

Plantacinių miškų veisimo ir priežiūros inovatyvi technologija nenaudojamose ir žemės ūkiui netinkamose žemėse

1. Keywords: Forest planting, Timber quality, Forest growing, Plantation forest, Uncultivated land

2. Area: Forestry

3. Subarea: Planting and maintenance of plantation forests

4. Theme: Innovative technology for planting and maintenance of plantation forests on uncultivated and non-agricultural land

5. Year: 2020

6. Summary: Until now, the plantation forests of these tree species have not been planted in Lithuania, because there was no legal basis for this. After the legalization of plantation forests of these tree species, the technology of their planting, maintenance and growing has been developed, and pilot plantations have been established, maintained and protected in 10 holdings of different Lithuanian ecoclimatic regions. There highly qualified employees create conditions for the plantations to achieve economically justified productivity, and reduce the potentially negative impact on the growth rate of seedlings.

7. More detailed version of the summary: In order to preserve and increase biodiversity, while increasing the profitability and competitiveness of forestry, a new, sustainable, shorter-circulation technology for the planting, maintenance and growing of larch, spruce, birch and black alder plantation forests has been developed. This technology differs from other existing planting technologies in terms of the requirements for the selective quality of seedlings, their type, soil fertility and moisture in the selection of a plot for planting, and plantations are planted on uncultivated and non-agricultural land. Seedlings used for planting are grown from seeds collected in seed production stands. In order to facilitate planting work, which can be carried out in both spring and summer, and to increase the productivity of planters 2-3 times, not only conventional but also tubular planters with a closed root system are planted. This method of planting reduces the spread of the false nucleus in the plantations, improves the establishment and initial growth of plantations, and ensures smooth and continuous involvement of highly qualified workers in the development, maintenance and technological improvement of the plantation forest. The project results are relevant to farmers who have uncultivated and non-agricultural land and want to use it, as well as to advisers who can transfer the acquired knowledge and innovations to farms. Highly qualified employees acquaint forest practitioners / advisers with the latest plantation forest growing and maintenance technologies, scientific knowledge, technical tools and instruments, provide recommendations for correct selection of forest purpose and its introduction, maintenance and protection using the most advanced technologies before the first logging operations. The used technology enables optimization of work and funds, and growing more and appropriate quality products, i. e. timber. The quality of timber grown in plantation forests is higher than in conventional ones, because trees with thinner branches and straighter trunks are grown in properly selected and arranged planting areas. Grown trees can be used to produce all the products currently produced from conventionally felled forests.

8. Effect: Economical, Agro-environmental protection

9. Argumentation: The forecasted differences in the average annual efficiency of plantation forests compared to the usual ones are as follows: depending on the interest rate (0-4%): the average annual production effect of spruce plantations is higher by 83-171 Euro/ha or 42-1080%, birch - 35-131 Euro/ha or 62-975%, and that of black alder - 38-140 Euro/ha or 99-1100%.

10. Project description: -

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12. URL: -

13. Images:

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