C&E data in the European Barley Database

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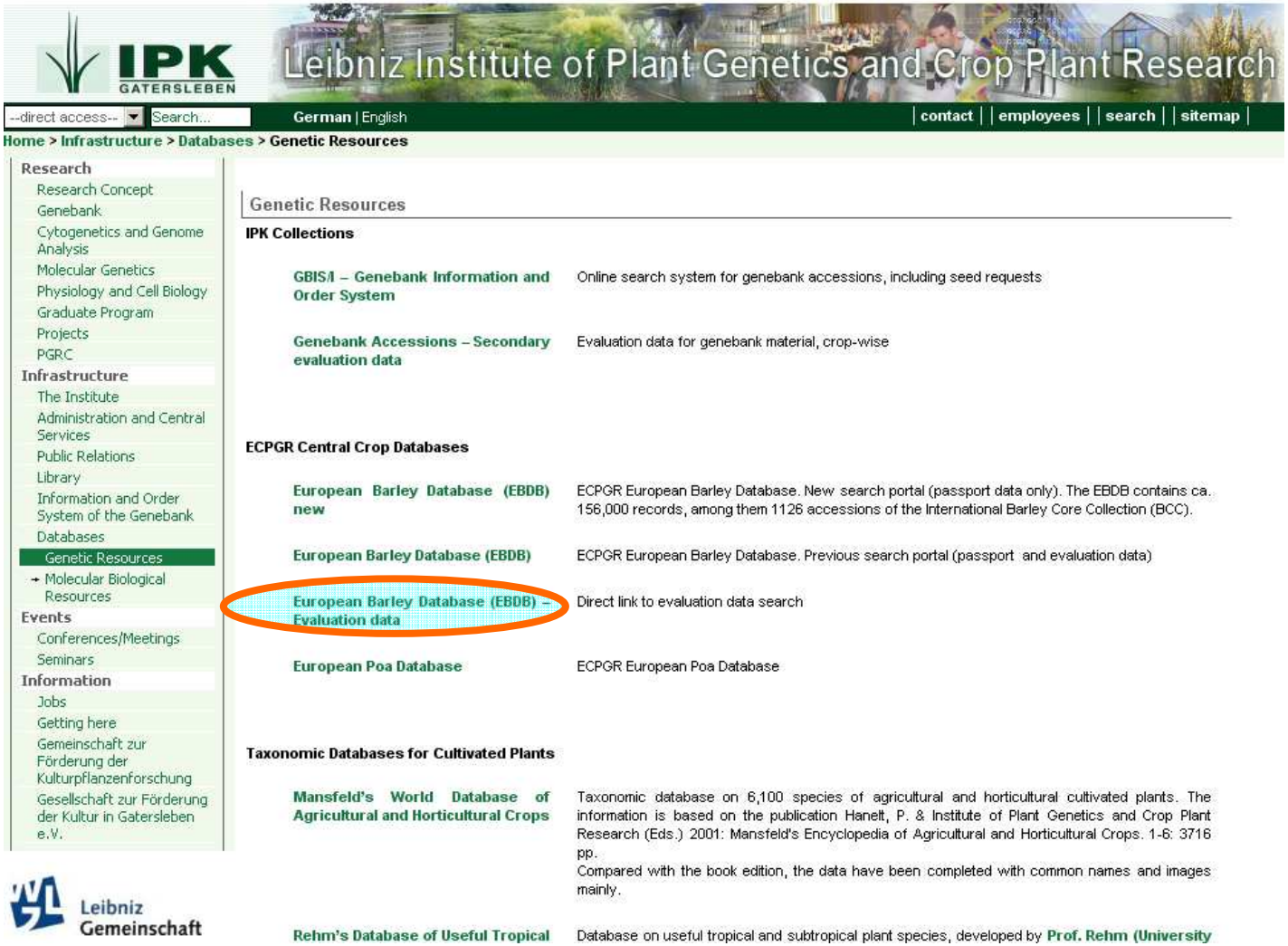
IPK GATERSLEBEN

Present State EBDB

- previous version developed in 1999-2002
  - Postgres, PHP, web interface
  - project GENRES Barley, Dirk Enneking
  - included C&E data from project
  - C&E data handling based on NGB‘s “Dynamic Data Analyser”
- after 2002: PDW project (Bioinformatics)
  - transfer to Oracle, re-engineering
  - new web interface – only for Passport data

  → “old” and “new” portal still active

www.ipk-gatersleben.de English



Explanation to the Dynamic Evaluation Data Analyser

- Some examples
- prorecnum=1 (Spring barley)
- prorecnum=2 (Winter barley)

This explanation page is reached either because you loaded the evaluation data analyser page without specifying a project number, or you intentionally followed a link to this page. If you wanted to view some evaluation data, please specify a project number on the URL line, like this.

The graphs and statistical analyses presented on the result pages are always extracted and calculated at run-time from data in the NGB database. In other words, the information is always up-to-date and synchronised with the latest observations entered into the information system.

Grouping of descriptors

For projects or queries that involve a large number of descriptors, the main page can show the descriptors in arbitrary groups like 'botanic', 'agricultural', 'resistance', or 'chemical' properties. This will make the page easier to read, but needs a data dictionary table to work consistently.

Grouping of observations

For each project, the main (first) result page will show one line for each descriptor evaluated in the project. If only one descriptor was evaluated, you will get only one line on the first page. By following the link in the first column of the table (the descriptor name) you will get more detailed statistics for the descriptor in question, with lines showing how the variation in the observed material is spread over subgroups. Currently the variation in the following subgroups is calculated:

- variation by observation site
- variation by observation year
- variation in observed taxa
- variation in observed culta ('type of germplasm')
- variation by country of origin
- variation in observed accessions

If any of these groupings, except for the accession group, has only one instance, e.g. all observations were made in the same year, then the corresponding statistics line will not be shown. In such cases the variation is the same as total variation for the observed descriptor, which is shown as the top line on all pages anyway. One of the difficulties with providing automated analyses on the observed values in a characterisation or evaluation trials come from unclear definitions, and mixed scales of

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Introduction page EBDB evaluation data

Evaluation data spring barley

Genres Spring Barley Evaluation

Total variation	x	SD	CV	n	Min	Max	Distribution
leafspots	3.84	2.08	0.54	116	1	9	
R. maidis	1.03	0.18	0.17	2225	1	4.20621	
R. padi	1.80	1.33	0.74	2225	1	8.45043	
Ramularia cygni-galli	3.99	1.70	0.43	135	1	8	
S. avenae	1.12	0.45	0.40	2225	1	5.47913	
M. dirrhodium	1.69	1.38	0.82	2225	1	7.85323	
Lodging	3.07	2.48	0.81	272	1	10	
Puccinia striiformis f. sp. Hordei (Yellow rust)	1.35	1.05	0.78	1114	1	8	
Puccinia hordei (Brown rust, Dwarf leaf rust)	4.53	2.29	0.51	11564	1	9	
Blumeria graminis f. sp. Hordei (Powdery mildew)	4.43	2.12	0.48	13856	1	9	
Rhynchosporium secalis (Scald)	3.91	2.10	0.54	11087	1	9	
Pyrenophora graminea (Barley stripe)	1.31	0.97	0.74	1310	1	7.68197	
Pyrenophora teres (Net blotch)	3.14	1.54	0.49	8716	1	12.85646	

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Spring barley - detail

Descriptor data

obsdscnum	3
descode	9-12
descriptor	leafspots
code_strin	% infection logarithmic scale: 1=0 - 0,75 %, 2=0.75 -2 % 7=21-36 %, 8=36-60 %, 9=60-100 %
decodeby	CODDISLOG
remarks	Physiological stress symptom, not in IPGRI desc. List

Total variation	x	SD	CV	n	Min	Max	Distribution
leafspots	3.84	2.08	0.54	116	1	9	

Variation by sit	x	SD	CV	n	Min	Max	Distribution
Landskrona 2002 Spring	5.15	1.49	0.29	52	3	9	
Reichersberg 2001 Spring	2.77	1.88	0.68	64	1	8	

Variation by yea	x	SD	CV	n	Min	Max	Distribution
2001	2.77	1.88	0.68	64	1	8	
2002	5.15	1.49	0.29	52	3	9	

Variation by tax	x	SD	CV	n	Min	Max	Distribution
Hordeum agriocrithon Åberg var. agriocrithon	7.00	0.00	0.00	1	7	7	
Hordeum spontaneum Koch	1.00	0.00	0.00	4	1	1	
Hordeum vulgare L.	3.00	1.83	0.61	4	1	5	
Hordeum vulgare L. convar. deficiens (Steud.) Mansf. var. abyssinicum (Sér.) Körn.	3.00	0.00	0.00	1	3	3	
Hordeum vulgare L. convar. deficiens (Steud.) Mansf. var. deficiens (Steud.) Körn.	4.50	2.12	0.47	2	3	6	
Hordeum vulgare L.							

convar. vulgare var. subviolaceum Körn.	3.00	0.00	0.00	1	3	3	
Hordeum vulgare L. convar. vulgare var. trifurcatum (Schlecht.) Wender.	2.00	0.00	0.00	1	2	2	
Hordeum vulgare L. convar. vulgare var. violaceum Körn.	1.00	0.00	0.00	1	1	1	
Hordeum vulgare L. var. gallaesidamicum Giess. et al.	6.00	0.00	0.00	1	6	6	
Not classified	3.33	2.08	0.62	3	1	5	

Variation by cul	x	SD	CV	n	Min	Max	Distribution
Wild	1.00	0.00	0.00	4	1	1	
Landrace	5.19	1.47	0.28	21	3	8	
Breeders line	4.00	0.00	0.00	1	4	4	
Advanced cultivar	2.83	2.23	0.79	18	1	8	
Not classified	3.85	1.99	0.52	72	1	9	

Variation by ori	x	SD	CV	n	Min	Max	Distribution
Afghanistan	4.33	1.53	0.35	3	3	6	
Albania	3.00	0.00	0.00	1	3	3	
Argentina	4.00	0.00	0.00	1	4	4	
Australia	5.00	1.76	0.35	10	2	8	
Azerbaijan	1.00	0.00	0.00	1	1	1	
Bulgaria	4.00	0.00	0.00	2	4	4	
Belarus	4.00	0.00	0.00	1	4	4	
Bolivia	6.00	0.00	0.00	1	6	6	
Canada	1.00	0.00	0.00	1	1	1	
China	1.50	0.71	0.47	2	1	2	
Colombia	5.00	0.00	0.00	1	5	5	
Czech Republic	2.00	0.00	0.00	1	2	2	
Germany	2.14	1.68	0.79	7	1	5	
Denmark	1.00	0.00	0.00	1	1	1	
Algeria	4.80	0.84	0.18	5	4	6	
Ecuador	2.00	0.00	0.00	1	2	2	
Spain	3.50	0.71	0.20	2	3	4	
Ethiopia	5.45	1.47	0.27	20	3	8	
Finland	4.00	0.00	0.00	1	4	4	
United Kingdom	1.00	0.00	0.00	1	1	1	

Spring barley – more detail

Evaluation data winter barley

Genres Winter Barley Evaluation

Total variation	x	SD	CV	n	Min	Max	Distribution
Barley mild mosaic virus + Barley yellow mosaic virus (BaYMV-1)	5.64	3.77	0.67	3634	1	9	
Barley mild mosaic virus + Barley yellow mosaic virus (BaYMV-1 + 2)	6.14	3.83	0.62	2304	1	9	
R. maidis	1.03	0.18	0.17	2225	1	4.20621	
R. padi	1.80	1.33	0.74	2225	1	8.45043	
Ramularia cygni-galli	3.99	1.70	0.43	135	1	8	
S. avenae	1.12	0.45	0.40	2225	1	5.47913	
M. dirrhodium	1.69	1.38	0.82	2225	1	7.85323	
Lodging	3.07	2.48	0.81	272	1	10	
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Pyrenophora graminea (Barley stripe)	1.31	0.97	0.74	1310	1	7.68197	
Pyrenophora teres (Net blotch)	3.14	1.54	0.49	8716	1	12.85646	
Barley yellow dwarf virus (BYDV)	5.68	1.52	0.27	1714	1	9	
Barley mild mosaic virus (BaMMV)	3.35	3.65	1.09	184	1	9	
Beginning of heading (spike emergence)	1.00	0.00	0.00	127	1	1	
Cold tolerance	2.26	1.89	0.84	107	1	9	

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EBDB characterisation data

Growth habit	
spring	58385
winter	15289
intermediate	2195
Kernel cover	
C=covered	3521
N=Naked	2829
Spike kernel row number	
2-row	8483
6-row	11469

Total EBDB:
>155,000 accessions

Present situation

- no personnel capacity for EBDB development (eg C&E data inclusion in new portal)
- update of passport planned 2009-2010
  - request passport from each holder in EURISCO format & replace previous set from that holder
  - maintain cross-refs between accessions (eg designation of duplicates)
  - add passport from EURISCO alternatively
- C&E data? → provide to EURISCO?

thx for attn