

# Preservation of genetic resources of horticultural plants in InHort, Skierniewice, Poland

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# HISTORY

The systematic collection, evaluation, and conservation of fruit plant cultivars was initiated in Poland in 1921, when the Department of Fruit Growing at the Agricultural University of Warsaw was established in Skierniewice.

In the years 1926-1928, as part of the Department of Fruit Growing, the first Pomological Orchard was established, where the cultivars of fruit plants were assessed under field conditions.



Pear trees (*Pyrus caucasica* Fedorov.) planted in 1926 - a remnant of the first Pomological Orchard

# HISTORY

In the fifties of the twentieth century, trees of more than 500 apple cultivars were already growing in the Pomological Orchard in Skierniewice, and the cultivars of other fruit tree species (pear, plum, sour cherry and sweet cherry) were also collected and tested.



'Kosztela' apple trees - an example of an old orchard from the 1950s, and old sour cherry orchard

# FIELD COLLECTIONS OF CULTIVARS OF FRUIT TREES (InHort)

<b>Species</b>	<b>No. of accessions</b>
apple	1 341
pear	351
plum	330
sour cherry	207
sweet cherry	313
peach	135
apricot	100
hazelnut	77
walnut	67
pome rootstocks	166
stone rootstocks	30
wild species	264
<b>total</b>	<b>3 381</b>

# FIELD COLLECTIONS OF CULTIVARS OF BERRY PLANTS (InHort)

<b>Species</b>	<b>No. of accessions</b>
strawberry	228
raspberry	111
blackberry	37
currants	66
gooseberry	40
highbush blueberry	80
cranberries	48
grapevine	345
others	74
<b>total</b>	<b>1 029</b>

# FIELD COLLECTIONS OF VARIOUS SPECIES OF FRUIT PLANTS (InHort)



# COLLECTIONS OF VARIOUS SPECIES OF VEGETABLE PLANTS (InHort)

Collections of vegetable plants has been founded in 1979 at the Institute of Vegetable Crops in Skierniewice (Since 2011, the Institutes of Vegetable and Pomology and Floriculture have been merged into one organism – Research Institute of Horticulture)

Since 1981 seeds more than 10 000 accessions of 50 species of vegetable plants have been collected and deposited in long-term storage laboratory at the National Centre for Plant Genetic Resources in Radzików.

# FIELD COLLECTIONS OF VEGETABLE PLANTS (InHort)

Species	No. of accessions
garlic	642
shallot	282
wild <i>Allium</i>	112
<b>total</b>	<b>1 036</b>



## CRYOPRESERVATION OF GARLIC (RIH)



Cryopreservation of 197 accessions of garlic



# FIELD COLLECTION OF MELLIFEROUS PLANTS (InHort)

The collection of melliferous plants was established in 1964 in Apiculture Division in Puławy

<b>Species group</b>	<b>No. of accessions</b>
annuals	31
biennial	17
perennials	107
dwarf shrubs	9
shrubs	41
trees	38
<b>total</b>	<b>243</b>



# FIELD COLLECTIONS OF ORNAMENTAL PLANTS (InHort)

Species	No. of accessions
lily	223
narcissus	134
tulip	494
gladiolus	47
rose	245
<b>total</b>	<b>1 143</b>



# FIELD COLLECTIONS ARE OPEN TO VISITORS



Pomological characteristics of some peach cultivars historically cultivated in Poland and prepared in the collection of gene resources Institute of Horticulture in Poznań

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Peach fruit has been grown in the P. W. variety of peach products, currently averaging 2 million tons and from 2010 to 2016 increase of the harvest from the average 2010 amounted to about 30% increase (Fig. 1). The first peach harvest of peach trees in Poland is recorded generally in the middle of June and usually in peach growing. When the trees are young and with well-ventilated canopy, the fruit ripens in the second half of June (Fig. 2).

The peach field collection in the Research Station of the Research Institute of Horticulture in Poznań is one of the oldest in the world. It contains 1500 peach cultivars, 1000 of which are in the collection of gene resources. The collection is the largest in the world and contains a wide range of peach trees with different characteristics of fruit ripening, fruit color, fruit size and shape, fruit yield and fruit quality. The collection is also the largest in the world and contains a wide range of peach trees with different characteristics of fruit ripening, fruit color, fruit size and shape, fruit yield and fruit quality.

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Cultivar	Year of origin	Parentage	Group	Harvest time	Fruit weight (g)	Fruit diameter (mm)	Fruit length (mm)	Fruit shape	Fruit color	Fruit quality
...	...	...	...	...	...	...	...	...	...	...



# COOPERATING INSTITUTIONS

**Arboretum i Zakład Fizjografii w Bolestraszcach**

*Prowadzenie kolekcji starych odmian drzew owocowych w Bolestraszcach*

**Polska Akademia Nauk Ogród Botaniczny – Centrum Zachowania Różnorodności Biologicznej w Powsinie**

*Prowadzenie kolekcji jabłoni i utrzymanie w kriobanku gatunków roślin sadowniczych*

*Prowadzenie kolekcji historycznych odmian róż*

**Szkoła Główna Gospodarstwa Wiejskiego w Warszawie**

*Prowadzenie i ocena zasobów genowych roślin dyniowatych*

**Uniwersytet Przyrodniczy w Poznaniu**

*Prowadzenie kolekcji winorośli na terenie RSGD Przybroda Uniwersytetu Przyrodniczego w Poznaniu*

*Prowadzenie kolekcji polowej szparaga*

**Towarzystwo Przyjaciół Dolnej Wisły**

*Ochrona in situ i ex situ starych odmian drzew owocowych nad Dolną Wisłą*

**COBORU Stacja Doświadczalna Oceny Odmian w Karzniczce, Zakład Doświadczalny Oceny Odmian w Lisewie**

*Prowadzenie kolekcji polowych ozdobnych roślin cebulowych*

**PlantiCo – Hodowla i Nasiennictwo Ogrodnicze Zielonki Sp. z o.o.**

*Rozmnażanie i charakterystyka zasobów genowych roślin warzywnych z banku genów*



MINISTERSTWO  
ROLNICTWA  
I ROZWOJU WSI

Maintaining the collections at the National Institute of Horticultural Research in Skierniewice and cooperating institutions is possible thanks to the funding of the Ministry of Agriculture and Rural Development as a part of the project:  
Protection of Genetic Resources of Horticultural Plants



I would like to thank all my colleagues who have made it possible to carry out the tasks related to the protection of genetic resources of horticultural plants

[www.inhort.pl](http://www.inhort.pl)

In fruit growing we use an old English saying:

„one apple a day keeps the doctor away”

I don't know what the saying is in the *Allium* group. Maybe:

„one piece of garlic a day keeps everyone away”

**THANK YOU  
FOR ATTENTION!**

