Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85

UDC 581: 582
AGRIS F40

https://doi.org/10.33619/2414-2948/85/13

CONTEMPORARY SITUATION OF THE Rosaceae FAMILY TREE CROPS IN THE NAKHCHIVAN FLORA

©Babayeva S., *Nakhchivan State University,*
Nakhchivan, Azerbaijan, safuraaliyeva1991@gmail.com

СОВРЕМЕННОЕ ПОЛОЖЕНИЕ ДРЕВЕСНЫХ КУЛЬТУР СЕМЕЙСТВА Rosaceae ВО ФЛОРЕ НАХИЧЕВАНИ

©Бабаева С. Р., *Нахичеванский государственный университет,*
г. Нахичевань, Азербайджан, safuraaliyeva1991@gmail.com

Abstract. The presented article provides information on tree crops of the Rosaceae family, distributed in the Nakhchivan flora. During the comparative analysis of the collected actual materials and literature sources, it was determined that 20 cultivated species of the Rosaceae family are found in the studied area. In the article, based on the actual materials collected during the research conducted in the territory of the Nakhchivan at different times, detailed information on the prospects for the use of tree crops of the Rosaceae family is reflected. At the same time, extensive information is provided on the distributing places of the existing crops species, the possibilities of their use in scientific and folk medicine.

Аннотация. Представлена информация о древесных культурах семейства Розоцветных, распространенных во флоре Нахичевани. В ходе сравнительного анализа собранных фактических материалов и литературных источников установлено, что на исследуемой территории встречается 20 культурных видов семейства Розоцветных. В статье на основе фактических материалов, собранных в ходе исследований, проводившихся на территории Нахичевани в разное время, отражены подробные сведения о перспективах использования древесных культур семейства Розоцветных. При этом дается обширная информация о местах распространения культурных видов, возможностях их использования в научной и народной медицине.

Keywords: tree crops, flora, genus, species.

Ключевые слова: древесные культуры, флора, род, виды.

Introduction

The geographical location of the Nakhchivan, relief features, soil and climate factors have led to the creation of special vegetation here. One of the main natural resources of this region is its rich vegetation. According to literature data, cultivated species occupy a special place in the flora of the Nakhchivan. Numerous plants found in the wild flora have been studied and cultivated by humans at various times. Cultivated plants are not only the products of nature, but also the objects of human labor. Cultivated plants occupy the main place in agrophytocenoses. Cultivated plants are used by humans for purposes determined to one degree or another due to their diversity of formation, distribution and systematic status.

Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85

Looking at the chronology of the history of the study of the woody species of the Rosaceae family in the flora of the Nakhchivan, it can be seen that although the cultivated species of the family have been widely studied, they have not been comprehensively studied yet. Thus, there is a need to study more comprehensively, taking into account the relevance of spreading patterns, treatment directions and prospects of use of tree crops of this family.

Material and Methodology of the Research

During the research, generally accepted floristic, geobotanical, bioecological, etc. methods, phenological observations and routes were used. Reference was made to literature sources and actual data obtained during the field research as the main research materials [2, 3, 5, 7, 8, 11].

Clarification of the names of the cultured species studied was given by adapting the works of Taxonomic spectrum of flora of Nakhchivan by T. H. Talybov and Flora of Azerbaijan by A. M. Askerov [1, 9].

Discussion and Conclusions of the Study

One of the economically important families of the Nakhchivan is the Rosaceae family. As a result of the conducted research, the systematic composition of woody cultivated species of the Rosaceae family was determined and 20 species belonging to 10 genera were noted, and the taxonomic composition of the cultivated species belonging to these genera is reflected in the Table below.

Table

TAXONOMIC SPECTRUM OF THE CULTIVATED WOODY SPECIES BELONGING TO THE Rosaceae FAMILY

Genera	*Quantity of the cultivated species*	*Total number by, %*
Armeniaca Mill.	1	5
Armeniacoprunus Cinovskis	1	5
Cotoneaster Medik.	1	5
Crataegus L.	4	20
Cydonia Tourn. ex Mill.	1	5
Malus Mill.	1	5
Persica Mill.	1	5
Prunus L.	5	25
Pyrus L.	2	10
Rosa L.	3	15
Total	*20*	*100*

The cultivated species of the Rosaceae family are planted and cultivated as food and fodder plants.

Genus 1. *Armeniaca* Mill. Apricot.

Armeniaca vulgaris Lam. ≡ *Prunus armeniaca* L. — Common gorse. It is a common tree among bushes and forest areas around the villages of Arafsa (Khazina-Dara) of Julfa district, Batabat, Bichenak of Shahbuz district, Khurs, Nurgut of Ordubad district. It is a valuable food and medicinal plant. Apricots are used fresh and dried. Jam, compote, jelly, juice is made from its fruits. The pectin contained in its fruits is used to remove toxic substances from the body. Its fruits are very beneficial in the regulation of cardiovascular disease and metabolism. The seeds of the plant are used in laryngitis, bronchitis and tracheitis.

Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85

Genus 2. *Armeniacoprunus* Cinovskis = *Prunus* L. Cherry-apricot.

Armeniacoprunus dasycarpa (Ehrh.) Cinovskis = *Prunus dasycarpa* Ehrh. Hairy cherry-apricot. Cultivated in the orchards. Wild forms are found in Ordubad region. It is an edible food plant. Preserves and jam are made from its fruits.

Genus 3. *Cotoneaster* Medik. Rabbiting.

Cotoneaster lucidus Schltdl. ≡ *Cotoneaster acutifolius* var. *lucidus* (Schltdl.) L. T. Lu. It is a decorative shrub. It is widely used in the construction of live fences.

Genus 4. *Crataegus* L. Hawthorn.

Crataegus chlorocarpa Lenné et K. Koch. Greenfruit hawthorn. It is a plant which fruit is juicy. It is also known as a medicinal herb used in insomnia and dizziness due to its stimulating effect on the heart. The species is also used as an ornamental plant in the decoration of parks and gardens, in the construction of live fences [10].

C. turkestanica Pojark. ≡ *Crataegus pseudoheterophylla* subsp. *turkestanica* (Pojark.) K. I. Chr. Turkmenistan hawthorn. Preparations made from this type of hawthorn are used in the treatment of many diseases. It is used in shortness of breath, dizziness, atherosclerosis and nervous diseases, expands cardiovascular vessels and improves blood circulation.

Figure 1. *Crataegus turkestanica* Pojark. (https://www.plantarium.ru/)

C. ferganensis Pojark. Fergana hawthorn. It is a shrub plant that is recommended to be used in mixed greening in the Araks River plains and around the city of Nakhchivan. The fruits are red brown in color and very tasty. Its fruits are eaten by humans and birds. The fact that this plant is both a fruit tree and a valuable raw material for the medical industry, and that it grows on not very favorable soils, confirms the correctness of this recommendation.

C. songarica K. Koch. Songar hawthorn. It is common in thickets, river valleys and ravine slopes in the middle mountain belt. It is a valuable plant as a food and medicine important species.

Genus 5. *Cydonia* Tourn. ex Mill. Quince.

Cydonia oblonga Mill. Ordinary quince. It is widely used as food, medical and ornamental plant. The fresh fruit has a choleretic and diuretic effect. Jam, compote, jelly, and marmalade are also made from its fruits. The seeds of the plant are also used as a sedative, emollient and antitussive in folk medicine. Ripe fruits are very effective in the treatment of gastrointestinal diseases.

Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85

Figure 2. *Cydonia oblonga* Mill. (https://www.plantarium.ru/)

Genus 6. *Malus* Mill. Apple.

Malus domestica (Suckow) Borkh. House apple. It is widespread around the villages of Benaniyar of Julfa district, Pusyan, Khanliq, Demirchi of Sharur district, Bilav, Behrud of Ordubad district, Kultepa and Vaikhir of Babek district. Apple is a valuable plant that bears the best fruit, has many vitamins in its fruit, is used in medicine and produces honey. The economic importance of apple trees is also great. Apple, being a tasty and nutritious fruit, is eaten fresh, and compote, jam, marmalade, apple butter, apple vinegar, and apple juice are made from it. It is also widely used as a vitamin plant due to the presence of organic acids, sugar, vitamins A, B, C, and iron in apple.

Genus 7. *Persica* Mill. Peach.

Persica vulgaris Mill. = *Prunus persica* (L.) Stokes. Ordinary peach. Grow on the dry, gravelly, gravelly-stone slopes around the villages of Shahbuz district, Ghazanchi, Nahajir, Milakh, etc. of Julfa district. Its valuable fruits are used fresh. Jam, compote, juice, jelly is prepared from it, and it is also preserved. The appetizing fruits are used as gastrointestinal softener. Peach oil is used in medicine to treat migraine, acute and chronic inflammation of the ear. Also, peach leaves are used as powerful anti-inflammatory.

Genus 8. *Prunus* L. Cherry.

Prunus vulgaris (Mill.) Schur = *P. cerasus* subsp. *cerasus*. Sour Cherry. Behrud, Aylis, Bilav, etc. of Ordubad district. It is widely spread in the forests, thickets, clearings, mountain slopes, river valleys, stony and rocky slopes around the villages. It has a wide area and is cultivated everywhere. It is a valuable fruit tree. Sour cherry fruits are a valuable food plant that eaten fresh. Jam, compote, drinks and juice are made from its fruits. Its fruits are used to treat lung and kidney diseases and prevent blood clotting.

P. austera (L.) Borkh. = *P. cerasus* L. Sour cherry. It spread among the bushes in the forests, thickets, clearings, mountain slopes, river valleys, stony and rocky slopes around the villages of Aylis, Bilav, Behrud of Ordubad district. It is a valuable fruit tree.

P. nachichevanica (Koval.) Kudr. = *P. cerasifera* Ehrh. Nakhchivan plum. It is a very valuable food plant.

P. spinosa L. Sky plum. Distribution in the Khurs, Alahi of Ordubad district, Milakh, Arafsa of Julfa district, Bichenak, Agbulagh, Kotam of Shahbuz district, etc. It widely spread in the forests, forest clearings and forest areas around the villages. The fresh fruits of Goyam plum are used as food and medicinal plant in folk medicine. Jam and jelly are made from Goyam. It is very effective in the treatment of gastrointestinal diseases in folk medicine. Flowers and leaves are also used. Decoction made from its flower has a diuretic and antioxidant effect. Tea made from its leaves is used in the treatment of kidney diseases.

Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85


Figure 3. *Prunus vulgaris* Mill. (https://www.plantarium.ru/)

P. domestica L. Domestic plum. It spread around the villages of Benaniyar of Julfa district, Pusyan, Khanliq, Demirchi of Sharur district, Chennab, Bilav, Behrud of Ordubad district, Khalkhal, Kultepa, Vaikhir of Babek district. It is a valuable food, medicinal and decorative plant. Its fruits are rich in organic acids, sugar, pectin and various vitamins. The fruits are eaten fresh. Jam, compote, jelly, juice is also made from its fruits. Its medical importance has also been known in folk medicine. Unsolidified oil is obtained from the seeds in medicine.

Genus 9. *Pyrus* L. Pear.

Pyrus communis L. Common pear. It is planted in all regions. It is an important food and medicinal plant. Eating fresh fruits regulates digestion. Tea made from dried fruits has an antiseptic and diuretic effect. Jam made from its fruits is used in the treatment of lung diseases.

P. serotina Rehder. Night-ripening pear is also cultivated in the Nakhchivan. It is a species used for food and medicine.

Genus 10. *Rosa* L. Dogwood.

Rosa ×*damascena* Mill. Palate hip. It is a very beautiful ornamental plant. It is also used as a food and medicinal plant. Jams, syrups, infusions made from its fruits are used in the treatment of rickets, anemia, urinary and biliary disorders. The rose obtained from its petals is widely used in the perfumery industry, and the fatty oil extracted from its seeds is widely used in the treatment of dermatitis. Also, the species is widely used in medicine, cosmetics, greening and ornamental gardening [6, 8–11].

R. ×*centifolia* L. Century dogwood. It is spread among the bushes and forests around the villages of Khurs, Nurgut, Julfa district, Batabat, Bichenak, Shahbuz district. It is a decorative shrub. It is widely used in the decoration of gardens, parks, live fences, single crops.

R. chinensis Jacq. China dogwood. The species is cultivated as an ornamental shrub in gardens and parks. Among decorative roses, it occupies one of the first places due to its beautiful and fragrant flowers. Climbing forms are used in the greening of walls and rest corners. In particular, many valuable hybrid forms are widely used in ornamental and horticultural work. Also, its flowers and fruits are used in Chinese medicine to treat thyroid diseases.

The percentage of the areas where woody cultivated species of the Rosaceae family are used is reflected in the given diagram. As can be seen from the diagram, the nutritionally important cultured species of the Rosaceae family predominate, accounting for 45%, medicinal 36%, and decorative 19%.

Т. 8. №12. 2022
https://doi.org/10.33619/2414-2948/85

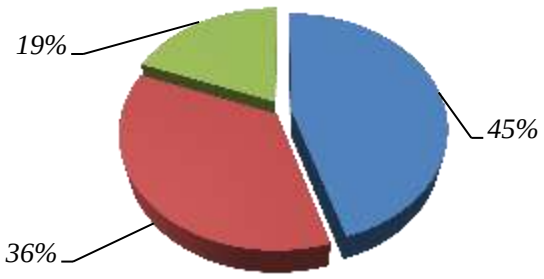

Figure 4. Prospects for the use of cultivated species

Conclusion

As a conclusion of the conducted research, the systematic composition of the woody cultivated species of the Rosaceae family was determined and 20 species belonging to 10 genera were noted, and the areas where these species were used and were also studied. It was found that 19 (45%) types of woody cultivated species of the family are used as food, 15 (36%) types are used as medicine and 8 (19%) species are used as decorative plants.

References:

1. Askerov, A. M. (2016). Flora Azerbaidzhana (Vysshie rasteniya - Embryophyta). Baku, 216-240. (in Azerbaijani).

2. Ibadullaeva, S. Ch., & Mamedova, S. A. (2011). Derev'ya i kustarniki, ispol'zuemye v narodnoi meditsine. In *Aktual'nye problemy biokhimicheskikh teorii: Materialy II Mezhdunarodnoi konferentsii, Gyandzha,* 42-47. (in Azerbaijani).

3. Ibragimov, A. S., Piriev, M. Z., & Ganbarov, D. S. (2011). Derev'ya i kustarniki semeistva rozotsvetnykh Nakhchyvanskoi Avtonomnoi Respubliki. Nakhchyvan',. 19-91. (in Azerbaijani).

4. Gasymov, Kh. Z., Alekbarov, R. A., Ismailov, A. Kh., & Seidov, M. M. (2018). Proiskhozhdenie kul'turnykh rastenii. Baku, 227-239. (in Azerbaijani).

5. Kakhramanova, M. S. (2012). O primenenii nekotorykh lekarstvennykh drevesno-kustarnikovykh rastenii. *Nauchnye trudy instituta botaniki NAN Azerbaidzhana,* 199-202. (in Azerbaijani).

6. Mamedov, T. S., Abbasova, Z. Kh., Bagirova, S. B., & Gasanova, M. Yu. (2018). Vidy roda Kizil v Azerbaidzhane v prirodnykh i kul'turnykh usloviyakh. Baku, 8-109. (in Azerbaijani).

7. Seidov, M. M., & Ibadullaeva, S. Ch. (2007). Bioekologicheskaya kharakteristika derev'ev i kustarnikov Shakhbuzskogo gosudarstvennogo prirodnogo zapovednika. *Izvestiya Nakhchyvanskogo otdeleniya Natsional'noi akademii nauk Azerbaidzhana. Seriya estestvennykh i tekhnicheskikh nauk,* (4), 62-65. (in Azerbaijani).

8. Talybov, T. Kh., Ibragimov, A. S., & Ibragimov, A. M. (2014). Lekarstvennye rasteniya Nakhchyvanskoi Avtonomnoi Respubliki. Nakhchyvan, 182-233. (in Azerbaijani).

9. Talybov, T. Kh., & Ibragimov, A. S., (2008). Taksonomicheskii spektr flory Nakhchyvanskoi Avtonomnoi Respubliki. Baku, 126-133. (in Azerbaijani).

10. Kasumova, T. A., Amirov, G. A., & Ibragimov, A. Sh. (1991). Zapasy plodov vidov Crataegus L. v Nakhichevanskoi ASSR. *Rastitel'nye resursy, 2*(2), 24-26. (in Russian).

11. Grossgeim, A. A. (1950). Flora Kavkaza. Moscow. (in Russian).

Список литературы:

1. Аскеров А. М. Флора Азербайджана (Высшие растения - Embryophyta). Баку: ТЭАС Пресс, 2016. С. 216-240.

2. Ибадуллаева С. Ч., Мамедова С. А. Деревья и кустарники, используемые в народной медицине // Актуальные проблемы биохимических теорий: Материалы II Международной конференции. Гянджа, 2011. С. 42-47.

3. Ибрагимов А. С., Пириев М. З., Ганбаров Д. С. Деревья и кустарники семейства розоцветных Нахичеванской Автономной Республики. Нахичевань. 2011. С. 19-91.

4. Гасымов Х. З., Алекбаров Р. А., Исмаилов А. Х., Сеидов М. М. Происхождение культурных растений. Баку, 2018. С. 227-239.

5. Кахраманова М. С. О применении некоторых лекарственных древесно-кустарниковых растений // Научные труды института ботаники НАН Азербайджана. 2012. С. 199-202.

6. Мамедов Т. С., Аббасова З. Х., Багирова С. Б., Гасанова М. Ю. Виды рода Кизил в Азербайджане в природных и культурных условиях. Баку: Наука, 2018. С. 8-109.

7. Сеидов М. М., Ибадуллаева С. Ч. Биоэкологическая характеристика деревьев и кустарников Шахбузского государственного природного заповедника // Известия Нахичеванского отделения Национальной академии наук Азербайджана. Серия естественных и технических наук. 2007. №4. С. 62-65.

8. Талыбов Т. Х., Ибрагимов А. С., Ибрагимов А. М. Лекарственные растения Нахичеванской Автономной Республики. Нахичевани, 2014. С. 182-233.

9. Талыбов Т. Х., Ибрагимов А. С., Таксономический спектр флоры Нахичеванской Автономной Республики. Баку, 2008. С. 126-133.

10. Касумова Т. А., Амиров Г. А., Ибрагимов А. Ш. Запасы плодов видов *Crataegus* L. в Нахичеванской АССР // Растительные ресурсы. 1991. Т. 2. №2. С. 24-26.

11. Гроссгейм А. А. Флора Кавказа. М.: Изд-во Акад. наук СССР, 1950.

Работа поступила
в редакцию 11.11.2022 г.

Принята к публикации
19.11.2022 г.

Ссылка для цитирования:

Babayeva S. Contemporary Situation of the Rosaceae Family Tree Crops in the Nakhchivan Flora // Бюллетень науки и практики. 2022. Т. 8. №12. С. 104-110. https://doi.org/10.33619/2414-2948/85/13

Cite as (APA):

Babayeva, S. (2022). Contemporary Situation of the Rosaceae Family Tree Crops in the Nakhchivan Flora. *Bulletin of Science and Practice, 8*(12), 104-110. https://doi.org/10.33619/2414-2948/85/13