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IMPROVING THE CONDITION OF DEGRADED PASTURE LANDS AND OBTAINING BIOMASS BY PHYTOMELIORATION

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Abstract

In the world, the leading place is occupied by the use of energy-resource-saving and high-performance seedling tools for improving pastures. Considering that arid lands occupy about 1/3 of the earth's surface area and make up more than 36% of the land area all over the planet, an important task is to introduce high-performance energy-resource-saving tools with high quality of work into the practice of improving the condition of pastures. In this regard, it is important to use a combined tool that will simultaneously perform tillage and planting seedlings of phytomeliorative plants while improving degraded pastures.

Aim

Reduction of material and energy costs while improving arid pastures and obtaining biomass by developing a combined tool for planting seedlings of phytomeliorants.

Tasks

To develop planting technology scheme and manufacture an experimental sample of a combined tool for planting seedlings and test it in production conditions with the determination of energy and economic indicators.

Materials and methods

The main indicator of the correctness of planting seedlings with the developed combined tool is the survival rate, the density of standing and the yield of planted seedlings of phytomeliorative plants, since favorable conditions for the growth of seedlings are created when providing the required depth of sealing and compaction of the soil.

Results

Experimental studies to determine the survival rate of planted seedlings were carried out in the Nurata experimental field of NIIKEP. It is desirable to restore artificial pastures in the form of multicomponent agrophytocenoses. Since they can be used as a fodder base for livestock any time of the year. In our experiments, we selected the most promising types of forage plants (chogon, izen, keyreuk, camphorosma), and having sown the seeds of these phytotomeliorants, we grew seedlings of phytomeliorants that were planted with a combined tool.

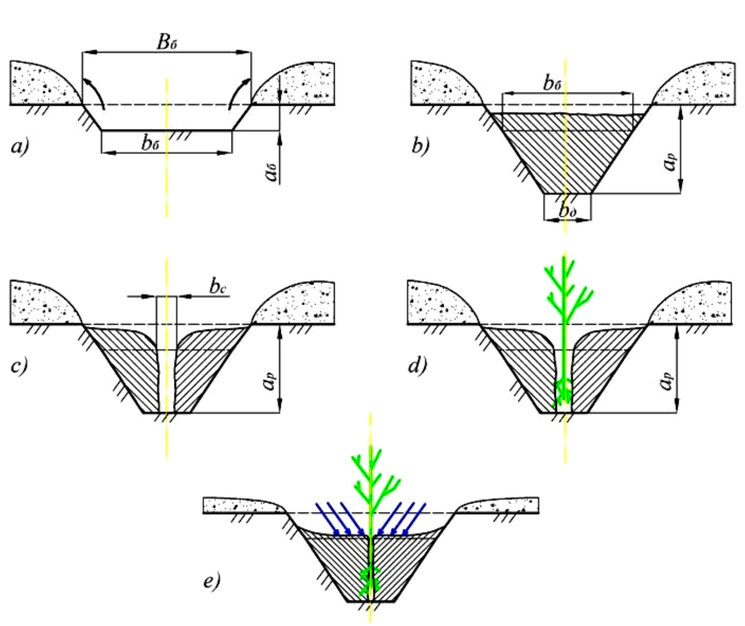

Fig.1. **The proposed technology of planting seedlings of phytomeliorants**

Fig.2. **The proposed combined unit for improving pastures and obtaining biomass**

Table 1. The results of the survival rate, growth and yield of the created agrophytocenosis for the fifth year of vegetation in the "Nurata experimental field" of NIIKEP

Life forms and plant shares	Phytocenosis	Survival rate*	Average plant height, cm	Yield, c/ha
Semi - shrubs	Chogon– 25 %	4620 / 75,0	91,5±3,2	4,9±0,2
	Izen– 25 %	5057 / 82,1	89,3±3,0	5,3±0,3
	Keyreuk– 25 %	4472 / 72,6	75,6±2,6	3,9±0,1
	camphorosma–25 %	4324 / 70,2	65,4±2,2	3,5±0,08
	Total 100%	**18473**		**17,6**

Fig. 3. **General view of the improved pasture by planting seedlings**

Conclusion

1. If we assume that the plants in the agrophytocenoses accumulate a high yield for 25-30 years, then the restored crops have been used for many years, and livestock farms are provided with guaranteed feed in the subjectsof the economy.
2. Agrophytocenoses can be erected by sowing seeds or planting annual seedlings grown on special plots. The advantage of the created agrophytocenoses by planting seedlings is that due to the high survival rate of seedlings, it is possible to achieve the planting rate and the norm of the density of standing seedlingsof phytomeliorants. By ensuring a rational distance between seedlings, high feed productivity and water balance are ensured.

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