028	1059.2
■ Singapore	188	820

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.