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Conservation of Genetic Resources of Horticultural Plants in the Field Collections of the National Institute of Horticultural Research in Skierniewice, Poland

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The building where my office is located

Main square in Skierniewice

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SOME 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

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SOME HISTORY

In the 1950s, 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 chery 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

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SOME HISTORY

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.

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Currently, conservation and maintenance of *ex situ* collections of horticultural plants 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:

„Conservation of Genetic Resources of Horticultural Plants”.

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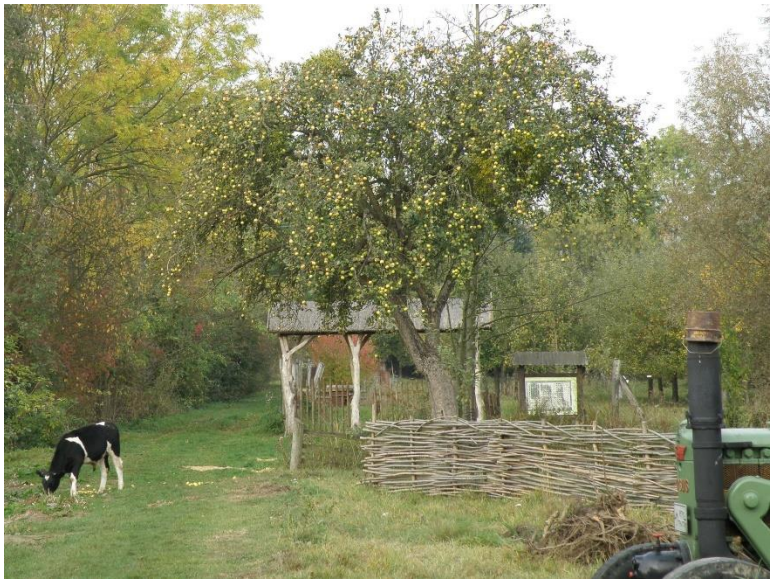
In addition to preserving biodiversity for future generations, maintaining the collection has three main goals

- scientific

- in breeding of new varieties

- educational

Identification, characterization and evaluation of materials collected during the expedition



Apple genotypes brought from the expedition for identificationJabłonie z ekspedycji (fot. G. Hodun)

CROP CATEGORIES/GROUPS OF PLANTS IN COLLECTIONS

Fruit trees

Fruit bushes and berry plants

Vegetable plants

Ornamental plants

Melliferous plants

Depending on the species/group of plants, 26-32 partial collections can be distinguished.

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FIELD COLLECTIONS OF FRUIT TREES (InHort)

Species	No. of accessions
apple	1 362
pear	359
plum	330
sour cherry	212
sweet cherry	335
peach	136
apricot	100
hazelnut	77
walnut	67
pome rootstocks	168
stone rootstocks	30
wild species apples from expeditions pears from expeditions	264 660 255
total	**4 355**

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FIELD COLLECTIONS OF FRUIT BUSHES AND BERRY PLANTS (InHort)

Species	No. of accessions
strawberry	251
raspberry	98
blackberry	43
currants	152
gooseberry	41
highbush blueberry	80
cranberries	49
grapevine	360
others	74
total	**1 148**

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FIELD COLLECTIONS OF VARIOUS SPECIES OF FRUIT PLANTS (InHort)









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FLELD COLLECTIONS OF VEGETABLE PLANTS (InHort)

Species	No. of accessions
garlic	635
shallot	281
wild *Allium*	104
total	**1 020**

CRYOPRESERVATION OF GARLIC (RIH)

Cryopreservation of 237 accessions of garlic

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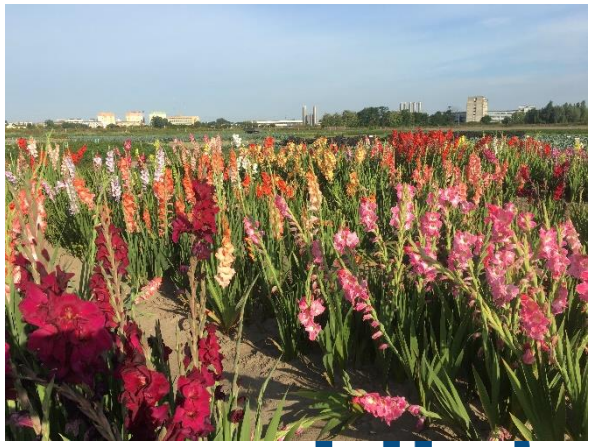
FIELD COLLECTIONS OF ORNAMENTAL PLANTS (InHort)

Species	No. of accessions
lily	222
narcissus	147
tulip	522
gladiolus	61
rose	258
total	**1 210**



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FIELD COLLECTION OF MELLIFEROUS PLANTS (InHort)

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

Species group	**No. of accessions**
annuals	31
biennial	17
perennials	103
dwarf shrubs	9
shrubs	41
trees	38
total	**239**

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PROPAGATION OF GENOTYPES IN ORDER TO SUPPLEMENT/REPLACE DYING/SICK PLANTS AND MAINTAIN COLLECTIONS (InHort)

Each year, a number of actions must be taken to maintain the collected objects.











Several hundred objects of fruit plants are reproduced every year.
In the case of bulb plants, all genotypes are covered by reproduction.

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GRIN-Global INHORT genetic resources documentation system

- GRIN - Global jako system zarządzania zasobami genowymi w bankach genów
- GRIN - Global as a system for managing gene resources in gene banks – Curator Tool
- Transferring data to the national database on crop plant genetic resources and to the European EURISCO database - MCPD v. 2.1 data format
- Providing materials and data on the genetic resources of horticultural plants via the INHORT website

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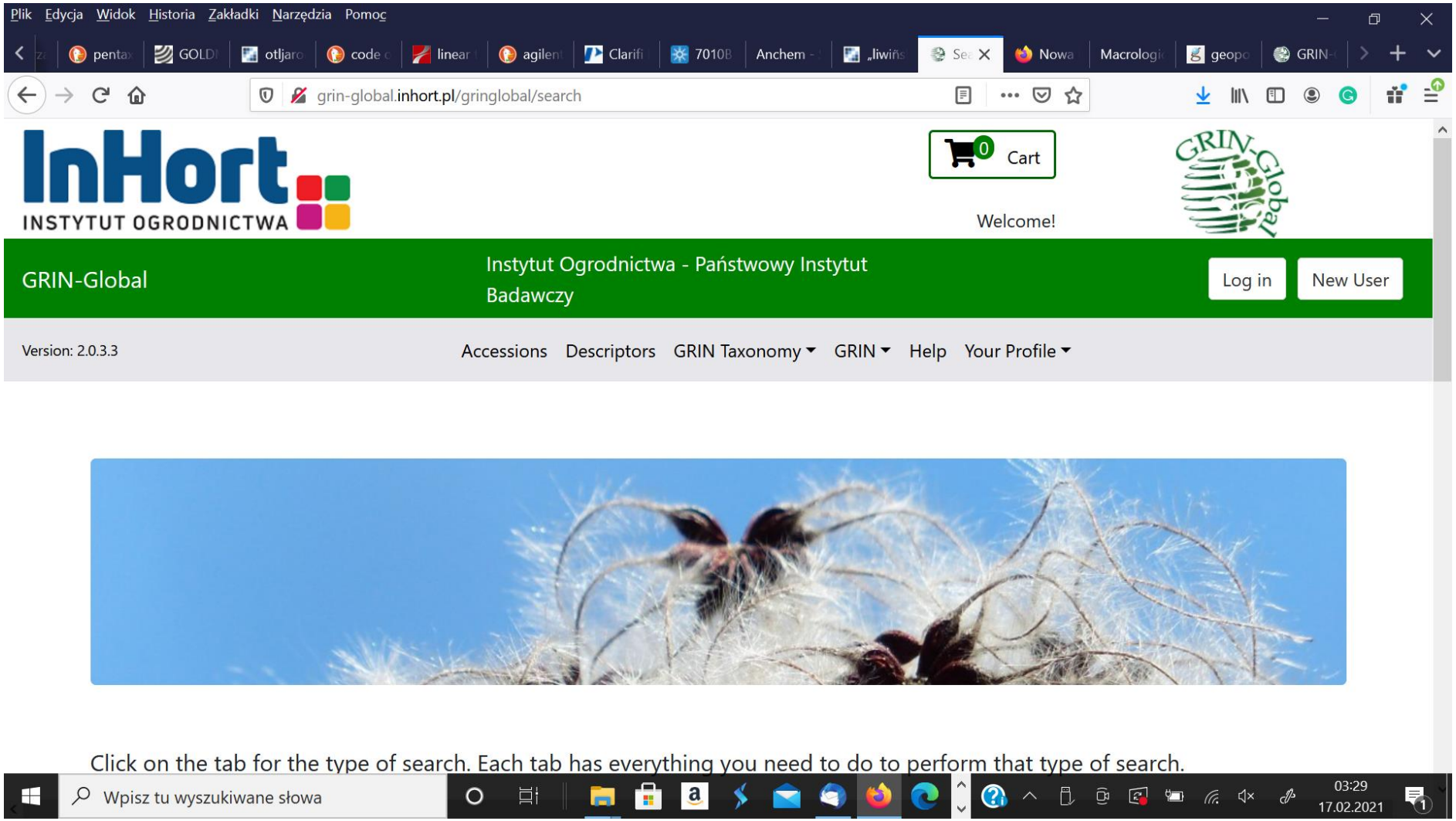
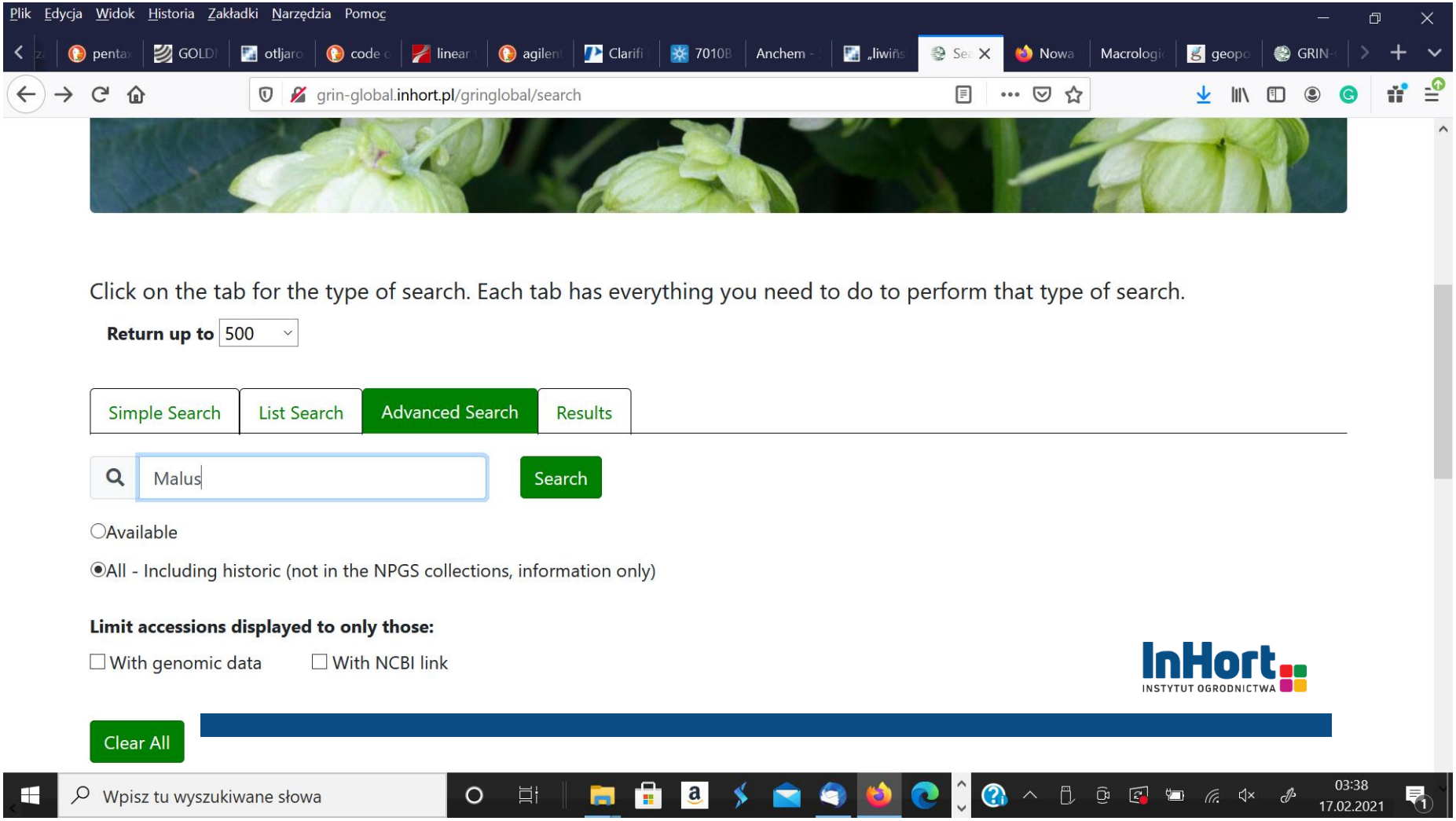
On the website http://grin-global.inhort.pl/gringlobal/search



GRIN-Global INHORT genetic resources documentation system



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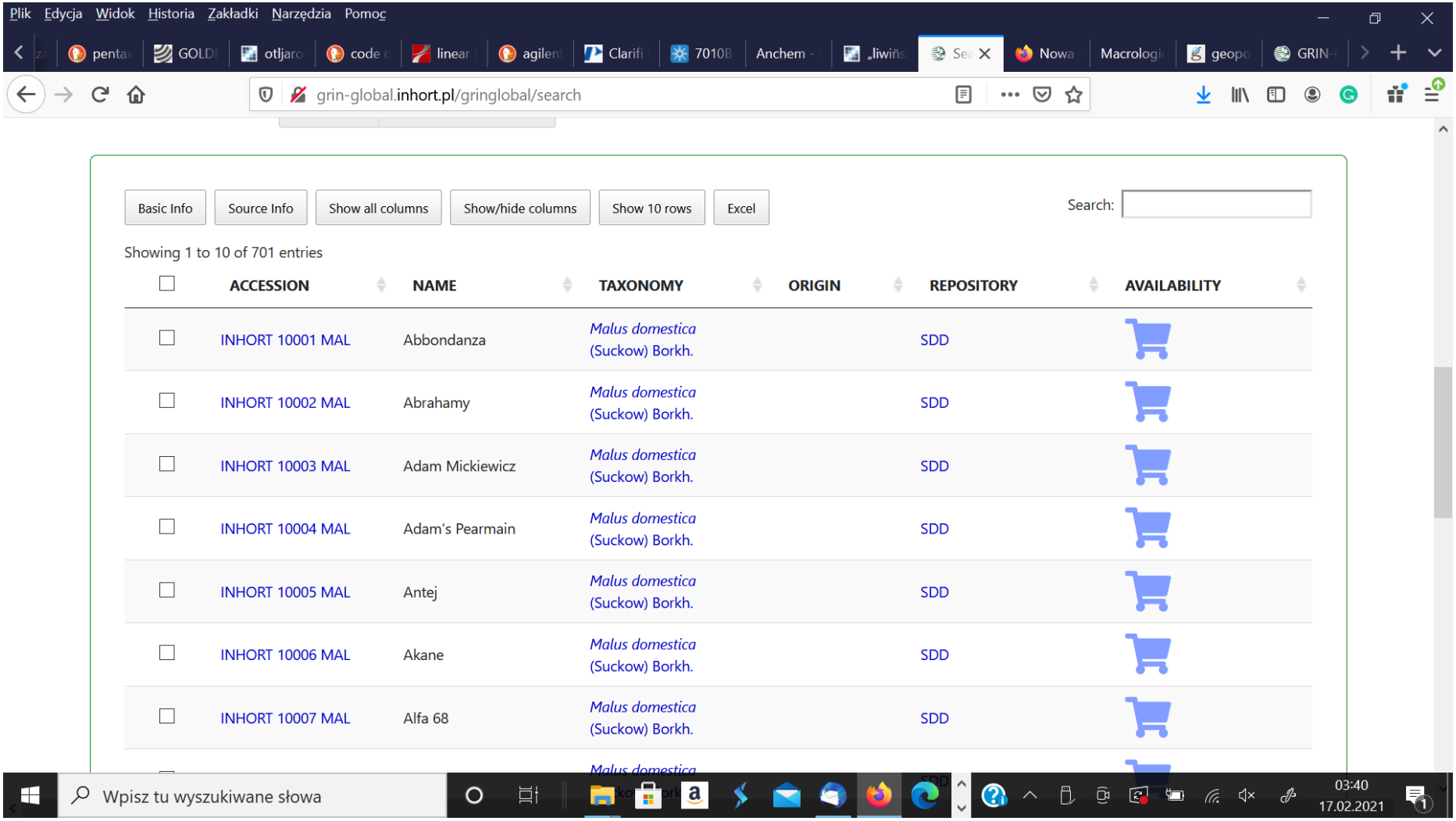

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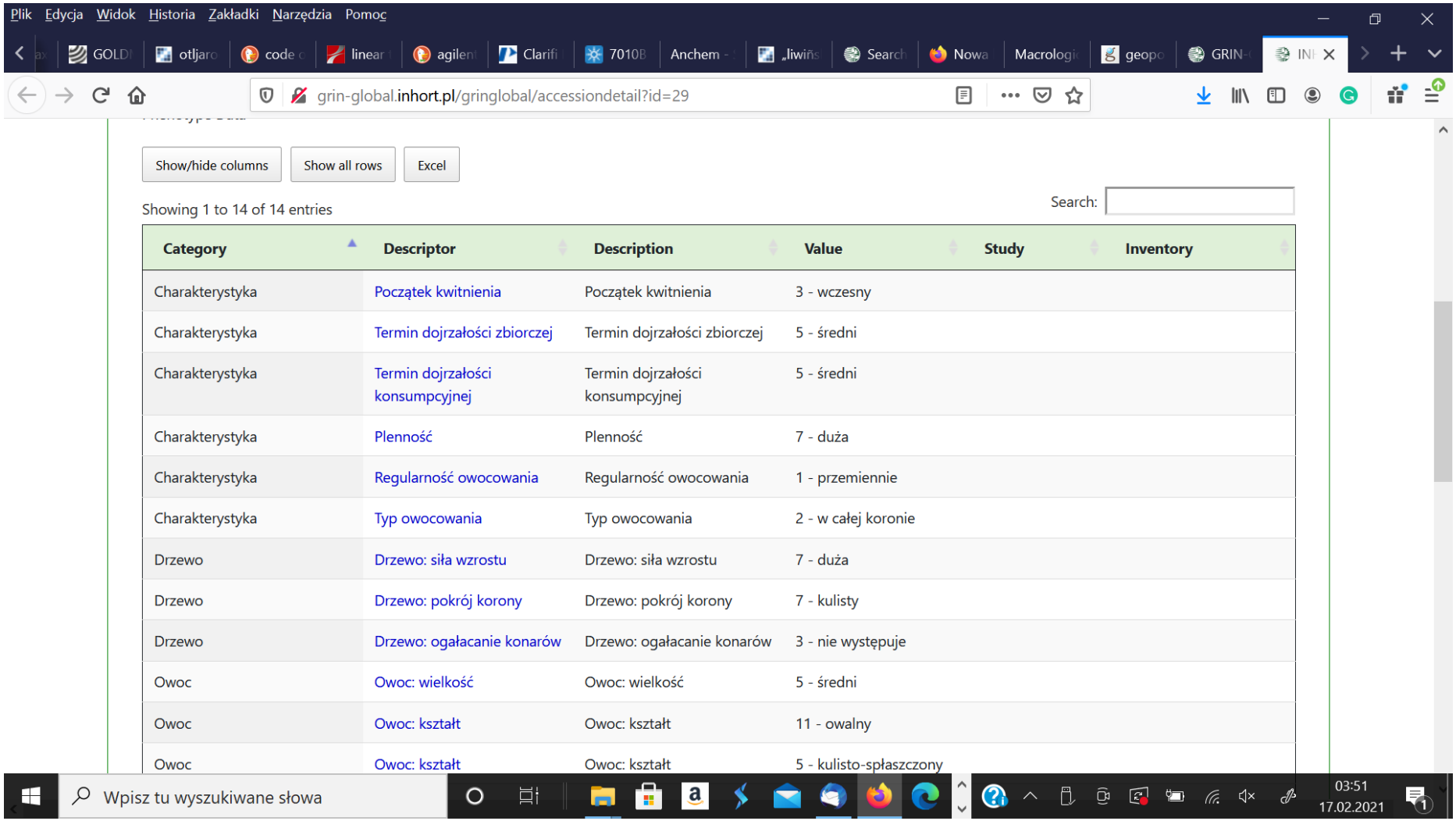

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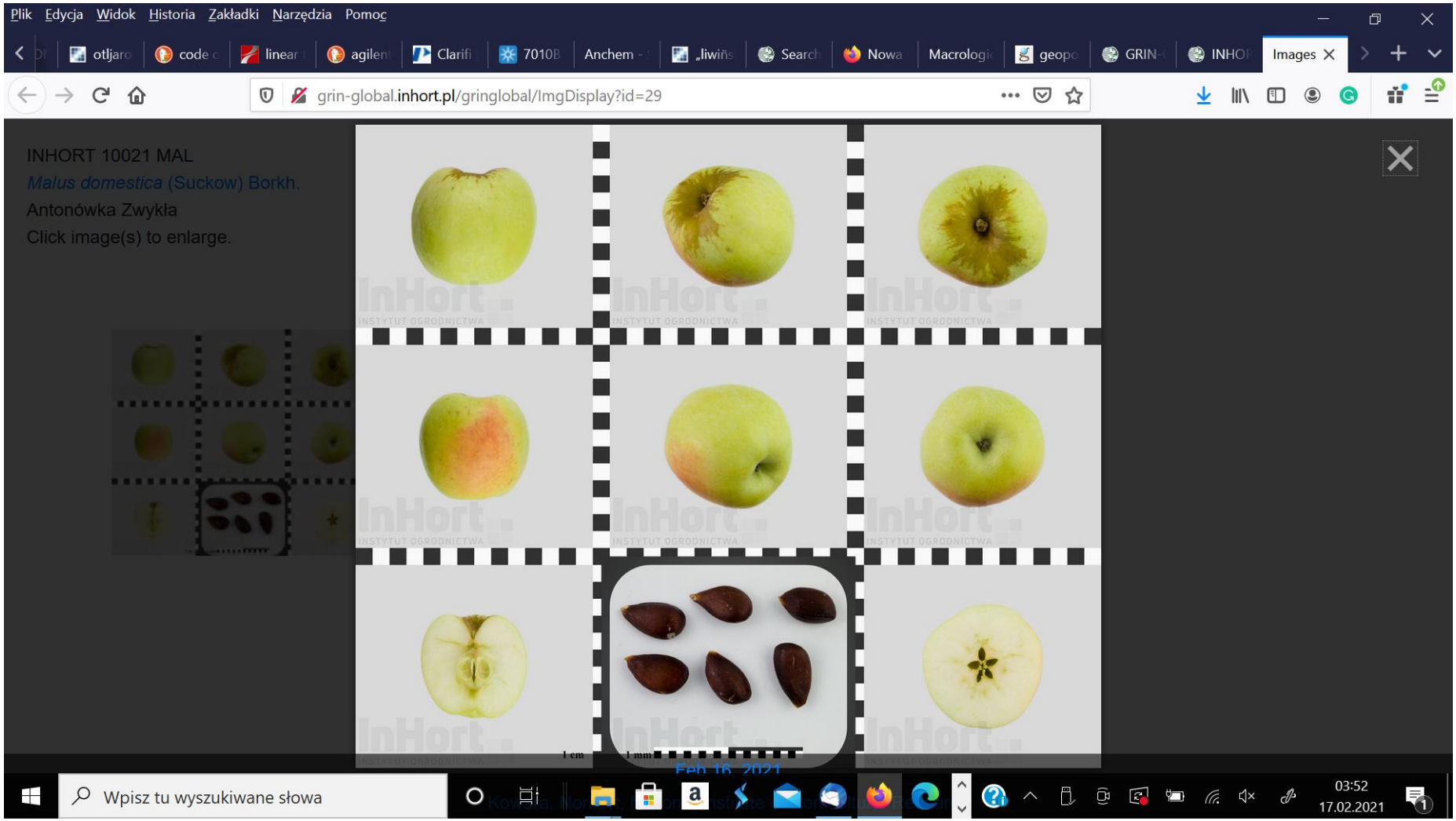

THE FUTURE OF HUMANITY DEPENDS ON THE CONSERVATION OF BIODIVERSITY

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

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THANK YOU FOR ATTENTION!