



Mini Review

Volume 15 Issue 4 - April 2018
DOI: 10.19080/ARTOAJ.2018.15.555959

Agri Res & Tech: Open Access J

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The Process of Postagrogenic Lands Overgrowing within the National Parks of North-West Russia



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Submission: March 29, 2018; Published: April 23, 2018

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Mini Review

The socio-economic crisis of the 20th century in Russia led to a massive reduction in agricultural land. This is mainly arable land and hayfields. In General, about 40 million hectares of arable land were withdrawn from turnover in Russia during the crisis period. In the North-West of Russia, currently the area of cultivated land is about 30% of all registered cultivated land [1]. The bulk of the abandoned land is located in the southern part of the region, where agricultural production was the most developed former time. These lands undergo process of transformation mainly under influence of spontaneous overgrowth by the wood both valuable coniferous breeds (a pine, a fir-tree), and deciduous (a birch, an aspen, an alder, willow).

The solution of the issues of rational use of abandoned lands (for example, forest cultivation or maintenance of agricultural landscapes) is very important for national parks and other protected areas created in the region to preserve the unique natural complexes, cultural features and traditions of the local population.

Processes of reforestation, subsequent development and growth of forest stands on the former agricultural lands differ from processes of reforestation on lands with natural formation.

In the territory of the Kenozersky national Park (Arkhangelsk region, Russia) arable and haymaking lands which use was economically unprofitable were predominantly taken out of use. This-small-scale sites were remote from settlements. In connection with the outflow of the population from rural areas around the villages also began to form plots of abandoned land, which began to overgrow by woody-shrub vegetation.

The development of tourism is very important for national parks. Tourists can be attracted by beautiful landscapes that have historically been around settlements. Significant investments are required to maintain all agricultural landscapes in historical form. The main task of the research of overgrowth of postagrogenic lands is to identify those areas that, with

minimal timely investments, will create the maximum effect of the presence of historical agro-cultural landscapes.

The rate of fields overgrowth depends on their area, as the process of forest formation begins from the nearest natural stands. It will take 8-10 years to overgrow a field or hayfields up to 5-10 hectares to the degree of forest covered statute [1-3]. This is the most historically characteristic size of fields and hayfields for the Kenozero national Park. At the same time, the canopy of the forming stand will reduce the height as it moves away from the "wall" of the forest. Predominant tree species in the early stages of overgrowth are alder, willow and birch. Pine appears in small groups. Alder prefers rich and moist loamy soils, pine and birch prevails on sandy loam soils. Alder and willow reach a height of 7-8m in 7 years with an average diameter of 6cm at the root level. Spruce and pine for this period reach a height of 0.8-1.0m. At this age comes the closed canopy stand. To maintain and preserve the open landscapes needed to be more early intervention of forestry measures.

When using postagrogenic lands for the purpose of high-quality wood cultivation, it is possible to obtain highly productive coniferous stands that grow on 1-3 class of bonity higher than the stands that are formed on forest soils. So the average height of a pine or spruce stands at the maturity age can make up to 26m, the stock of a forest stand can reach 400m³/ha and this is a very good parameter for the North-West of Russia.

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DOI: [10.19080/ARTOAJ.2018.15.555959](https://doi.org/10.19080/ARTOAJ.2018.15.555959)

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