DEVELOPING SEA-BUCKTHORN CULTIVARS
SUITE FOR MECHANICAL HARVESTING

Description
The Institute of Cytology and Genetics SB RAS and the Novosibirsk Michurin Zonal Fruit-Berry Experimental Station Siberian Branch of the Russian Academy of Agricultural Sciences) have developed sea-buckthorn cultivars suitable for mechanical harvesting, i.e., having hard epicarp and suitable for dry pick-up.

The cultivars differ in ripening terms, color, chemical composition, and taste, which determines the purpose of their use: technical, gastronomic or universal.

Sibirsky Rumyanets is an ultra-early cultivar. Fruits ripen in mid-August, have shining bright-red color, contain up to 36% of carotenoids, and have high commodity ratio.

Cultivars Podruga, Zolotoi Kaskad, and Kapriz are mid-early; ripen in the first half of September, sugar content - 7-10%.

Krasny Fakel, Ognistaya, and Ivushka are late cultivars ripening in the second half of September, have red fruits with high content of carotenoids, resistant to squashing pressure up to 600g, remain undamaged on branches till the first frosts, may be harvested both in autumn and winter by kicking.

Druzhina is mid-early cultivar, most suitable for industrial harvesting in autumn, has reserved growth intensity, trees have compact top and hard shoots with no branches in summer, uniform-sized large rare fruits with hard epicarp, good for light dry pick-up. Required pick-up pressure is 70-90 g, as opposed to 140-210 g for other existing cultivars.

New cvs suit for cultivation both in agroindustry and small farms and can be used as donors in breeding to produce cultivars that are more adaptable to mechanical harvesting:

- Cvs Druzhina, Krasny Fakel, Ivushka, Zarnitsa, Ognistaya, and Parade are most adapted to mechanical cultivation and harvesting, are distinguished from the existing cvs in harder epicarp and higher commodity ratio, are good for dry pick-up and transportation;
- Table varieties Podruga, Zolotoi Kaskad, and Kapriz contain more sugar and less acid, can be eaten fresh and used for making juices, stewed fruits and jams;
- Ultra-early red-fruited Sibirsky Rumianets cv is multi-purpose, since it contains many carotenoids it is good for making juice;
- Zyryanka cv fruit has good chemical composition and is distinguished by stable annual yield performance,

**Technical appraisal and economic benefits**
There are no analogs to the large-fruited sea-buckthorn cvs produced at the Institute.

**Application areas**
- Agriculture
- Medicine
- Pharmacology
- Food industry
- Ecology

**Development stage**
Supply of seeds and seedlings of sea-buckthorn cvs to agroindustry enterprises and small farms in the Novosibirsk region and in China (for plantations aimed at fixing and strengthening soils to protect them from winter erosion)

**Patent situation**
Authors’ certificate for Zyryanka and Druzhina cultivars. All other developed cultivars are included in the Public Register of Breeds permitted for use.

**Commercial offers**
Agreements and contracts on supply of sea-buckthorn seeds and cuttings.

**Estimated cost**
To be negotiated.

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