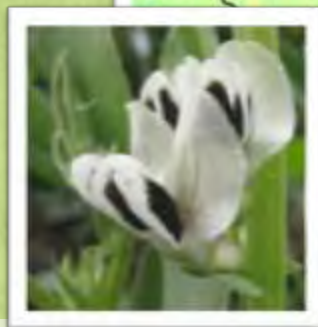


Grain legumes collection in the Czech Republic



5th Meeting of
the ECPGR
Grain Legumes
Working Group
7-8 May 2013
Novi Sad,
Serbia



Šumperk



Ing. Miroslav Hochman

AGRITEC, Research, Breeding & Services, Ltd.
Šumperk, Czech Republic



The Czech National Programme on Conservation and Utilization of Plant Genetic Resources and Agro-biodiversity

Supervising structure:

„National Programme on Conservation and Utilization of Plant, Animal and Microbial Genetic Resources for Food and Agriculture“ 2012-2016 Čj. 206553/2011-MZe-17253

The National Programme (NP) was launched by the Ministry of Agriculture of the Czech Republic on 6 December, 2011 and it is valid for years 2012-2016 as a common platform for conservation and utilization of genetic resources in agriculture. It consists of three separate National programmes:

1. National Programme on Conservation and Utilization of Plant Genetic Resources and Agro-biodiversity (NP PGR)
2. National Programme on Protection of Genetic Resources of Economically Significant Microorganisms and Tiny Animals
3. National Programme on Protection and Utilization of Livestock and Other Animals for Food and Agriculture

Institutions dealing with grain legumes collection in the Czech Republic

- 1) **AGRITEC, Research, Breeding & Services, Ltd., Šumperk**, holding the collection of grain legumes (*Pisum, Vicia, Phaseolus, Glycine, Lupinus, Lens and Cicer*)
- 2) **Research Institute of Crop Production, Praha, workplace Olomouc** maintaining collection of grain legumes used as vegetables (*Pisum /garden pea/, Vicia faba, Phaseolus*).
- 3) **Research Institute for Fodder Crops, Ltd. Troubsko**, holding the collection of fodder legumes (*Lupinus, Vicia, Cicer, Lathyrus*).

EVIGEZ

Passport and evaluation data of grain legumes collections are part of EVIGEZ, the national information system provided by the Research Institute of Crop Production (RICP), Gene Bank, Praha-Ruzyně.

The passport data are available at URL
<http://www.genbank.vurv.cz/genetic/resources/>



Status of grain legumes collection in the Czech Republic

The total number of accessions is 4875, the largest collections being those of *Pisum* (2 363) and *Phaseolus* (1 134). The collection also includes *Vicia*, *Glycine*, *Lupinus*, *Cicer*, *Lens* and *Lathyrus*.



Accessions of all the genera are evaluated in the field in randomized complete block and three years results are recorded into the database.

Descriptor lists or lists of minimum descriptors for all cited crops are available and were cited in previous reports.

Status of grain legumes collection Czech Republic

30. 9. 2007

Crop/Genus	Total passport
<i>Pisum</i>	2261
<i>Vicia faba</i>	391
<i>Vicia ssp.</i>	416
<i>Phaseolus</i>	1123
<i>Glycine</i>	234
<i>Lupinus</i>	97
<i>Lens</i>	81
<i>Cicer</i>	66
<i>Lathyrus</i>	41
Total	4710

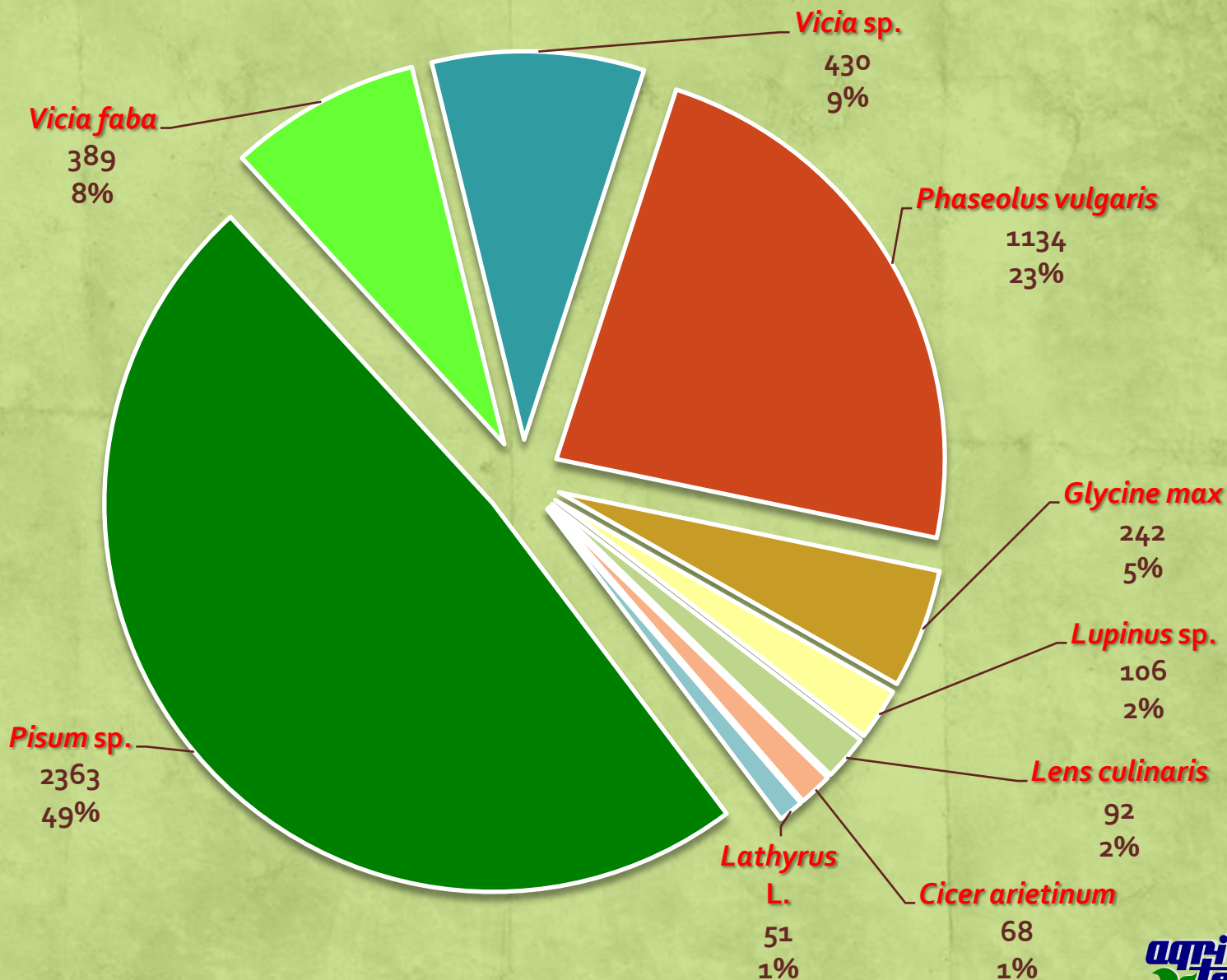
Status of grain legumes collection Czech Republic

30. 4. 2013

Crop/Genus	Total passport
<i>Faba</i> ADANS.	389
<i>Cicer</i> L.	68
<i>Lens culinaris</i> MEDIC.	92
<i>Phaseolus</i> L.	1134
<i>Pisum</i> L.	2363
<i>Lathyrus</i> L.	51
<i>Glycine max</i> (L.) MERR.	242
<i>Vicia</i> sp.	407
<i>Lupinus</i> L.	106
Total	4875

Structure of grain legumes collection - Czech Republic

30. 4. 2013



Status of grain legumes collection

AGRITEC Ltd.

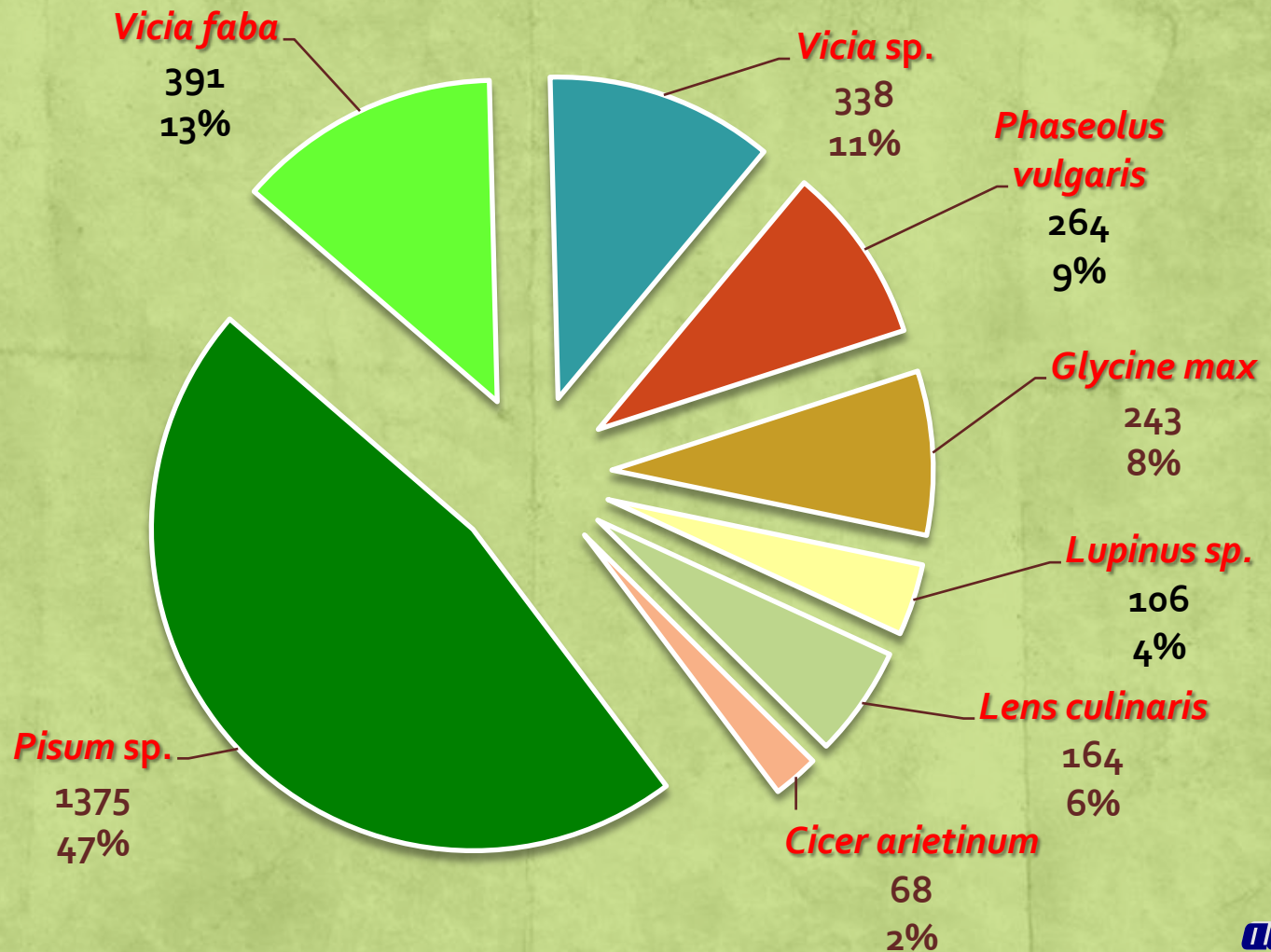
30. 4. 2013

Crop/Genus	Advanced cultivar	Landrace	Breeder's line	Wild	Not specified	Total passport
<i>Pisum sp.</i>	1015	60	257	24	19	1375
<i>Vicia faba</i>	306	22	58	4	1	391
<i>Vicia sp.</i>	270	18	22	18	10	338
<i>Phaseolus vulgaris</i>	209	6	5	0	44	264
<i>Glycine max</i>	212	4	13	0	14	243
<i>Lupinus sp.</i>	74	9	4	18	1	106
<i>Lens culinaris</i>	12	9	6	0	137	164
<i>Cicer arietinum</i>	68	0	0	0	0	68
Total	2166	128	365	64	226	2949

Structure of grain legumes collection

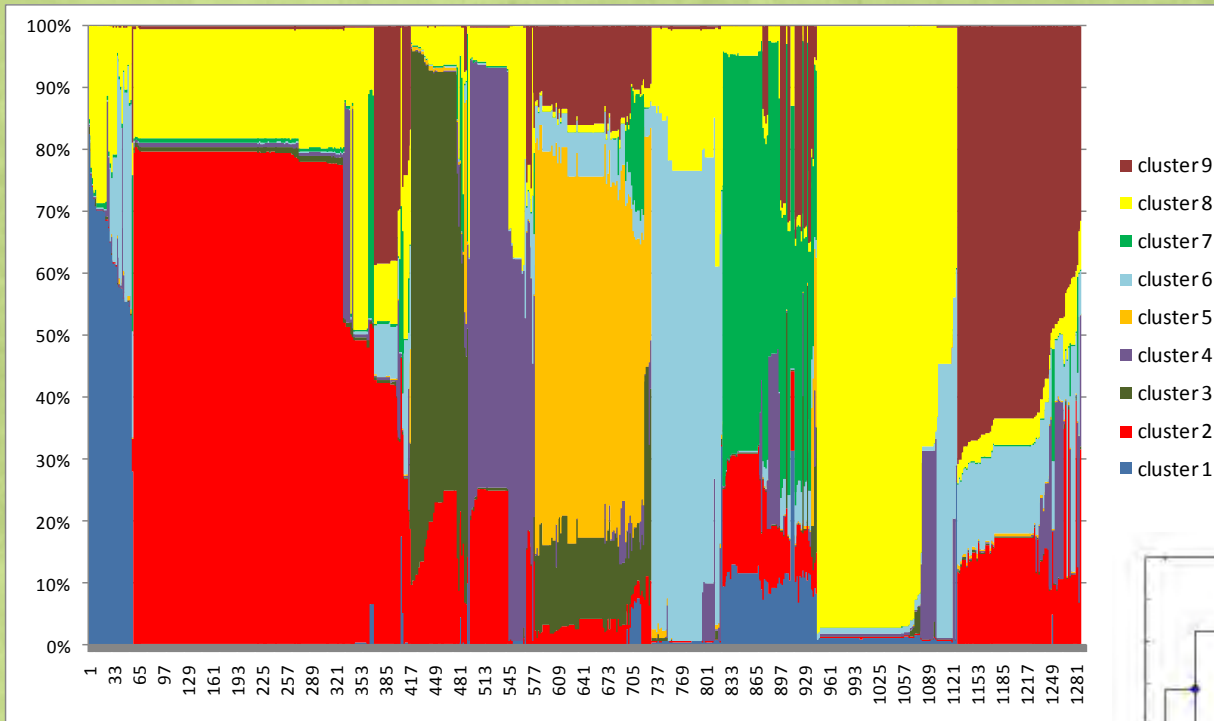
AGRITEC Ltd.

30. 4. 2013



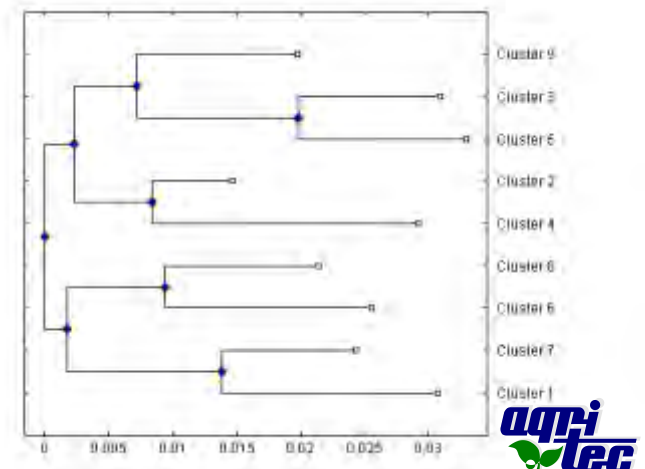
Research of germplasm resources of grain legumes

Genetic structure of a complete collection of pea BAPS analysis of 35 DNA markers



Cluster	Accessions
cluster 9	159
cluster 8	182
cluster 7	121
cluster 6	92
cluster 5	149
cluster 4	87
cluster 3	73
cluster 2	359
cluster 1	57

The entire collection of genus *Pisum* can be divided into 9 clusters.



Mutual exchange, evaluation and effective utilization of gene resources of grain legumes originating in Russia and the Czech Republic

International project KONTAKT II no. LH12227 (2012-2015)

Cooperating foreign partner:

N. I. Vavilov Research Institute of Plant Industry, Department of LEGUMINOUS CROPS, St. Petersburg, Russia

The project should contribute to the expansion of the genetic diversity in exchange of genetic resources from the Czech and Russian national collection for the purposes of research and breeding.

Aims of the project:

- To collect seed samples and information on the genetic resources of the genus *Pisum*, as donors of significant economic properties.
- To verify and confirm newly acquired knowledge with the help of field tests and modern molecular methods.
- To create a line with defined properties for use in research and breeding work.

New Czech Republic's representative

New Czech Republic's representative of the ECPGR Grain Legumes Working Group

Ing. Igor Hunady



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Thank you for your attention
Have a nice day!

