

## Comparative analysis of truck fleet for wood transportation in terms of technology and economy

Wood transport is a very important link between forest management and the wood industry. The research paper presents a comparative analysis of the truck fleet for wood transportation in terms of technology and economy. The survey covered 102 trucks from 22 transport companies. Trucks with trailers or semi-trailer truck tractors adapted for exporting large-size or medium-sized timber were put under research. The distance, the length of trips, the weight of loads, species and transported timber assortments were tested. Timber was transported from 12 Regional Directorates of State Forests, including 140 forest districts, up to 55 customers. On 304 different routes between forest districts and wood processing companies, 1126 trips were registered, diversified in terms of vehicle type, assortment and wood species. A total of 22534 wood trips were analyzed. Based on the collected data, fixed and variable costs incurred by carriers were analyzed in detail. The rates paid for the wood trip course were also analyzed. The following features of the truck fleet were defined: brands, age, engine power, average fuel consumption and load capacity. The break-even points and profits calculated on a yearly basis were compared with respect to various truck parameters and selected technical and economic indicators such as: load capacity indicator, vehicle trip usage indicator, technical speed of the vehicle, load mileage, average distance of 1 loaded trip. The conducted research allowed to compare different cars and indicate which technological solutions are more beneficial for transport companies and show how the quality of management affects the financial result.

Key words: timber transportation, truck fleet for timber transportation, wood transport costs, rate for truck trip with wood