

## ENVIRONMENTAL IMPACT OF ARTIFICIAL FOREST PLANTATIONS IN THE STEPPE ZONE

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### **Анотація**

*Зона степу є найбільш чисельною серед всіх зон, які налічуються в Україні. Її площа складає приблизно 40% території України або ж 240 тис. км<sup>2</sup>. Вона характеризується переважною кількістю багаторічних трав. В невеликій кількості зустрічаються ліси, які характерні для лісостепової зони. Та завдяки лісосмугам та лісонасадженням стає доступнішим і збільшення врожаю сільськогосподарських рослин. Тому штучні лісонасадження дуже важливі для степової зони.*

**Ключові слова:** ліс, лісосмуги, степова зона, рослинність.

### **Abstract**

*The steppe zone is the most numerous among all zones in Ukraine. Its area is approximately 40% of the territory of Ukraine, or 240,000 km<sup>2</sup>. It is characterized by a large number of perennial grasses. There are few forests that are characteristic of the forest-steppe zone. But thanks to forest belts and afforestation the harvest of agricultural crops becomes available and increases. Therefore, artificial forest plantations are very important in the steppe zone.*

**Key words:** forest, forest belts, steppe zone, vegetation.

### **Introduction**

The peculiarities of conditions in the steppe, the stability of tree species in the steppe zone, their biology, ecology, as well as their relationships to various types of combinations were studied, as well as the issue of phytocenoses in the steppe zone. Forest biogeocenoses in the steppes of our country are formed under different conditions and are characterized by the use of various types of trees and shrubs for their vital activities, as well as their stability in energy cycles.

### **Research Results**

The forest is considered a broad concept. It includes areas with plants that are combined by the ecological similarity of the edaphotope and is characterized by a community of tropho- and hygromorphs. From the above, it can be seen that forests are self-regenerating from an ecological point of view.

It is also known that the formation of forest plantations had several stages:

- 1st stage – search;
- 2nd stage – ecological and biocenological;
- 3rd stage – botanical and geographical;
- 4th stage – forest typology.

Among the four listed stages, the last one (forest typology) is considered the most accurate. Since, the solution of the main biogeocenological issue in the steppes is the possibility of artificial plantations to meet the specific conditions of existence in the steppe. The typology of man-made artificial forest plantations in the steppe zone of Ukraine is based on the type of forest vegetation conditions, type of ecological structure and tree type.

During the study of forest biocenoses located within the steppe zone of Ukraine, the following features of the creation and cultivation of forests were revealed:

- 1) artificially created forest plantations in the steppe environment, after getting used to it, turn it into a forest.
- 2) the most effective structure of plantations in the steppe is the shadow structure, because it changes the steppe properties in the forest best of all;
- 3) a very important stage of preparation for afforestation is the selection of resistant tree species for the forest vegetation conditions of a certain environment.

## Conclusions

Taking into account the above, we can say that under conditions of observance of typological principles, as well as sufficient preparation at the stage of selection of the necessary tree species, it is possible to form productive forest plantations that will meet the conditions of the steppe and will not harm the already existing vegetation.

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