

A

NEW METHODS OF PLANNING THE EXPLOTATION OF FORESTS

by N. M. NEVESKY, Engineer

#12505

47



RESUMÉ

Up to now all the methods of creating such forms of forest management that would in an equal manner secure both the restoration of forests and a remunerative exploitation of same have not been successful. The practice has shown that neither of these methods give in this respect an equal effect. Thus, we find the very best plans of silviculture, which, however, are disadvantageous with regard to the exploitation of forests; on the other hand, there are plans for the exploitation that are very well drafted and are good from the economical standpoint, which, however, do not answer the silvicultural requirements, and which even lead to the ruinous destruction of forests. The plans that have been up to the present moment made in the USSR have been very carefully drafted as far as the conservation of forests is concerned, but they often cannot be carried out because of their economical drawbacks. As a result of such a system was the impossibility to exploit forests. This is the reason why we have vast virgin forests, in which no trees have ever been felled, but where the natural growth is stunted because the trees, after reaching the maximum age fall and decay.

The constantly growing industrialization and reconstruction of the national economy of the USSR as well as the growth of the timber export, make it incumbent upon us to increase the timber producing regions and at the same time to decrease the cost of timber. This is why we must create such a new system of forest management that would result in a cheap supply of timber products from our virgin wood regions, and simultaneously to a full conservation of our forest lands, and a constant gain of products. This being an extraordinary difficult problem it is quite impossible to solve same theoretically, and it is absolutely necessary to draft experimental plans based on practi-

cal experience. The outlined facts have necessitated the Forest Products Research Institute of USSR to organize to that effect a special research expedition. This expedition has drafted such an experimental plan in one of the timber regions of the Votsk Autonomic District. The author of these lines has been at the head of this scientific expedition. Based on the effected work, the author has suggested quite a number of new forms of work, and explains the essence of that new methodology for drafting a plan for the exploitation of forest lands which would fully enable to exploit the forests at a cheap rate and at the same time to secure not only the conservation of forests but even to improve the planting of wood. Considering the fact that in order to solve this problem it is necessary to deal with a very large number of unknown and variable quantities both of a silvicultural and engineering character, whereby all these quantities depend mutually upon each other; the whole system of solving this problem is constructed by a method of gradual approximations. In this connection all the scientific and research work should be done simultaneously. Thus, the study of forest types, the supply of ripe plantations, the processes of natural restoration, conditions of soil, grass cover, the phytopathological and entomological processes, the influence on the forest of cattle grazing and professional hunting, the hydrological and topographical researches, ameliorative investigations, the tracing of land roads, transport and the study of waterways, determination of central regions of consumption, and the projects for the establishment of places for timber loading in the very territory of forests, economical investigations etc.—all the enumerated problems should be solved simultaneously and gradually, beginning with a rough sketch and going on to precise the matter by fits and starts, at the same time trying to bring all the enumerated problems into a close contact. Such a system of working up all the above problems results in a creation of a special method of drafting plans for the exploitation, the so called sectorial method. The essence of such a method is distinguished by the fact that all the wood producing processes are effected in such a sector, in which the felling of wood and all the mechanization is projected. It must be emphasized that 25% of the forest is felled in single dense wooden sections spread all over the sector, whereas on the remaining 75% of the area of the sector an intermediate salubrious cutting is produced which fully secures the natural growth of the wood and leads to the improvement of forest plantings. By such a system during the whole year all the work is constantly effected, and all the machines and the mechanized

roads are fully and equally utilized. This requires a permanent staff of specially trained and skilled workers as well as a qualified technical personnel. Every year the whole system has to be transferred from one yearly sector to another. Thus, the suggested new method of planning the exploitation, enables to produce the work in a forest like in a factory, that is to say, it will transform our virgin forests into wood producing factories, where there will in an equal manner be secured both the growth of forests and a cheap exploitation. The further development of such experimental scientific researches will lead to a creation of a new applied scientific discipline, which will teach us how to build up a new industrial, socialistic forest management.

А

ВСНХ — СОЮЗЛЕС — СССР

ТРУДЫ ИНСТИТУТА ДРЕВЕСИНЫ (ВНИИД)

ЛЕСОЗАГОТ. ОТДЕЛ

ВЫП. I

Инж. Н. М. НЕВЕССКИЙ

630 61
Н. Н. Н. М. I

НОВЫЕ МЕТОДЫ СОСТАВЛЕНИЯ ПЛАНОВ ЭКСПЛОАТАЦИИ ЛЕСНЫХ МАССИВОВ

26 РИС. В ТЕКСТЕ И ОТД. КАРТА

49255

49255

78.



ГОСУДАРСТВЕННОЕ ТЕХНИЧЕСКОЕ ИЗДАТЕЛЬСТВО

А

1 9 3 0

О Г Л А В Л Е Н И Е

	<i>Стр.</i>
Введение	5
Глава I.	
Старый способ построения механизации в лесах	7
Глава II.	
Организация новой работы.—Основные предпосылки.—Рабочий аппарат . . .	8
Глава III.	
Сложность построения плана эксплуатации лесного хозяйства.—Способ постепенного приближения	9
Глава IV.	
Методология работы по составлению плана эксплуатации лесного хозяйства.—Коренное отличие от прежних форм планирования	12
Глава V.	
Особая роль транспорта леса.—Водные и сухопутные пути.—Значение топографии местности для лесовозных дорог.—Направление потоков груза.—Главный поток.—Центр потребления.—Новые методы изыскательских работ.—Свобода маневрирования изыскательской группы	14
Глава VI.	
Изучение леса с целью выяснения возможности применения концентрированных рубок и установления мест, размеров и форм концентрации . . .	18
Глава VII.	
О сокращении программы работ лесоустроительных партий.—Необходимость уточнения выхода сортиментов.—Новая форма полевых работ по инвентаризации.—Результаты совместной и одновременной работы таксаторов и изыскателей	30
Глава VIII.	
Принцип построения совокупного плана механизированных путей и концентрированных рубок.—Ход построения совокупного плана.—Как появился годовой сектор	36
Глава IX.	
Составление плана годовых секторов на ревизионный период.—Различные варианты плана.—Соединенная карта путей.—Деление на секторы всего	