ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 03, March-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

IMPACT OF TREE PLANTATIONS ON ENVIRONMENTAL PROTECTION AND PRODUCTIVITY OF AGRICULTURAL CROPS

Abdullayev Oybek Shakirjanovich
Assistant of Andijan Institute of Agriculture and agrotechnologies
Soliyeva Sarvinoz Kamoliddin kizi
Mamatxoliqova Nozimaxon Ilxomjon kizi
Students of Andijan Institute of Agriculture and Agrotechnology

Abstract: According to statistics, 20 percent of the earth's surface consists of green areas and forests. Today, these groves are considered one of the important resources that can provide oxygen to the living world and provide our country with high-quality wood. They are also considered very important for the cleanliness of the environment and for various flora and fauna. In a word, trees maintain the balance of life. If they are harmed, it harms the nature, therefore, the existence. In order to prevent such situations, it is the demand of the time that we take care of trees.

Key words: Agriculture, crops, farm, tree groves, drylands.

Surrounding forests - agricultural crops, livestock farms, canals, settlements, highways and railways, water reservoirs, etc. forest groves established to protect objects from unfavorable natural phenomena (drought, soil erosion, floods, snow, etc.) and to improve the microclimate.

They can be forest massifs, band-shaped and ball-shaped. These groves belong to the 1st group of forests. Depending on the function they perform, environmental trees are divided into the following groups:

- state enclave forests;
- surrounding tree groves in dry lands;
- surrounding forests around canals;
- field forest hedgerows on irrigated lands;
- water regulation zones on mountain slopes;
- forest environments around ravines;
- tree plantations of the mountain reclamation environment;
- pasture forest areas;
- forest hedgerows around farms;
- green umbrellas;
- forest hedgerows built on shifting sands.

The main (protective), companion (thickening the vertical section of the soil) trees and shrubs (protecting the soil from erosion) are used in the establishment of hedgerows. The following types of hedgerows are more commonly used: planting trees and shrubs on dry and irrigated land;

A region of 2-4 sometimes 5 rows of field trees is formed. In regions with strong wind (Kokand district group of Fergana Valley, Mirzachol), 4-5 rows of trellised tree plantation regions (lanes are left at the same intervals along the entire vertical section of the region) are effective.

eISSN: 2349-5715 pISSN: 2349-5707
Volume: 11, Issue 03, March-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

Wooded areas around fields reduce wind speed, protect soil from wind erosion, allow snow to accumulate evenly and retain moisture. Water-regulating tree plantations are established on the slopes of the regions. Their main task is to reduce the runoff of melted snow and precipitation. They also protect the soil from being washed away, facilitate the passage of surface water into the soil. The water-regulating role of arboretum regions can be strengthened with the help of simple hydrotechnical structures - terraces, borders, ditches.

Areas of trees along streams and ravines mainly serve to protect streams and ravines from erosion. Such groves are planted thickly with a width of 12.5-21 m, and sometimes the edges of streams and ravines are turned into forests. Forests on mountain slopes serve the purpose of flood protection. For example, in Chirchik and Samarkand forest farms, several thousand hectares of flood-prone basins have been afforested.

Planting of surrounding trees in sand dunes is carried out for the purpose of prevention of deflation, consolidation of shifting sands and forest reclamation of desert pastures; tree plantations along the canals reduce water evaporation, lower the level of ground water, and prevent re-salinization of the lands along the canals; planting trees around water reservoirs reduces the flow of surface water, moves it underground and into the soil, protects the coast from washing, improves the hydrological regime of coastal areas; planting trees around settlements and roadsides reduces wind speed, mitigates the effects of drought, improves the microclimate, and protects railways and highways from snow.

Ihota groves are mainly based on windward location. It is divided into (cross-wind) and auxiliary (perpendicular to the main enclosure) types. The distance between the main forest fences is 300-600 m, depending on the strength of the wind, and the distance between auxiliary fences is 800-1200 m. Ihota plantations consist of 3-5 rows, the distance between the rows is 2.5-3 m, and the distance between the rows is 1-2 m.

In Uzbekistan, 33,000 hectares of forests are being established every year, 10,000-12,000 hectares of which are in the dry areas of the Aral Sea (2002). Oak, larch, poplar, willow, sycamore, sycamore and similar trees around fields, settlements, water reservoirs, canals and roadsides, spruce, oak, walnut, almond, etc. on mountain slopes, saxovul, kandim, shumtol for strengthening sands. is planted.

Water conservation forests also serve to regulate water and protect soil; protects the soil from wind and water erosion; reduces the wind speed, increases the penetration of moisture into the soil; prevents floods; captures soil erosion products and cleans air and water. Water conservation forests reduce water flow variability; with this, regular operation of hydrotechnical facilities and hydroelectric power stations, cities and settlements with drinking water, agriculture. allows for a stable supply of irrigation water. Water protection forests are included in forests of the 1st group.

In the territory of Central Asia, the flow of the main rivers is formed in the mountains, therefore, the importance of mountain forests is especially great. Only vegetation and abundant moisture-absorbing ground cover can trap precipitation, especially rain, that falls on the mountains. In the experiments, it was found that a 10% increase in trees in the area of the water basin increases the flow by 12-17 mm. There are few forests in the mountains of Central Asia: the level of forest coverage of mountains is 2.47%, including 2% in Uzbekistan, 4.2% in Kyrgyzstan, 1.8% in Tajikistan, 0% in Turkmenistan .8%, in South Kazakhstan it is 2.5%. That is why the issue of forest protection and establishment of new forests in this region is very important.

eISSN: 2349-5715 pISSN: 2349-5707
Volume: 11, Issue 03, March-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

In 1880, N.I. Korolkov in Samarkand (Omonkotan), and in 1889, S. Yu. Rauner in Tashkent region (Aqtash) laid the foundation for the establishment of forest plantations on the mountain slopes of Central Asia for the first time. These forests still exist today. Juniper, pistachio, walnut, almond, black juniper, etc. are the main trees in the mountains. The height of the ecologically significant arbors. It grows in the mountains from 1200 to 3000 m. In Central Asia, there are more than 492,800 ha of natural forests, including 192,500 ha in Uzbekistan, 151,800 ha in Kyrgyzstan, 124,700 ha in Tajikistan, 23,800 ha in Turkmenistan, juniper trees planted on the slopes cover an area of more than 5000 ha.

Forest tree seedlings are grown in special nurseries. A complex of machines and mechanisms is widely used for preparing terraces and planting seedlings on mountain slopes. Reserves are of great importance in the protection and expansion of mountain forests (see Zomin mountain forest state reserve, Nurota state reserve). Ihota groves are located on the banks of rivers, large trunk canals (Janubiy Mirzachol, Katta Fergana, Karshi, AmuBukhara machine canal, Karakum), along inter-farm and farm canals, reservoirs (Khayraqkum, Kattakurgan , Surkhan, Charvoq, Tuyabo'giz, Andijan) were organized around. On the banks and ridges, mainly cypress, poplar, willow, larch and other trees and shrubs are planted.

In conclusion: unanimously approving the initiative of President Sh.M.Mirziyoev, let's not forget that the trees surrounding us have incomparable services in the healthy and balanced development of the population of our country, that they are an invaluable wealth given by nature, it depends on the future and to leave a healthy generation, we need to contribute to the afforestation work around us.

REFERENCES:

1. N.I. Susa, F.I. Serebryakova “Agrolesomelioratsiya” Moskva. Kolos 1966 god

2. Kolesnichenko M. B “Lesomelioratsiya s osnovami lesovodstva” Moskva. Kolos 1981 god

3. Xonazarov A.A Tuproq eroziyasi va tog’ o’rmon melioratsiyasi. Toshkent. O’qituvchi. 1998

4. Kumzullaev G’.K. Xonazarov A.A “Ihota daraxtzor va dehqonchilik”, Toshkent. O’qituvchi. 2002

5. Norqulov U., Sheraliev H. “Yaylovlar melioratsiyasi” Toshkent Yangi asr avlodi. 2010 yil.

6. Schroth Fonseca, Harvey, Garscon, Lasconcelos and Izac Eds Agroforestry and biodiversity Conservation in Tropical Landscapes. USA. Island Press. 2004.

7. Dvorak J. Novak L. Soil conservation and silviculture. London. Elsevier. 1994

8. Абдуллаев О., Тўхтаев Б. Фарғона водийси шароитида қора мевали Арония (Aronia Melanocarpa L.) нинг интродукцияси ва биоэкологик аспектлари” Innovative Development in Educational Activities. 2022. 1(2), 54-62.

9. Абдуллаев О.Ш., Тухтаев Б.Ё. Первые результаты исследований по интродукции черноплодной аронии (Aronia melanocarpa L.) в условиях Ферганской долины // Актуальные вопросы садоводства и картофелеводства: сб. тр. науч.-практ. конф. Челябинск, 2023. С. 16-24.

eISSN: 2349-5715 pISSN: 2349-5707
Volume: 11, Issue 03, March-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

10. Shakirjanovich A.O., Furqat A.Q. The Importance Of Some Species Belonging To The Magnoliaidae Family In Greenhouse And Propagation Methods // Ethiopian International Journal of Multidisciplinary Research. 2024. 11(01), 132-135.
11. Shakirjanovich A.O. Carrying out agrotechnical measures when growing paulownia seedlings // Ethiopian International Journal of Multidisciplinary Research. 2024. 11 (01), 136-140.
12. Абдуллаев О.Ш., Тухтаев Б.Ё. Первые научное исследование интродукция черноплодной аронии (Aronia melanocarpa L.) в условиях Ферганской долины // Science and innovation. 2022. (2). С. 405-411.
13. Абдуллаев О.Ш., Абдуллаева Х.З., Туйчиев И.У., Темиров А.М. Андижонда ўрмон фонди ерларидан самарали фойдаланилиниш холати // Молодой ученый, 2019. 21 (259). С. 594-597.
14. Shakirjanovich A.O., Furqat A.Q. The Importance Of Some Species Belonging To The Magnoliaidae Family In Greenhouse And Propagation Methods // Ethiopian International Journal of Multidisciplinary Research. 2024**.** 11 (01), P. 132-135.
15. Shakirjanovich A.O. Carrying out agrotechnical measures when growing paulownia seedlings // Ethiopian International Journal of Multidisciplinary Research. 2024**.** 11 (01), P.136-140.
16. Абдуллаев О.Ш., Тухтаев Б.Ё. Первые научное исследование интродукция черноплодной Аронии (Aronia melanocarpa L.) в условиях Ферганской долины // Science and innovation. 2022. (2). С. 405-411.
17. Абдуллаев О.Ш., Абдуллаева Х.З., Туйчиев И.У., Темиров А.М. Андижонда ўрмон фонди ерларидан самарали фойдаланилиниш холати // Молодой ученый, 2019. 21 (259). Б. 594-597.