### **Editor in chief**



Editor in chief of the "Forestry information" journal Rodin Sergey Anatoljevich

# **Employment, position**

"Russian Research Instotute for Silviculture and Mechanization of Forestry".

Deputy director for research

## Degree, academic rank

Doctor of agricultural sciences

Member of the Russian Academy of sciences

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## Research profile

Development of environmental and resource saving technologies and mechanization hardware for planting stock production and spruce plantation establishment in cutover areas of European Russian forest zone based on integrated studies of environmental condition and coniferous growth interactions.

### Key research accomplishments

Developments to optimize forest nursery soil patterns and soil treatments parameters, verification of planting stock conservation, storage and transport procedures,, as well as environmental and resource saving technologies of large-sized seedling production without transplanting with new generation machinery and hardware application that reduce labour input., Cutover area environmental and silvicultural characteristics after harvesting machinery operation have been studied and classified according to its access for silvicultural machinery operation and spruce plantation establishment criteria and patterns in fresh cutover areas, estimation of cutover environmental silvicultural condition impacts on soil treatment machinery performance as well as forest plantation

root nutrition conditions, environmental and silvicultural spruce plantation establishment technologies in drained and temporally water-logged soils and its condition evaluation scale. Developed an mathematical modeling algorithm automated system to optimize selection of forest regeneration procedure and tree species pattern during forest plantation establishment and proposed forest regeneration environmental and silvicultural system that regards timber felling and forest plantation production as an integrated process.

## Developed and practically applied:

- Procedure to optimize soil physical features and soil treatment parameters in forest nurseries;
- Procedures for long-term, physically proved planting stock conservation its storage and transport;
  - Technologies to produce large-sized seedlings without transplanting;
- Fresh cutover area classification that enables to define its accessibility for integrated mechanization of operations and soil treatment and other silvicultural machinery performance as well as plant root nutrition conditions;
- A scale for integrated evaluation of 20 and 30 year old spruce plantation quality that enables plantation improvement operations and maximum environmental and silvicultural output;
- Environmental and resource saving technologies for forest plantation establishment in cutover areas with regard to forest growing conditions of cutover areas and forest planting machinery availability in forest management units

Led 6 candidates of sciences.

Author (coauthor) of 7 monographs.

Author (coauthor) of over 117 research papers

Author (coauthor) of 17 patents

Author (coauthor) of 18 textbooks and training manuals

### Research and social appreciation

Distinguished Forester of the Russian Federation