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MODERN LOGGING EQUIPMENT USED IN THE “BRASLAV LAKES” NATIONAL PARK

“Braslav Lakes” National Park is a national park situated in the north-west part of Belarus. The National Park shelters unique natural complexes, protects them from human economic activity, preserves them for future generations. It was created in 1995.

The forest area is not only trees, shrubs and grass, it also includes hundreds of different living creatures. Deforestation is one of the most common environmental problems. It may unbalance the eco-system. It may result in disappearance of some species of flora and fauna, in decrease of species diversity, in increase of carbon dioxide in the atmosphere. But rational forest management improves the quality of the forest. It includes timber harvesting which can be carried out in all forest groups without exception. There are 2 types of felling: main felling and improvement thinning.

Main felling is carried out only in the mature forest. There are the following types of felling:

1. Clear cutting. With this type of felling, everything is cut out except for the undergrowth. It is carried out in one go.

2. Gradual felling. With this type of felling, the forest stand is cut in several steps.

3. Selection felling. Its main purpose is the formation of highly productive plantations. Sick, dry, and other defective trees are cut down.

Improvement thinning can be of the following types: liberation felling, cleaning, and thinning.

Forest management is a very important activity at the national park. That's why only professionals work there. They operate complex machinery that is beyond the power of many. For example, Harvester AMKODOR 2551 is designed for felling trees, branching and bucking of tree-length logs into assortments of predetermined length during logging operations. The specialized harvester productivity is 150 – 180 m³ of wood per 10 hours of work.

Its engine is Model D-260.9.

Its nominal power is 132 kW or 180 hp.

Then comes Harvester AMKODOR 2661/2661-01, this machine is designed for collection in the forest, loading and skidding of assortments from 2 to 6 m in length, as well as their unloading, processing and storage with the help of a manipulator at warehouses of logging and forestry enterprises.

The Ponsse Scorpion King Harvester is an eight-wheeled vehicle equipped with a unique crane. Excellent field of view in all directions allows the operator to do his job without unnecessary interference, choose trees and direction of their falling quickly. The weight of the Ponsse Harvester is 21 tons, the length is 8 m, the height is 4 m, the width is 2.84 m. The installed C50 manipulator has a boom outreach of 11 m and rotation angle of 280°. It has a Mercedes-Benz engine with the nominal power of 279 hp.

Skidding tractor AMKODOR 2661 with a hydro-mechanical transmission and a powerful 148 horsepower diesel engine has a load capacity of up to 12 tons.

Productivity of this forwarder is up to 20 cubic meters of assortments per hour, with a skidding distance up to 300 meters with a maximum length of tree-length logs up to 6.5 meters.

For long-distance transportation Log Carrier MAZ-6303A8-328, is available. A log carrier is a type of special cargo transport equipment for transportation of various long oblong types of cargo (pipes, rolled products, poles, logs, lumber, assortments). Its engine power is 294 kW or 400 hp.

And there is also a tractor BELARUS MPT-461.1 with power of 60 kW or 82 hp.

Forest loading and transportation vehicle. This machine is designed for collection and transportation of wood (1.5-6.0 m long assortments) from logging sites and industrial warehouses to highways or lower warehouses, for wood grading, for loading and unloading and stacking operations.

REFERENCES

1. <https://braslavpark.by/>
2. <https://amkador.by/>