# Valuable blackberry cultivars tested in *Rubus* collection at the Research Institute of Horticulture in Skierniewice, Poland

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The project on *Rubus* genus is conducted by the Research Institute of Horticulture in Skierniewice, in central Poland. There are 143 genotypes of raspberries, blackberries and hybrid berries planted. Each taxon is represented by 3 plants grown in the field. The experiment takes place the Experimental Orchard in the neighbor village Dąbrowice on sandy-clay soil (fot. 1).

The blackberry and hybrid berries were planted in rows. Distance between rows with plants was 3 m and between plants in a row 2.5 m. During vegetation season plants were protected with chemicals when the threshold risks of the main pests and diseases were high. Weeds were destroyed by use of herbicides and manually. All chemicals were used as recommended on commercial plantations, according to the actual Plant Protection Program for Fruit Tress and Small Fruits.

Fot.1. Blackberry plants in field

Fot. 2. Orkan

Fot. 3. Black Butte

In the collection there are 35 genotypes from subgenus Eubatus, mostly *Rubus fruticosus* L., with stiff, thornless sprouts (e.g. 'Orkan' - fot. 2). Less popular in Poland are blackberries coming from European - *Rubus caesius* and *Rubus hirtus*, and American - *Rubus ursinus* and *Rubus flagellaris*. In the collection there are also blackberry cultivars with a complex origin i.e. trailing blackberries like 'Black Butte' (fot. 3). There is also a smaller group with hybrid berries with the popular in Poland, highly tolerant to low winter temperatures cultivar 'Tayberry' (fot. 4).

First known hybrid berry was 'Loganberry' (fot. 5) bred in 1883 by Californian James Logan, whose last name was used to create the cultivar's name. Loganberry derived the cultivar (*Rubus* × *loganobaccus*) from a red raspberry 'Red Antwerp' (*Rubus idaeus*) and the blackberry variety 'Aughinbaugh' (*Rubus ursinus* vel *Rubus vitifolius*). Hybrid berries are mostly planted in small gardens.

Fot. 4. Tayberry

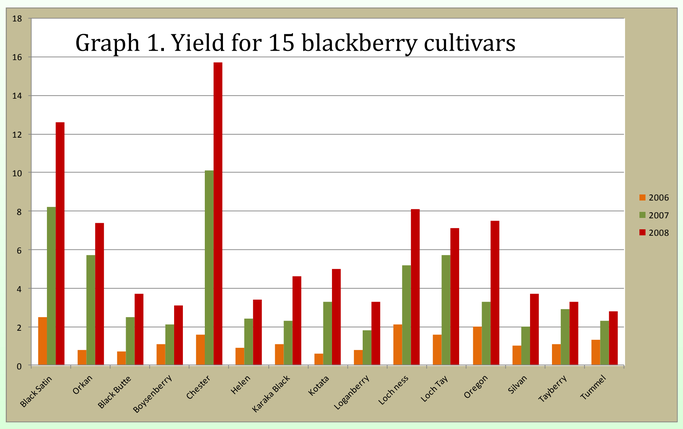
Fot. 5. Loganberry

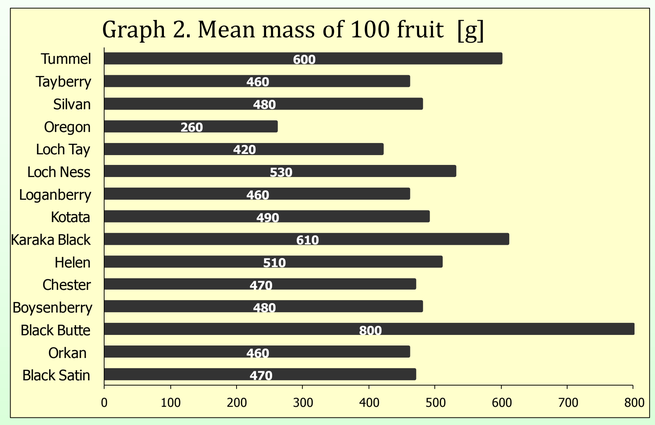
In the collection *Rubus* are testing raspberry, blackberry and hybrid berry that new in Poland. In 2005-2010 was to evaluate growth and yielding of 9 cultivars blackberry: Black Butte', 'Chester', 'Helen', 'Karaka Black', 'Kotata', 'Loch Ness', 'Loch Tay', 'Oregon' and 'Silvan', and 4 hybrid berry: 'Boysenberry', 'Loganberry', 'Tayberry' and 'Tummel'. They were compared with two standard blackberry varieties 'Orkan' and 'Black Satin' (graph 1 and 2).

In the Gene Bank collection were also done phenological observations and plants susceptibility to diseases and pests.

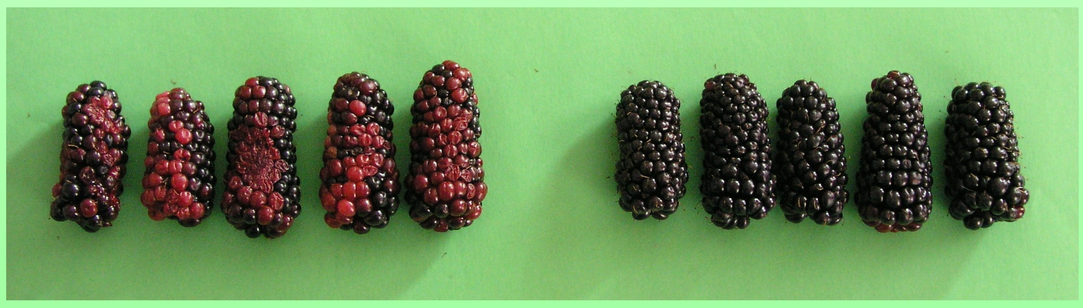
Fot. 6. Grey mould, cane Botrytis, Botrytis fruit rot

Fot. 7. Blackberry mite (Red berry mite) *Acalitus essigi*




In 2016 was testing new Polish blackberry: 'Zagajnik', 'Gracja' and 'Brzezina'. They were compared with standard Polish blackberry - 'Orkan' and 'Gazda' (tab. 1). Study will be continue.



Fot. 8. Susceptibility on rotting fruits

Table 1. Blackberry fruiting in central Poland

| Polish cultivars | Yield in 2016 [kg/plant] | Mass of 100 fruits [g] |
|---|---|---|
| Zagajnik | 2,6 | 297 |
| Gracja | 3,4 | 551 |
| Brzezina | 1,4 | 460 |
| Orkan | 4,6 | 667 |
| Gazda | 2,1 | 216 |

Fot. 9. Blackberry Chester

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