Leibniz Association

IPK GATERSLEBEN

Quality Management ISO 9001:2015

AZ 372545

The German Grain Legume Collection

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- **Short Introduction of IPK**
- **German Genebank Collection**
- **Grain Legumes of IPK**
- ***Lathyrus* Collection**
- **Projects / Activities**

Member of the Leibniz Association

Leibniz Institute of Plant Genetics and Crop Plant Research

IPK GATERSLEBEN

The German Genebank in Gatersleben

Inventory	Total number of acc.	Cultivation/no of accessions
Cereals and Grasses	**65,448**	**2,494**
wheat	28,111	769
barley	23,245	771
rye	2,411	73
Legumes	**28,066**	**1,436**
beans (*Phaseolus*)	9,146	283
peas	5,295	180
Vegetable	**18,794**	**2,556**
tomatoes	3,544	90
onions	3,319	1,421
beet/*Beta*	2,320	180
Oil/Fibreplants	**7,998**	**928**
rapeseed	2,472	134
flax	2,324	104
Medicine/Spice Plants	**8,344**	**1,476**
Mutants	**1,771**	**266**
Forage crops	**11,786**	**1,410**
forage grasses	10,441	1,115
Potatoes	**6,060**	**2,991**
Total	**151,002**	**13,557**

151,002 accessions

3,212 species

776 genera

Reference collections

415,888 herbarium sheets

100,096 seeds & fruits

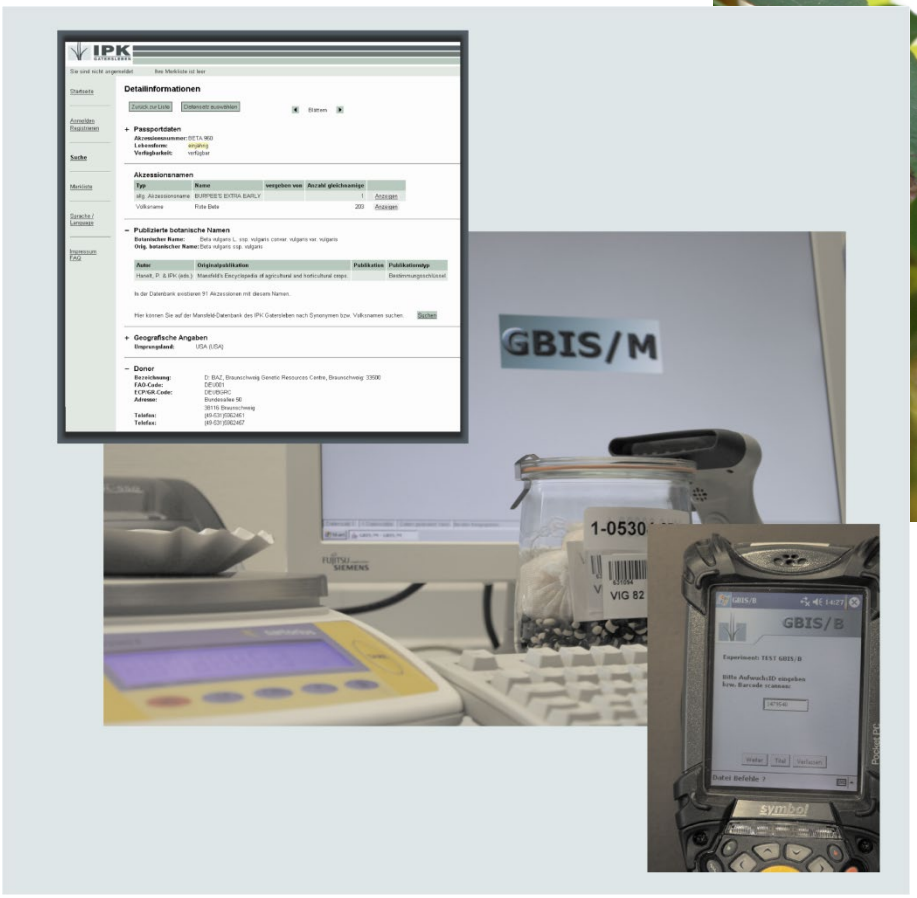
52,249 cereal spikes

Seed Storage

Cold Storage

at –18°C; seed humidity < 10% (ca. 7%)

Genebank Information System (GBIS)



http://gbis.ipk-gatersleben.de/gbis_i/

CERTIFICATE

This is to certify that

Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK)

Corrensstraße 3
06466 Seeland, OT Gatersleben
Germany

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:
Research and Service on Plant Genetic Resources

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001: 2015

Certificate registration no.	372545 QM15
Valid from	2019-03-31
Valid until	2022-03-30
Date of certification	2019-03-15

DQS GmbH

Stefan Heinloth
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany

Quality Management System

Certification according to ISO 9001:2015

Legume Collection

Legumes	**27,826**
Phaseolus beans	8,990
Faba beans	3,073
Soybeans	1,492
Other beans	618
Pea	5,337
Chickpea	527
Lathyrus	515
Vetch	1,844
Lupins	2,765
Lentil	460
Clover	1,929

Lathyrus Collection

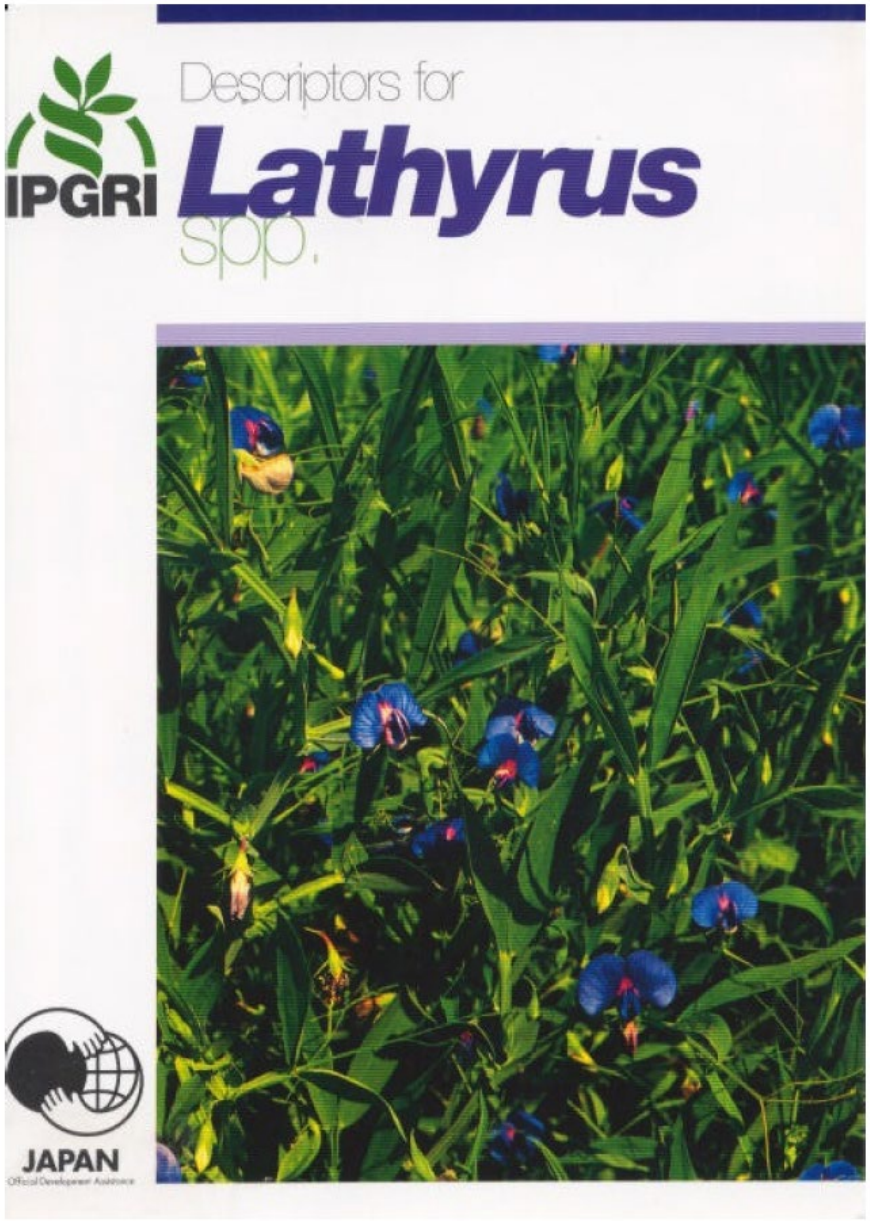
Species	Number of acc.
Lathyrus amphicarpos L.	2
Lathyrus angulatus L.	2
Lathyrus annuus L.	6
Lathyrus aphaca L.	12
Lathyrus articulatus L.	9
Lathyrus aureus (Steven) D.Brândza	2
Lathyrus chloranthus Boiss.	1
Lathyrus cicera L.	67
Lathyrus cirrhosus Sér.	1
Lathyrus clymenum L.	21
Lathyrus davidii Hance	5
Lathyrus gorgoni Parl.	2
Lathyrus heterophyllus L.	2
Lathyrus hierosolymitanus Boiss.	1
Lathyrus hirsutus L.	8
Lathyrus inconspicuus L.	2
Lathyrus japonicus Willd.	1
Lathyrus komarovii Ohwi	1
Lathyrus latifolius L.	8
Lathyrus laxiflorus (Desf.) Kuntze	1

Species	Number of acc.
Lathyrus miniatus M.Bieb.	2
Lathyrus neurolobus Boiss. & Heldr.	2
Lathyrus niger (L.) Bernh.	1
Lathyrus nissolia L.	2
Lathyrus ochrus (L.) DC.	48
Lathyrus odoratus L.	4
Lathyrus palustris L.	1
Lathyrus pannonicus (Jacq.) Garcke	1
Lathyrus paranensis Burkart	1
Lathyrus pratensis L.	3
Lathyrus pseudocicera Pamp.	1
Lathyrus rotundifolius Willd.	1
Lathyrus sativus L.	263
Lathyrus sp.	2
Lathyrus sphaericus Retz.	1
Lathyrus sylvestris L.	11
Lathyrus tingitanus L.	11
Lathyrus tuberosus L.	4
Lathyrus vernus (L.) Bernh.	2

39 species, 515 accessions

Characterization

Adapted version for IPK



Taxonomische Bestimmung

Der Züchter 24, 1954

Das morphologische System der Saaterbsen
(*Pisum sativum* L. sens. lat. GOV. ssp. *sativum*).

Von CHR. O. LEHMANN.

DER ZÜCHTER

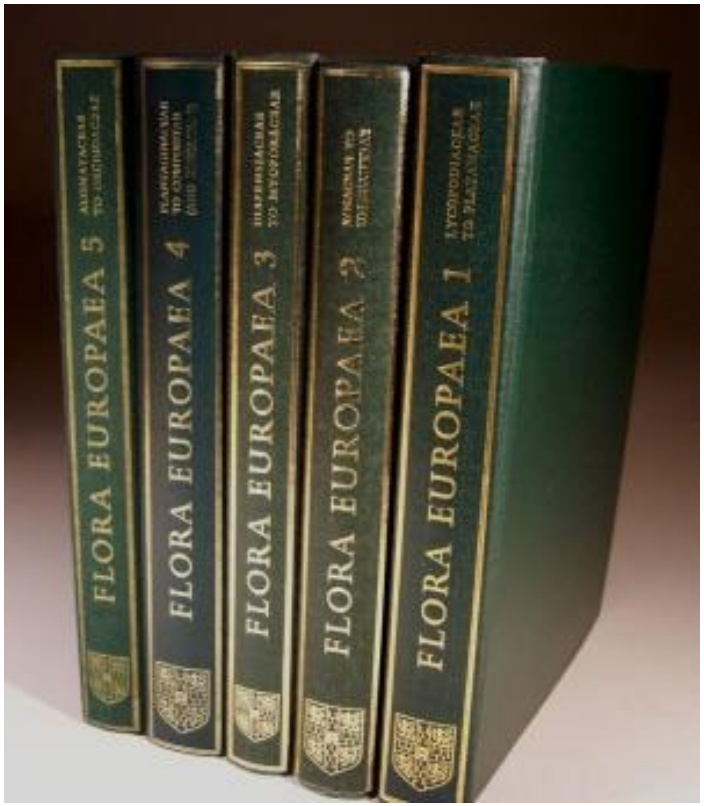
32. BAND 1962 HEFT 5

Aus dem Institut für Kulturpflanzenforschung Gatersleben der Deutschen Akademie der Wissenschaften zu Berlin

Ein Beitrag zur Systematik der Sojabohnen (*Glycine max* (L.) Merr.)*

Von CHR. O. LEHMANN

Taxonomic Determination



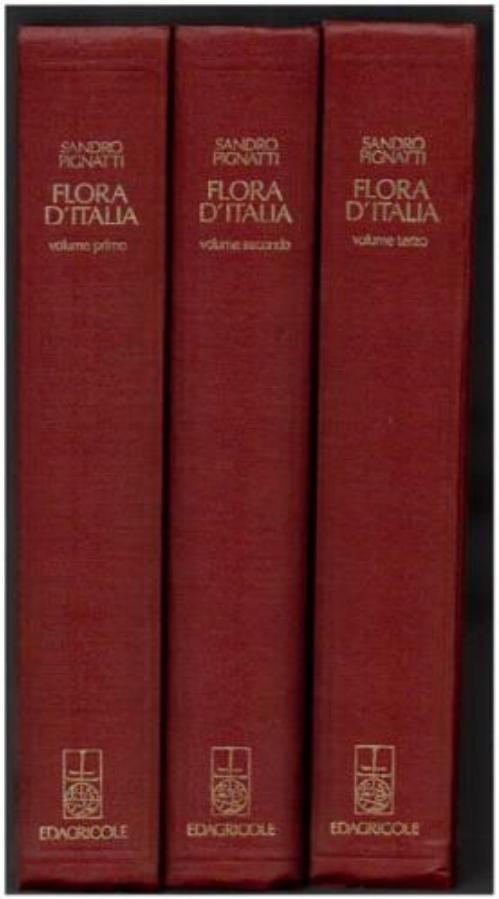


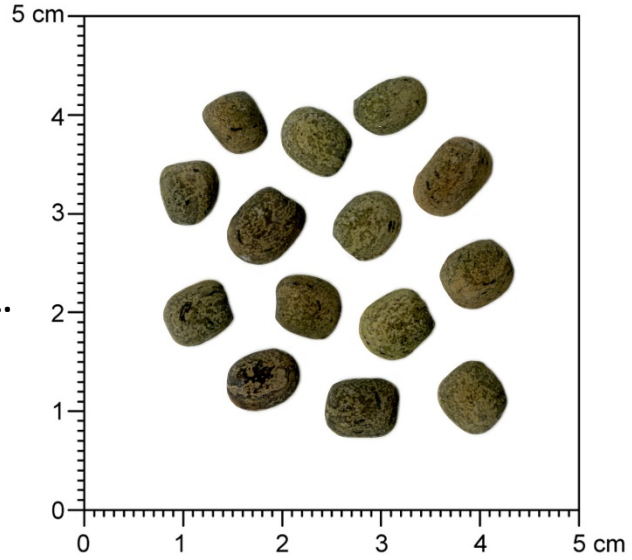
Photo Documentation

Lathyrus japonicus Willd. subsp. *maritimus* (L.) P. W. Ball

Lathyrus sativus L. – grass pea

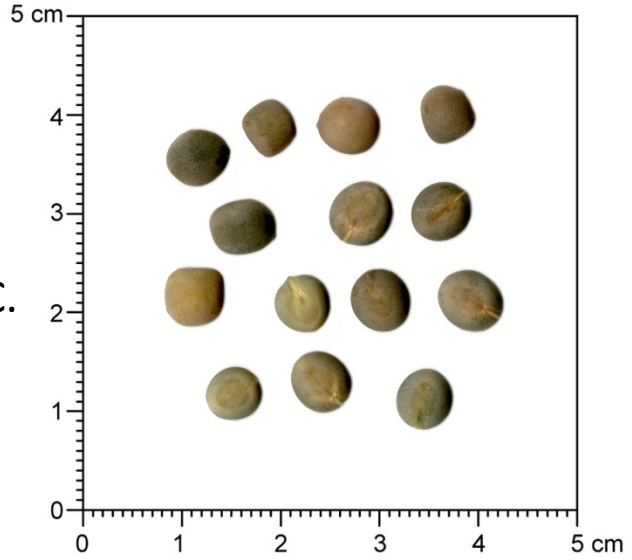
Lathyrus clymenum L.

LAT 157/15



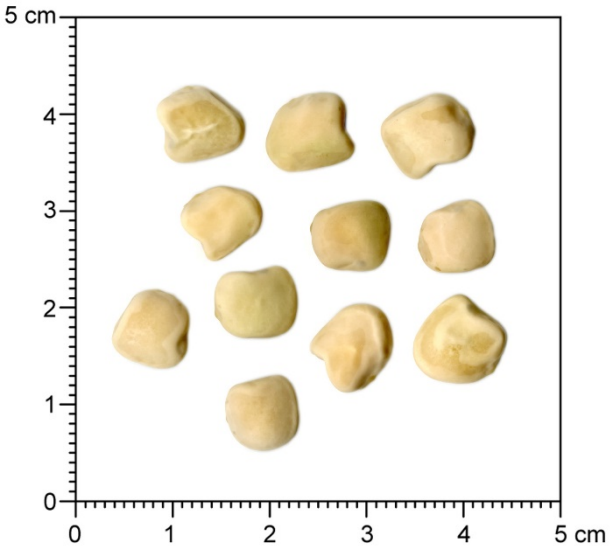
*Lathyrus ochrus (*L.) DC.

LAT 343/15



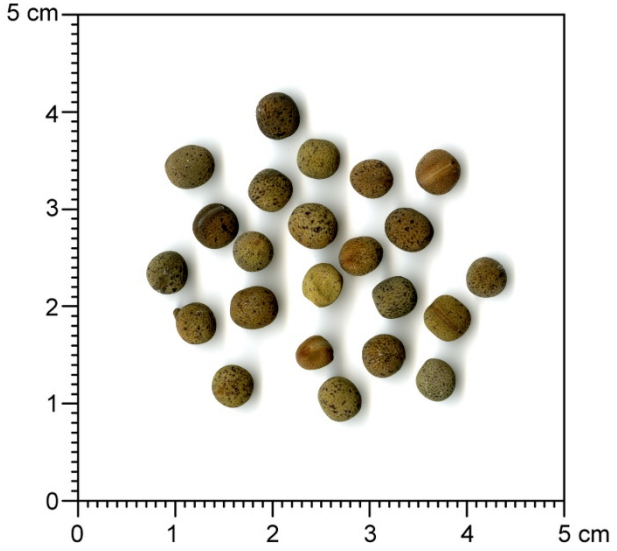
Lathyrus sativus L.

LAT 427/15



Lathyrus latifolius L.

LAT 4173/15



Sample Availability

- Convention of Biological Diversity
- International Treaty for Plant Genetic Resources of

  Food and Agriculture (Annex1 species)

  Some *Lathyrus* species are part of the

  Multilateral System
- Standard Material Transfer Agreement
- Nagoya Protocol
- Breeders rights
- Special agreements

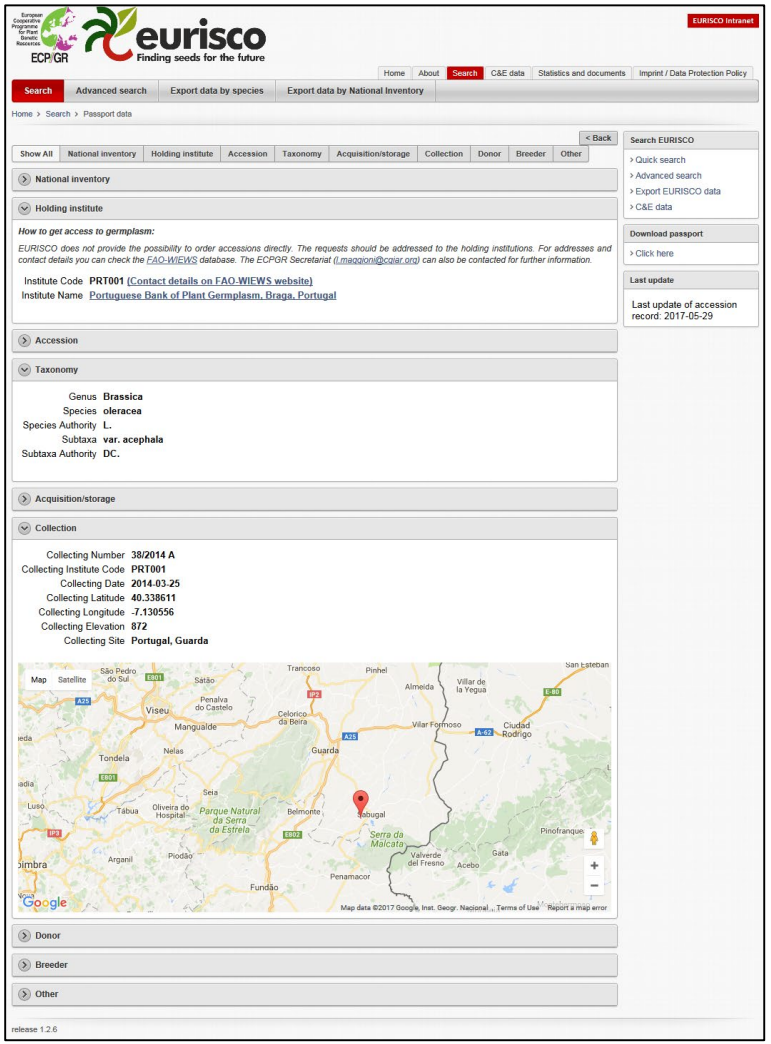
Annex I
List of crops covered under the Multilateral System

Forages

Genera	Species
LEGUME FORAGES	
Astragalus	chinensis, cicer, arenarius
Canavalia	ensiformis
Coronilla	varia
Hedysarum	coronarium
Lathyrus	cicera, ciliolatus, hirsutus, ochrus, odoratus, sativus
Lespedeza	cuneata, striata, stipulacea
Lotus	corniculatus, subbiflorus, uliginosus
Lupinus	albus, angustifolius, luteus
Medicago	arborea, falcata, sativa, scutellata, rigidula, truncatula
Melilotus	albus, officinalis
Onobrychis	viciifolia
Ornithopus	sativus
Prosopis	affinis, alba, chilensis, nigra, pallida
Pueraria	phaseoloides
Trifolium	alexandrinum, alpestre, ambiguum, angustifolium, arvense, agrocicerum, hybridum, incarnatum, pratense, repens, resupinatum, rueppellianum, semipilosum, subterraneum, vesiculosum

Passport data in EURISCO

- Four standard searches:
  - Taxonomy
  - Accession
  - Biological status
  - Collecting site
- Advanced search
- Different user-specific export features
- AEGIS Flagging



Weise et al. (2017) Nucleic Acids Research, 45(D1):D1003-D1008.

Criteria for AEGIS accessions at IPK

- Accessions with origin Germany, Germany cultivars;
- Accessions collected by German or Austrian collectors before 1945;
- Accessions collected by IPK staff; in the case of collecting missions after 1993 – when CBD entered into force – only those accessions that have been collected under a material transfer agreement;
- Material collected by ‘foreign missions’ and donated to IPK.
- Wild material, landraces, mutants
- Material must be freely available, legal status.

Ongoing projects on legumes in the genebank

InnoLuteus – Improving cultivation of yellow lupin (*Lupinus luteus*) in Germany (2019-2022)

LinSel – Selection of lentil (*Lens culinaris* L.) genotypes suited for sustainable cropping systems (2019-2022)

Esparsette – Evaluation and crop production optimization of different sources of sainfoin (*Onobrychis viciifolia*) for biomass production and investigation of the influence of tannins on the foam formation in the digester (2017-2019)

Garden Bean – Development of garden bean cultivars with resistance against different bacteriosis via marker-assisted selection (2019-2022)

BeanAdapt

LupiBreed - Improving yield potential, yield stability and seed quality of lupins (*Lupinus angustifolius* L.) as protein plants (2015-2018)

Thank you very much for your attention!