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Original Paper

DEVELOPING NEW CULTIVARS OF *PRUNUS* × *ROSSICA* EREM. AND CLONAL ROOTSTOCKS AT THE KRYMSK EXPERIMENT BREEDING STATION

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*The paper considers the possibilities of expanding the assortment of plum cultivars in world production by hybridising large-fruited myrobalan plum (*Prunus cerasifera *Ehrh.) cultivars with those of Japanese plum (*Prunus salicina *Lindl.) and other diploid stone fruit species. Because of many years of breeding work in Russia, cultivars of a new hybridogenous species* Prunus × rossica *Erem. (Russian plum) have been created, which can ensure a stable supply of fresh fruit from late June to September and complement the assortment of common plum cultivars. A description is given for the best adaptive, high-yielding cultivars with good taste and high canning qualities — 'Kubanskaya Kometa', 'Globus', 'Gek', 'Iyulskaya Roza', 'Dynnaya', 'Kolonnovidnaya', and 'Podarok Sad-Gigantu'. The efficiency of their cultivation using intensive technologies and own-rooted plants, as well as clonal rootstocks bred at the Krymsk Station, has been shown. It is recommended to carry out intensive cultivation of Russian plum using medium vigorous rootstocks like Kuban 86, Evrika 99, Zarevo, Fortuna and dwarf rootstocks VVA 1, Best, Upryamets and VSV 1.*

Keywords: *technology, fruit quality, productivity, winter hardiness.*

INTRODUCTION

At present, plum is in demand in world fruit crop production. The expansion of the plum assortment to meet consumer and fruit producer preference is of great importance, which makes it necessary to improve the assortment constantly by developing new cultivars. The world plum production also faces a problem of insufficiency in both cultivars and medium and low vigorous rootstocks for modern intensive plantations with a high density of trees. In this aspect, the development of cultivars and clonal rootstocks that meet the requirements of world production is a priority task faced by breeders working in this area.

Much work in this respect is being done in Southern Russia at the Krymsk Station VIR Branch.

Inter-species hybridisation of plums. One of the trends in the enrichment of the plum assortment for the conditions of Russia, especially for the European part of the country, was the creation of a new species — the Russian plum, *P.* × *rossica* Erem. It was synthesised by hybridising cultivars of the large-fruited myrobalan plum *Prunus cerasifera* Ehrh. with cultivars of Japanese (Chinese) plum *P. salicina* Lindl., including cultivars of Ussurian plum *P. salicina* subsp. *ussuriensis* (Koval. et Kost.) Erem. and their hybrids with Japanese plum cultivars, as well as with cultivars of other stone fruits like purple (black) apricot *P.* × *dasycarpa* Pers., sand cherry *P. pumila* L., American plum *P. americana*, common apricot *P. armeniaca* Marsh., and other species (Eremin, 2006).

Many morpho-biological characteristics of the Russian plum cultivars are similar to those of Japanese plum cultivars. The Russian plum cultivars are somewhat inferior to the latter in fruit size, but surpass them in winter hardiness and disease resistance, and the best Russian plum

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cultivars surpass them in taste and especially in canning qualities (Pomology, 2003; 2008). The purpose of this article is to reflect the results of the work on the creation and selection of varieties of Russian plum, close in terms of production and consumption indicators to Japanese plum, as well as rootstocks for it, with the aim of further cultivation of this crop in intensive plantations.

MATERIALS AND METHODS

The breeding work and testing of the obtained cultivars was carried out at the Krymsk Experiment Breeding Station, VIR Branch, in the field collection and specialised laboratories. The objects of breeding were the cultivated and wild *Prunus* species — *P. cerasifera* Ehrh., *P. tomentosa* Thunb., and *P. pumila* Thunb., *P. armeniaca* Lam. etc.

The study was carried out according to the "Programme and Methods for Cultivar Testing of Fruit, Berry and Nut Crops" (Sedov *et al*., 1999) and the "Programme and Methods for Breeding Fruit, Berry and Nut Crops" (Sedov *et al*., 1995).

RESULTS

Breeding results. In the 1950s and 1960s, the first industrial Russian plum cultivars 'Pobeda', 'Desertnaya', and 'Obilnaya' (bred in the State Nikitsky Botanical Garden) were distributed in the southern fruit growing area in Russia, especially in North Caucasus. Of these cultivars, only the latter is still included in the assortment. At present, mainly cultivars developed at the Krymsk Experiment Breeding Station, especially cv. 'Kubanskaya Kometa', are cultivated in orchards. In recent years, the Russian plum assortment in this area was expanded by the large fruited, high quality cvs. 'Globus', 'Iyulskaya Roza', 'Evgeniya', 'Gek', 'Kolonnovidnaya', etc., which allowed achieving successive ripening of Russian plum fruits from the end of July through late September.

In the more northern regions of Russia, several winter hardy cultivars of Russian plum ('Kubanskaya Kometa', 'Naidyona' (in cooperation with Belarus), 'Shatyor', 'Iyulskaya Roza', 'Puteshestvennitsa', etc.) developed at the Krymsk Experiment Breeding Station were distributed. 'Kubanskaya Kometa' and 'Naidyona' cultivars are known in Poland, Germany, Latvia, Lithuania, Ukraine, and Belarus (Matveev, 2003; Ikase, 2008; Kaufmane *et al*., 2019; Lanauskas, *et al.,* 2019; Glowatska *et al.,* 2021).

Characterisation of cultivars. In the conditions of southern Russia, the cultivars of Russian plum ripen from late June till October, earlier than the early cultivars of common and Japanese plums (Table 1). For early harvesting, cvs. 'Iyulskaya Roza', Kubanskaya Kometa', 'Puteshestvennitsa', 'Shatyor', and 'Evgeniya' are superior. The fruits of the very late cvs. 'Podarok Sad-Gigantu' and 'Almaz' have firm flesh and keep well after ripening in storage facilities for up to three months or more. Thus, it is possible to extend the season of Russian plum fresh fruit consumption by up to six months a year.

Table 1. Successive ripening of Russian plum cultivars.

Cultivar	June	July			August			September	
	day of the month								
	21	1	11	21	1	11	21	1	11
Iyulskaya Roza									
Kubanskaya Kometa									
Shatyor									
Puteshestvennitsa									
Evgeniya									
Naidyona									
Gek'									
Obilnaya, control									
Kometa Pozdnyaya									
Kolonnovidnaya									
Globus									
Almaz									
Podarok Sad-Gigantu									

All of the plum cultivars developed at the Krymsk Station have good fruit taste that exceeds that of other fruits. Cultivars like 'Kubanskaya Kometa', 'Dynnaya', 'Globus', 'Puteshestvennitsa', and 'Gek' have especially high taste quality of fresh fruit.

The fruit of the recommended Russian plum cultivars have good canning qualities, exceeding in this respect the cultivars of Japanese plum and most common plum cultivars. Especially good for canning are fruits of cvs. 'Podarok Sad-Gigantu' and 'Almaz', which have very firm flesh; and content of dry matter and ascorbic acid is high in cvs. 'Dynnaya' and 'Globus', and some others (Table 2).

The below-listed cultivars developed at the Krymsk Experiment Breeding Station, and tested on clonal rootstocks Kuban 86, Evrika 99, and VVA 1, are recommended for cultivation.

'Almaz' — 'Kubanskaya Kometa' (Japanese plum × myrobalan plum) × 'Ashtarakskaya 2' (myrobalan plum). A medium-late ripening cultivar. Fruits are up to 40 g, rounded, red-purple. The flesh is yellow, red near the skin, very firm, sweet-sour, with good taste. The stone easily detaches from the flesh. Fruits are suitable for fresh consumption, canning, and store well.

The tree is of medium size, winter hardy, disease resistant. Yielding ability is high.

'Gek' — 'Skoroplodnaya' (Japanese plum) × 'Otlichnitsa' (myrobalan plum). A medium ripening cultivar. Fruits are up to 40 g, ovate, yellow. The flesh is yellow, medium firm, very aromatic, sweet-sourish, with a good taste. The stone does not detach from the fruit. Fruits are suitable for universal use.

The tree is above medium height, wide-spreading. Winter hardiness and disease resistance are high. Yielding ability is high.

Table 2. Fruit mass and canned fruit quality (on a 1–5-point scale) of Russian plum cultivars

Cultivar	Fruit mass, g	Canned fruit quality, points			
		fresh	juice	compote	jam
Kubanskaya Kometa, control	35	4.6	4.5	4.5	4.4
Iyulskaya Roza	30	4.4	4.6	4.5	4.5
Shatyor	45	4.4	4.4	4.4	4.4
Puteshestvennitsa	30	4.5	4.4	4.4	4.4
Evgeniya	40	4.5	4.6	4.4	4.5
Naidyona	36	4.5	4.5	4.6	4.5
Dynnaya	45	4.8	4.6	4.5	4.5
Gek	40	4.6	4.4	4.4	4.5
Kometa Pozdnyaya	40	4.5	4.5	4.3	4.2
Obilnaya	40	4.7	4.4	4.2	4.3
Kolonnovidnaya	50	4.3	4.5	4.5	4.5
Globus	60	4.7	4.6	4.5	4.6
Almaz	35	4.3	4.7	4.6	4.8
Podarok Sad-Gigantu	30	4.3	4.8	4.5	4.7
LSD 0.5	0.2				

‘Globus’ — ‘Obilnaya’ (Japanese plum × myrobalan plum) × ‘Hybrid 2’ (myrobalan plum ‘Kulturnaya Krasnaya’ × apricot). A medium ripening cultivar. Fruits are very large, up to 80 g, rounded, red-purple. The flesh is yellow, firm, sweet, aromatic, with excellent taste. The stone easily detaches from the flesh. Ripe fruits can stay on the tree up to 10 days, while their taste improves.

The tree is very vigorous, with a rounded canopy. Winter hardiness is medium, drought resistance is high, and disease resistance is medium. Yielding ability is very high.

‘Dynnaya’ — ‘Gigant’ (Japanese plum) × myrobalan plum. Fruits are large, up to 45 g, oval, dark-red. The flesh is yellow, medium firm, sweet, aromatic, with excellent taste. The stone easily detaches from the flesh. Fruits are valuable for fresh consumption and are suitable for canning.

The tree is medium vigorous, with low canopy. Winter hardiness and drought resistance are medium. Susceptible to shot hole disease. A perfect pollinator for Russian plum cultivars.

‘Evgeniya’ — ‘Obilnaya’ (Japanese plum × myrobalan plum) × ‘Kubanskaya Kometa’ (Japanese plum × myrobalan plum). A medium-early ripening cultivar. Fruits are large, 45 g, rounded-oval, red-purple; the flesh is yellow, firm, sour-sweet, with a pleasant taste. The stone easily detaches from the flesh. Fruits are suitable for universal use.

The tree is very vigorous, with a flat-rounded canopy. Winter hardiness and drought resistance are medium. Resistant to diseases, high-yielding.

‘Iyulskaya Roza’ — a seedling of cv. ‘Kubanskaya Kometa’ (Japanese plum × myrobalan plum). A very early cultivar, ripens 5–7 days earlier than cv. ‘Kubanskaya Kometa’. Fruits are medium-sized, ovate, pink-red. The flesh is yellow, firm, sour-sweet, with a light aroma and a good taste. The stone is slightly adhered to the flesh. Fruits are suitable for universal use.

The tree is medium vigorous, with a flat-rounded canopy. Winter hardiness is strong and drought resistance is medium. Resistant to diseases, high-yielding.

‘Kolonnovidnaya’ — ‘Hiawatha’ (cherry plum) × myrobalan plum. A medium ripening cultivar. Fruits are large, up to 70 g, wide-oval, maroon-purple. The flesh is pink, medium firm, sweet-sour, with a good taste. The stone is slightly adhered to the flesh. Fruits are suitable for fresh consumption and canning.

The tree is medium vigorous, with a narrow-columnar canopy. Winter hardiness and drought resistance are medium. Resistant to diseases, high-yielding. An excellent pollinator for Japanese and Russian plum cultivars.

‘Kometa Pozdnyaya’ — a seedling of cv. ‘Kubanskaya Kometa’ (Japanese plum × myrobalan plum). A medium ripening cultivar. Fruits are large, wide-rounded, dark-red. The flesh is yellow, firm, sweet-sour, with a good taste. The stone easily detaches from the flesh. Fruits are suitable for universal use.

The tree is medium vigorous. Winter hardiness is high. Resistant to diseases.

‘Kubanskaya Kometa’ — ‘Skoroplodnaya’ (Japanese plum) × ‘Pionerka’ (myrobalan plum). An early ripening cultivar. Fruits are above average in size, elongated-oval, dark-red. The flesh is yellow, medium firm, sour-sweet, aromatic, with a very good taste. The stone is slightly adhered to the flesh. Fruits are suitable for universal use.

The tree is low, with a flat rounded canopy. Winter hardiness and disease resistance are high. Very high yielding ability.

‘Naidyona’ — ‘Skoroplodnaya’ (Japanese plum) × ‘Desertnaya’ (Japanese plum × myrobalan plum). A medium ripening cultivar. Fruits are above average in size, oval, dark-red. The flesh is yellow, medium dense, sour-sweet, aromatic, with a good taste, suitable for universal use. The stone is slightly adhered to the flesh.

The tree is low, with a flat rounded canopy. Winter hardiness and disease resistance are high. High yielding ability.

‘Obilnaya’ — ‘Burbank’ (Japanese plum) × ‘Tavricheskaya’ (myrobalan plum), developed in the State Nikitsky Botanical Garden (Yalta, Crimea). A mid-ripening cultivar. Fruits are large, rounded or flat-rounded, red-purple. The flesh is orange, red near the skin, firm, with a good taste. The stone easily detaches from the flesh. Fruits are suitable for fresh consumption and canning.

The tree is medium vigorous. Winter hardiness is high, disease resistance is medium, and drought resistance is not high. High yielding ability.

'Podarok Sad-Gigantu' — 'Gigant' (Japanese plum) × 'Ashtarakskaya 2' (myrobalan plum). A medium-late ripening cultivar. Fruits are large, 40 g, rounded, red-purple. The flesh is yellow, red at the skin, very firm sweet-sour, with a good taste. The stone easily detaches from the flesh. Fruits are good for fresh consumption and canning; they transport and keep well.

The tree is low, with a flat canopy. Winter hardiness and disease resistance are high, drought resistance is medium. A high-yielding cultivar.

'Puteshestvennitsa' — a seedling of cv. 'Desertnaya' (Japanese plum × myrobalan plum). An early ripening cultivar. Fruits are of medium size, flat rounded, red. The flesh is orange, pink near the skin, sour-sweet, with a strong spicy aroma and excellent taste. The stone is slightly adhered to the flesh. Fruits are suitable for fresh consumption and especially for canning.

The tree is medium vigorous. Winter hardiness and disease resistance are high, drought resistance is medium. Yielding ability is high and stable in years.

A good pollinator for the simultaneously flowering Japanese and Russian plum cultivars.

Shatyor — a seedling of cv. 'Fiebing' (Japanese/American plums) a spontaneous hybrid with myrobalan plum. An early ripening cultivar. Fruits are large, rounded-oval, red. The flesh is medium firm, sour-sweet, with a very good taste. The stone is firmly adhered to the flesh. Fruits are suitable for universal use.

The tree is low, with a dense drooping canopy. Winter hardiness, drought and disease resistance, and yielding ability are high.

Rootstock breeding. Since Russian plum cultivars are in demand with producers and consumers of orchard products, there appeared a need to develop intensive cultivation technologies. The use of low vigorous clonal rootstocks in these technologies has become especially relevant. Until the middle of the last century, there were no such rootstocks for plums in Russia. In this regard, the development of clonal rootstocks of varying growth vigour, medium and low vigorous rootstocks in the first place, was started at the Krymsk Experiment Breeding Station of VIR in the 1950s and led to the formation in Russia of an assortment of rootstocks for plums, including Russian plums. Some of them turned out to be very adaptive and suitable for cultivation in various countries (Kaufmane *et al*., 2007; Safarov, 2011*;* Gravite *et.al.,*2020; Peppelman, *et.al.,* 2007). The best rootstocks also showed good results when used in modern intensive cultivation in combination with new Russian plum cultivars. This led to their rapid spread in several countries in the cultivation of not only plums, but also peaches and apricots (Eremin and Eremin, 2015).

Characterisation of rootstocks. Some clonal rootstocks ensure better use of the valuable qualities of the Russian plum cultivars grafted on them. VVA 1 and VSV 1 clonal rootstocks accelerate fruit ripening by 4-7 days. They have a good anchoring; the canopy do not bend over and does not require support. The below-listed clonal rootstocks are recommended for intensive cultivation of Russian plum:

Best — Sand cherry (*P. pumila* L.) × myrobalan plum (*P. cerasifera* Ehrh.*)*. The trees on this rootstock are 40–50% lower than on myrobalan seedling rootstocks. Winter hardiness of roots is high, drought resistance is above average. Resistant to soil pathogens. Anchoring is satisfactory. Does not produce root suckers. Easy propagation by green shoots, hardwood cuttings and by layering.

VVA 1 — Willowleaf cherry (*P. tomentosa* Thunb.) × myrobalan plum (*P. cerasifera* Ehrh.). Reduces grafted tree growth by 40–50%. The productive period is 12–15 years. Anchoring is good. Does not produce root suckers. Winter hardiness of roots is high, up to minus 15 °C, drought-resistance is low. Resistant to nematodes and wilt diseases. Compatible with all Russian plum cultivars.

VSV 1 — Willow leaf cherry (*P. incana* Stev. × Nanking cherry *P. tomentoisa* Thunb.). Reduces grafted tree growth by 50–60%. Anchoring is good. Does not produce root suckers. Sufficiently winter-hardy, drought-resistant, but does not tolerate soil water logging. Resistant to excessive lime in soil (chlorosis) and soil pathogens. Easily propagates by green shoots and satisfactorily by hardwood cuttings and layers. Compatible with all Russian plum cultivars.

Druzhba — Sand cherry (*P. pumila* L.) × common apricot (*P. armeniaca* Lam.). Trees on this rootstock are 30–40% lower than those grafted on highly vigorous rootstocks Kuban 86 and Fortuna. Anchoring is satisfactory, as some trees are bending slightly. Winter hardiness of roots is high, drought resistance is above average. Resistant to soil pathogens. Does not produce root suckers. Easily propagates by green shoots and satisfactorily by hardwood cuttings and layers. Compatible with most Russian plum cultivars.

Zarevo — somatic mutation of 'Vesenneye Plamya' clonal rootstock [(*P. americana* × *P. salicina*) × *P. cerasifera*]. The leaves are red. Reduces tree growth by 20–25%. Anchoring is excellent. Does not produce root suckers. Winter hardiness of roots is above average. Drought resistance is average. Resistant to soil pathogens. Compatible with all Russian plum cultivars. Good propagation by green and hardwood cuttings.

Kuban 86 – Myrobalan plum (*P. cerasifera* Ehrh.*)* × peach (*P. persica* Stokes). Reduces grafted plum tree growth by 10–15 %. Very good anchoring, as the root system is powerful. Resistant to drought, excessive lime, soil pathogens; winter hardiness of roots is satisfactory. Does not suffer

from soil fatigue. Compatible with all Russian plum cultivars. Easily propagates by green and hardwood cuttings.

Upryamets – Flowering plum (*P. ulmifolia*) × myrobalan plum (*P. cerasifera* Ehrh.). Reduces tree growth by 40–50%. Resistant to frost, droughts, soil pathogens. Compatible with all Russian plum cultivars. Anchoring is good. Does not produce root suckers. Easily propagates by green and hardwood cuttings.

Fortuna – [Japanese plum (*P. salicina* Lindl.) × peach (*P. persica* Stokes)] × myrobalan plum (*P. cerasifera* Erhr.). Compatible with all the Russian plum cultivars. Anchoring is very good. Does not produce root suckers. Easily propagates by green and hardwood cuttings.

Growing technologies for plums. The Russian plum cultivars recommended for cultivation meet the requirements of intensive fruit growing technologies. For this purpose, various types of plantation designs and types of pruning are suitable. For cultivating Russian plum at a density of up to 600–800 trees per hectare, clonal rootstocks like Kuban 86, Fortuna, Evrika 99, Vesenneye Plamya, and Zarevo are best suited, as they reduce tree growth by 10–20%. In intensive plantations with a density of over 1000 trees per hectare, the best results are obtained by using dwarfing rootstocks VVA 1, VSV 1, Upryamets, Best, and Druzhba (Fig. 1).

The Russian plum cultivars are superior to those of other plum species in terms of earliness of fruiting. Trees of these cultivars come into fruiting in the 2nd–3rd year after laying out the orchard. They are characterised by high yield, being no inferior to the best common plum cultivars. Particularly effectively, the outstanding productivity of Russian plum cultivars is realised in cultivar-rootstock combinations that employ clonal rootstocks in intensive cultivation systems.

Although all of the Russian plum cultivars are well compatible with the new clonal rootstocks developed at the Krymsk Experiment Breeding Station, not all of them realise their productivity potential to the same extent, for example, with the dwarfing VVA 1 rootstock. The 'Puteshestvennitsa'/VVA 1 cultivar-rootstock combination is distinguished by high productivity, especially in the early years of fruiting, while the trees of the cultivar-rootstock combinations 'Obilnaya'/VVA 1, 'Evgeniya'/VVA 1, 'Iyulskaya Roza'/VVA 1 bear fruit poorly in the first years of growth (Safarov, 2011).

Good results have been obtained when cultivating own-rooted plum cultivars without grafting.

All Russian plum cultivars are propagated by green shoots and by clonal micropropagation. Most of them ('Kubanskaya Kometa', 'Kometa Pozdnyaya', 'Iyulskaya Roza', 'Puteshestvennitsa', 'Kolonnovidnaya', 'Gek', 'Evgeniya', and 'Globus') can be propagated also by rooting hardwood cuttings, while these of cvs. 'Dynnaya', 'Shatyor', 'Podarok Sad-Gigantu' and 'Almaz' root poorly. All of the recommended clonal rootstocks can be successfully propagated

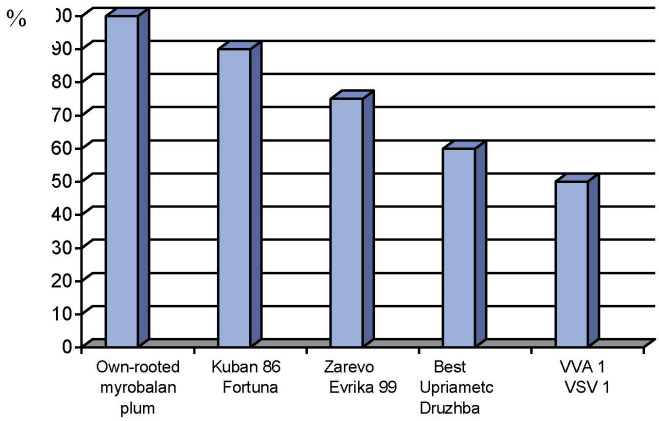


Fig. 1. Russian plum trees growth vigour on different rootstocks (as % of those grafted on myrobalan plum seedlings).

not only by clonal micropropagation, but also by green cuttings and hardwood cuttings.

In a nursery, one-year-old Russian plums produce a ramified canopy and even set flower buds quite often.

The Russian plum cultivars and clonal rootstocks are comparatively undemanding to soil, but for obtaining high yields of high-quality fruit it is necessary to use all of the agricultural methods employed in intensive cultivation of common and Japanese plums.

DISCUSSION

In the work on the creation of an industrial assortment of a new cultigen hybrid species — the Russian plum — *Prunus* × *rossica* Erem. a promising direction was found to be hybridisation involving, in addition to varieties of this species, hybrids of more hardy stone fruit species: *P. armeniaca* Lam., *P. dasycarpa* Pers., *P. pumila*, *P. tomentosa* Thunb., and *P. persica* Stockes. The new varieties and clonal rootstocks obtained by such combinations of crosses are well adapted to the conditions of most regions of Russia, surpassing in these indicators most varieties of Chinese and domestic plums, as well as clonal rootstocks of stone fruit crops used in most countries.

This makes it possible to cultivate the Russian plum in the more northern regions of Russia than other stone fruits are planted, and to develop intensive technologies. These technologies use winter-hardy and disease-resistant varieties of Russian plum ('Kubanskaya Kometa', 'Gek' etc.) and dwarfing clonal rootstocks: VVA 1, VSV 1, Upryamets, Best. More adaptive varieties and rootstocks of Russian plum can be successfully cultivated in countries and regions with similar climatic conditions to those in the southern regions and the Central fruit growing zone of Russia.

CONCLUSIONS

1. The existing assortment of common and Japanese plums can be expanded by new Russian plum cultivars developed

at the Krymsk Experiment Breeding Station. The cultivars recommended for a wide cultivation are 'Globus', 'Evgeniya', 'Dynnaya', and 'Kolonnovidnaya'. The winter hardy cvs. 'Kubanskaya Kometa', 'Naidyona', 'Puteshestvennitsa', 'Iyulskaya Roza', 'Kometa Pozdnyaya', 'Podarok Sad-Gigantu', 'Almaz', and 'Gek' are recommended for more northern areas.

2. The Russian plum cultivars developed at the Krymsk Experiment Breeding Station and grown for commercial purposes make it possible to ensure a continuous supply of fruits for a period of three months, and their continuous availability for consumption for six months.

3. To design compact orchards for Russian plum cultivation, it is recommended to use the dwarfing clonal rootstocks VVA 1, VSV 1, Upryamets and Best, and the medium vigorous clonal rootstocks Kuban 86, Evrika 99, Druzhba, Zarevo and Fortuna.

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PRUNUS × *ROSSICA* EREM. JAUNO ŠĶIRŅU UN KLONA POTCELMU SELEKCIJAS REZULTĀTI KRIMSKAS EKSPERIMENTĀLAJĀ SELEKCIJAS STACIJĀ

Pētījumā apskatītas iespējas paplašināt plūmju šķirņu sortimentu pasaulē, krustojot lielaugļu Kaukāza plūmju (*Prunus cerasifera* Ehrh.) šķirnes ar japāņu plūmi (*Prunus salicina* Lindl.) un citām diploīdajām kauleņaugļu sugām. Daudzu gadu selekcijas darba rezultātā Krievijā izveidotas jaunas hibrīdās sugas *Prunus* × *rossica* Erem. šķirnes (Krievu plūme), kas nodrošina pastāvīgu svaigu augļu piegādi no jūnija beigām līdz septembrim un papildina parasto plūmju šķirņu klāstu. Sniegts apraksts par labākajām adaptīvām, augstražīgām šķirnēm ar labu garšu un augstām konservēšanas īpašībām, proti, 'Kubanskaya Kometa', 'Globus', 'Gek', 'Iyulskaya Roza', 'Dynnaya', 'Kolonnovidnaya' un 'Podarok Sad-Gigantu'. Pamatota to audzēšanas lietderība, izmantojot intensīvas audzēšanas tehnoloģijas un patsakņu augus, kā arī Krimskas selekcijas stacijā izaudzētos klona potcelmus. Ieteicams veikt intensīvu Krievijas plūmju audzēšanu, izmantojot tādus vidēja auguma potcelmus kā Kuban 86, Evrika 99, Zarevo, Fortuna un pundurpotcelmus VVA 1, Best, Upryamets un VSV 1.