



Djabborov Bakhtiyor Iskandarovich  
Senior Lecturer. Bukhara State University  
Department of Botany and Plant Physiology

Shamsieva Nilufar  
Bobokulova Nozima  
Biology Students

**Abstract**

The article presents data on the biological and economic features of forest gymnosperms, their chemical composition, medicinal properties, and use in the national economy.

**Keywords:** viscose, silk, cellulose, staple, balm, resin, pine wool, camphor, alcohol, acetic acid, tannic extracts, turpentine, rosin, tar, charcoal, pine essential oil, taiga, *Pinus roxburghii*, *P. wallichiana*, *P. merkusii* and *P. insularis*.

**Introduction**

The importance of gymnosperms in nature is great. They, like all plants, release oxygen and absorb carbon dioxide, as well as form organic matter. By forming forests, often in cold regions (taiga), they create habitats and food for many animals. Gymnosperms form both pure coniferous forests and mixed forests (together with angiosperms-trees).

Coniferous trees on the slopes of rivers and ravines of Uzbekistan protect the soil from erosion. Conifers are landscape formers. They have a water protection and anti-erosion value. Needles and young shoots form the basis of the diet of moose and capercaillie in winter, many animals feed on seeds of Siberian cedar.

The importance of gymnosperms in human economic activity is great. Coniferous plants provide the bulk of construction wood, are used as fuel, and are raw materials for the woodworking and pulp and paper industries. Viscose, silk, cellulose, staple, balms and resins, pine wool and camphor, alcohol and acetic acid, tannic extracts, turpentine and rosin, tar and charcoal, pine essential oil, as well as foodstuffs and vitamins are obtained from them. Coniferous wood is a good decorative material.

Gymnosperms are also used in medicine. They serve as raw materials for obtaining vitamins, juniper cones are part of diuretic collections. Ephedra is used to produce ephedrine, a drug that excites the nervous system and is used to treat allergic respiratory diseases. In folk medicine, conifers are used to treat tuberculosis, nervous disorders, kidney diseases, bladder, deafness. Cedar oil is obtained from the seeds of Siberian pine.

The economic significance lies in the following, the economic significance of gymnosperms:



- the source of the wood. Gymnosperms account for about 40% of the total forest area in the world. Coniferous trees produce wood that is mostly soft, light in color and weightless. This wood is mostly highly polished and, due to its softness, is very useful for fine art work, furniture and interior decoration.

- Deodar cedar wood is commonly used to make doors, windows, and floors in homes. Laryx, agathis, and taxodium wood are other durable, stable wood species commonly used for the manufacture of railway sleepers, poles, beams, and power transmission poles. Agathis australis is found in Australia.

-resin source: resins are exudates released in the resin ducts of many coniferous trees. Below are some of the important resins and how they can be applied:

(a) Turpentine. They are also known as oleosmols. In India, *Pinus roxburghii*, *P. wallichiana*, *P. merkusii* and *P. insularis* are the main source of turpentine. Turpentine oil is used for liquefaction in the paint industry;

Venetian turpentine is a yellowish or greenish liquid with a specific odor. It is obtained from *Larix decidua*. It is used in veterinary drugs, lacquers and histological preparations;

(b) Rosin: Rosin, also known as rosin, is obtained by distilling oleoresin, the main source of which is species of Scots pine. Rosin is an aromatic brittle solid used in the production of paints, varnishes, soaps, oils, fabrics, plastics, rubbers, adhesives, chemicals and medicines;

(c) Copals: They are a group of solid resins that are obtained from both living and fossil sources. They do not contain oils and give a hard elastic varnish. Manila copal is obtained from white agathis. It is mostly harvested from live trees. Their varnishes are used in the application of enamels and interior work;

- source of paper and cardboard: Wood pulp *Picea smithiana*, *cryptomeria japonica*, *Pinus roxburghii*, *Abies pindrow*, etc. It is used for the production of paper, especially newspaper;

- decorative value. Species of cycad, ginkgo, taxus, pine, thuja, cupressus, araucaria, *cryptomeria*, *gnetum* are grown as ornamental plants;

- Soil erosion prevention: Pine roots extend horizontally for several meters and firmly hold soil particles and prevent soil erosion;

- fuel. Industrial wood waste is used as fuel;

- Stuffing: Pine needles are used for stuffing sofa sets, laboratory samples;

- Linoleum production: Fine sawdust from the woodworking industry is used for the production of linoleum and plastics.

## REFERENCES

1. Мурдахаев Ю. М. Лекарственные культуры в Узбекистане, Ташкент, 2001.
2. Musayev B. S. Agrokimyo. Toshkent, 2001
3. Xolmatov H.X., Ahmedov O. Farmakognoziya. - 1,2 qism. - Toshkent.: Fan, 2007.
4. Современная энциклопедия лекарственных растений/Сост. В.Преображенский,- Ростов-на-Дону: Баро-Пресс, 2001.- 592 с.
5. Сафарова З. Т., Фармонова О. С. К. Медоносные растения Узбекистана //Scientific progress. – 2022. – Т. 3. – №. 1. – С. 1083-1084.



6. Сафарова З., Кенжаева Н. ЛЕКАРСТВЕННЫЕ РАСТЕНИЕ КАК КОРМОВАЯ ДОБАВКА ДЛЯ ДОМАШНЕЙ КУРИЦЫ //Development and innovations in science. – 2022. – Т. 1. – №. 15. – С. 77-78.
7. Жабборов Б. И. и др. ОЧИҚ УРУҒЛИЛАРНИНГ ТАБОБАТДАГИ АҶАМИЯТИ //Journal of Integrated Education and Research. – 2023. – Т. 2. – №. 10. – С. 71-73.
8. Гафарова С. М., Халилова Ф. М. КАНАКУНЖУТ (OLEUM RICINI) ЎСИМЛИГИНИНГ ЎЗИГА ХОС ХУСУСИЯТЛАРИ //Journal of Integrated Education and Research. – 2023. – Т. 2. – №. 10. – С. 73-75.