BLACK CURRANT BREEDING IN UKRAINE – RECENT ACHIEVEMENTS AND NEW DEMANDS

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Structure of small fruit crop plantations in Ukraine*

- Black & Red currants, 6000 ha, 25%
- Strawberry
- Blueberries
- Gooseberry
- Blackberry
- Blue honeysuckle (Juneberry)

App. 80% represented with local cultivars

- official figure, small home orchards included, 2014
Currently, Research Centers perform the black currant breeding programmes.

National University of Life and Environmental Sciences of Ukraine

Institute of Horticulture NAAS

Institute of Pomology NAAS
Breeding at IH NAAS from 1971

First release – 2 main varieties simultaneously (1987), *Saniuta* are most popular

16 main varieties for over 40 years

5 varieties are successful commercially - now they account for 80% UA production, there are some plantings in EU

Important features – high agronomic performance, resistance to fungal diseases, fruit quality for both processing and fresh market
Ribes breeding at IH NAAS – more varieties produced

1992 – 6 main varieties, *Chereshneva* is most popular

1994 – 7 main varieties, *Wernisazh* is most popular

1997 – 10 main varieties, *Sofiivska* is most popular

2001 – 13 main varieties, *Yuvileyna Kopania* is most popular

2006 – 14 main varieties, *Yuvileyna Kopania* is most popular

2011 – 16 main varieties, *Yuvileyna Kopania* still most popular (cover up to 25% of plantings)

2015 – 16 main varieties, new popular cv - *Oriana*
Ribes breeding at other Research Centers of Ukraine

Institute of Pomology NAAS

Breeding at IP NAAS from 1930s (former “Mliiv Fruit Growing Station”)
First release – Cherkashchanka, Yunnat (beginning of 1950s)

- 8 main varieties for over 80 years
- Varieties are relatively successful commercially – Yunost, Pamyat Pravyka, Musa – now they account for 2% UA production, no plantings abroad

Institute of Agriculture of Carpathian region NAAS

- Breeding at IACR NAAS from 1961 (former “Lviv Research Horticultural Station”)
  - First release – Hutsulka, Novost Prikarpatia (1974)
  - 10 main varieties for over 50 years
  - 4 varieties are relatively successful commercially – Novost Prikarpatia, Krasa Lvova, Ukrainka, Lybid – now they account for 4-5% UA production, no information about plantings abroad

National University of Life and Environmental Sciences of Ukraine

- Breeding at NULES from 1984 (former “Ukrainian Agricultural Academy”)
  - First release – Poltava-800 (1980s)
  - 7 varieties for over 30 years
  - 1 main variety was relatively successful commercially in 1990s - Poltava-800. Some are popular on hobby market – Mryia kyivska (very early cv)
CONVENTIONAL HYBRIDIZATION – still the main method in breeding programs (IH NAAS, 2015):
CONVENTIONAL HYBRIDIZATION – seedlings in glasshouse and on the trial plot (IH NAAS, 2015):
Promotion on “early stage” – familiarize growers and amateurs with ongoing breeding work at IH NAAS:
What new within recent years?

Becoming popular in Ukraine...

**ALAKTIKA** (Breeder's number 99-19-17)
**Parentage:** Sofiivska × Ukrainka (Zagadka × Ojebin)
**Cropping season:** Harvests 4-5 days before Yuvileyna Kopania. Produced high yields in trials (11.5 t/ha).
**Growth Habit:** Reasonably upright with good vigour.
**Fruit Quality:** Berries are large (av.1.8 g) with excellent sensory qualities.
**Disease and Pest Resistance:** Resistant to mildew and leafspot. Slightly susceptible to gall mite.

**DEBYUT** (Breeder's number 99-20-18)
**Parentage:** Yuvileyna Kopania × Ukrainka (Zagadka × Ojebin)
**Cropping season:** Harvests slightly later than Yuvileyna Kopania. Produced very high yields in trials (16.4 t/ha).
**Growth Habit:** Semi-spreading habit with good vigour.
**Fruit Quality:** Berries are large (av.1.9 g). Juice quality is good overall.
**Disease and Pest Resistance:** Resistant to mildew and leafspot. Slightly susceptible to gall mite.
What new within recent years?
becoming popular in Ukraine...

POLTAVA 584
Parentage: Poltava 800 × Titania
Cropping season: Harvests at the same time as Yuvileyna Kopania. Has produced high yields in trials (13.5 t/ha).
Growth Habit: Reasonably upright with good vigour.
Fruit Quality: Berries are large (av.1.8 g) and shiny.
Disease Resistance: Field resistance to mildew and bot.

SERZH
Parentage: Belorusskaya sladkaya × Zagadka
Cropping season: Harvests 4 days before Yuvileyna Kopania. Has produced high yields in trials (13 t/ha).
Growth Habit: Upright with good vigour.
Fruit Quality: Berries are medium (av.1.3 g) with good firmness.
Disease and Pest Resistance: Field resistance to mildew and leafspot.

PRESTIZH
Parentage: # 46 × Smila
Cropping season: Harvests 5 days before Yuvileyna Kopania. Has produced high yields in trials (14.8 t/ha).
Growth Habit: Upright with good vigour.
Fruit Quality: Berries are large (>2 g) with good size qualities.
Disease and Pest Resistance: Resistant to mildew and slightly susceptible to leafspot.
Actual growers and market demands to new bc varieties

- superior /stable by years agronomic performance > 12 t/ha
- suitability to organic / low-input growing – exceptional resistance to fungal deceases and some pests
  - growers aspire to reduce their expanses
- environmental resilience / adaptability – extention of bc growing geography
- late and very late new varieties – extension of harvesting period
- dessert type varieties for fresh consumption – extension of sales opportunities
  - large, shiny, attractive berries more important that their dessert taste
New release – IHK 01-1-9 (Yuvileina-2)

Parentage: Yuvileyna Kopania × 88-14-16 (Pamiaty Vavilova × Titania)

Cropping season: Harvests at the same time with Yuvileyna Kopania (mid-late) Has produced very high yields in trials (18 t/ha).

Growth Habit: Reasonably upright with good vigour.

Fruit Quality: Berries are large (av.1.8 g) with good firmness, av. Brix level of 15.4, AcA 180-190 mg/100 g

Disease and Pest Resistance: Exceptional resistance to mildew and leafspot, rust and tolerance to gall mite.

Adaptability: very good (expected)
New release – IHK 99-20-16 (Yednist)

**Parentage:** Yuvileyna Kopania × Ukrainka (Zagadka × Ojebin)

**Cropping season:** Harvests 6 days before Yuvileyna Kopania (early-mid)

Has produced high yields in trials (14.8 t/ha).

**Growth Habit:** Semi-spread with good vigour.

**Fruit Quality:** Berries are medium-large (av.1.6 g) with good taste,

  av. Brix level of 14.1, AcA 145 mg/100 g

**Disease and Pest Resistance:** Resistant to mildew, slightly susceptible to leafspot and gall mite.

New release – Upiter

**Parentage:** 1649 × Nadiya

**Cropping season:** Harvests 4 days later Yuvileyna Kopania (late)

Has produced high yields in trials (17 t/ha).

**Growth Habit:** Semi-spread with good vigour.

**Fruit Quality:** Berries are large (av.1.8 g) with good taste,

  av. Brix level of 14.9, AcA 160 mg/100 g

**Disease and Pest Resistance:** Resistant to mildew and leafspot
Fresh Market Types by IH NAAS

**IHK 03-36-4**
- early-mid
- large (2.0 g) and attractive shiny berries
- very pleasant sensory qualities

**IHK 06-1-6 (Primana)**
- mid-late
- large (1.8 g) berries
- outstanding taste – *the testiest blackcurrant I ever tried!*
- excellent resistance to fungal deceases
- good storage potential
Thank you for attention!

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