RECOVERY OF SOILS DISTURBED BY MINING IN WEST AND CENTRAL SIBERIA

Description
The existing regulations for revegetation of soils disturbed by open coal mining were previously developed for the territory of the former Soviet Union with no regard to local conditions.
The suggested technology provides economically sound and effective recovery of biodiversity on the open spoil banks of any geological age using introduced forage, medicinal, aromatic, spicy, and food plants instead of waterproof and fertile layers covering or application of mineral and organic fertilisers and bacteria.

Fig. 1. Spoil bank surface, “Listvyansky” mine.

Fig. 2. Grass-legume mixture on the same spoil bank, mine “Listvyansky” (11 years after seeding.)

Technical appraisal and economic benefits
The new method is more efficient than that from the USSR State Standard (1986). The economic effect depends on numerous factors and is to be estimated separately for each part of a spoil bank. Revegetation by this method reduces pollution and social tension.

Application areas
Soils disturbed by open mining and petroleum exploration in West and Central Siberia.

Development stage
The new method was tested on two experimental sites: a level spoil bank and a spoil bank covered with a fertile soil layer (FSL). Long-term observations showed better plant growth on the level spoil bank than on the FSL site. A plot for reproduction of useful plants was created on the basis of high vitality herbal species.
The artificial agrophytocenoses created over an area of 100 ha (Novokuznetsk and Leninsk-Kuznetsk) turned to be as productive as the former dry meadows. The herbage has been mowed for years by machines and by hand.

Patent situation
Application not yet submitted.
**Commercial offers**
Joint production.

**Estimated cost**
Under the contract.

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