Data Import for Breeding Values Estimation

BeeBreed.eu
Bee institute Hohen Neuendorf

December 11, 2018

General

Template/Example

See attached template `Datenimport.csv` to be filled in with a spreadsheet application.

In `DatenimportBeispiel.xls` this template was filled with example data and saved in Excel, which can be a starting point. Be aware, data import does not support Excel files directly.

Preparation of the import file

In a spreadsheed or database application, please save as filetype CSV with the following options:

- Separator `;` (semicolon)
- Text separator: `"`
- Character set Unicode (UTF-8)

Export from Pexa

In the export function, a `.ldi` file is written which can be imported.

Pexa before version 5 was based on the previous data model. With some restrictions (country code must be guessed), files can also be read. However, queens and its parents, mating stations, inseminators must be from D.I.B.-Carnica-, ACA, Switzerland, Netherlands, Sweden, South Tyrol, French Carnica.

Rules of the import file

Fields are identified by the header line. Spelling must be accurate! Order is not important, columns can be removed if not needed.

Obligatory are the fields which identify the queen, `L1A, LV1A, Z1A, NR1A, J1A`, the type of mating `PAARTYP` and apiary number `NST`. For an administrator, the breeder number `ZST` is also essential.

A breeder can only enter data for queens tested by himself, thus, field `ZST` are not needed. If filled, they must coincide with the own account.

Any other field can be left blank but not in any combination, e.g. the fields of the 2A code must be filled jointly.

If the header does not comply, the file will not be read and an error is issued. The file will be read line-by-line. Lines with not the same number of columns will be refused. For each line there will either be a success message and/or warnings and error messages. As usual, errors prompt refusal of the dataset while warnings do not.

Field contents will be tested on type and value range, detailed error message will be directly displayed.

Still, wrong field contents may be accepted and lead to negative consequences, finally for the breeding values. Especially in bulk upload of data, extreme care is necessary!

Imported data can later be displayed in data overview and can be modified later. However, wrong information in queen identification will make this difficult.

If no queen with a certain identification is registered yet it is inserted. Otherwise, the existing dataset is modified but not if it was registered by a different breeder. As a general rule: only fields contained in the header line are overwritten. If the field entry is blank, the respective entry in BeeBreed is deleted. In principle, you can edit breeding data in spreadsheet and import over and over again.

The numbered BIMI- and BOMI-fields limited access to the hive records. Note that the data is indexed with the date! Contents will be overwritten only if the date matches exactly. Changing the date will lead to duplicate entries.

Details to the data model

Please note, that in the new data model introduced in May 2018, the nomenclature of queens, breeders, associations, mating stations and inseminators now includes a country code which is represented in fields L1A, L2A, L4A, LBST and so on. There is a separate registry for mating stations (LBST, LVBST, NBST) and inseminators (LBES, LVBES, NBES).

Several fields describe details of artifical insemination: number of drones (DROHNEN), number of drone colonies (DVOELKER), sub-type of mating (PAARSUBTYP) which is "b" if the drones are taken directly from the registered colony (identified in the fields L4A,LV4A,Z4A,NR4A,J4A which in this case is 1b), and "a" if the drones are from drone colonies stem from this registered colony - the default.

In addition the the clearence rate we would like to know the waiting time: AUSRAUMH.

VITTEST is 1 if the rules of the vitality test of the AGT are followed, e.g. Varroa treatment is forgone.

Multiple readouts of Varroa infestation and mit fall can be entered. Giving the date is essential here, which can be the full date (DD.MM.YYYY), date without a year (DD.MM. which refers to the test year), or calender week in fields BOMID1 ... BOMID7 resp. BIMID1 ... BIMID7.

Mite fall refers to a number of days (BOMITG1 ... BOMITG7), mite infestation to grams of the bee sample (BIMIGR1 ... BIMIGR7).

There is a special meaning of the first mite fall measurement of the year, typically at flowering of sallow (*Salix caprea*) entered columns (BOMI,BOMITG,BOMID). This identifies the initial Varroa burden a a starting point for the Varroa development.

Multiple mite fall data BOMI1 ... BOMI7 are for those testers not able/willing to perform infestation measurements. The preferred procedure (by AGT, D.I.B., ACA etc.) is the initial mite fall and mulitple infestation measurements (until the Varroa treatment in autumn).

The test year JST is by default the year after the year of birth of the queen. For exceptions from this rule, this can be marked here.

In field LP it can be marked if the performance test was complete (1) or was aborted (2), or if no performance test was made (3). If the dataset is imcompletely filled, enter 0. By default, it is 1.

Field FG marks that the administrator released the dataset. In data import, it can only be set to 1 by the administrator which is also the default.

Data fields

Name	Meaning	Format	Values	Obligatory
L1A	Country of 1a-queen	2 uppercase letters[1]		yes
LV1A	Association of 1a-queen	1-99		yes
Z1A	Breeder code of 1a-queen	1-999		yes
NR1A	Studbook number of 1a-queen	1-99999		yes
J1A	Birth year of 1a-queen	1900-2100		yes
NST	Apiary number	1..99		yes
JST	Performance test year (optional, default J1A plus 1)	integer	1900..2050	
LINIE	Breeding line	Text		
GF	Generation	integer		
L2A	Country of 2a-queen	2 uppercase letters[1]		
LV2A	Association of 2a-queen	1-99		
Z2A	Breeder code of 2a-queen	1-999		
NR2A	Studbook number of 2a-queen	1-99999		
J2A	Birth year of 2a-queen	1900-2100		
PAARTYP	Type of mating 1 artificial insemination, 2 island mating station, 3 line mating station, 4 race mating station, 5 apiary mating, 6 AGT-mating station with more than one 4a	1-6		yes
PAARSUBTYP	a for 4a mating, b for 1b-mating			
LBST	Country of mating station	2 uppercase letters[1]		
LVBST	Association of mating station	integer	1..99	
NBST	Number of mating station	integer	1..99	
DBST	Pass of mating station	integer		
LBES	Country of inseminator	2 uppercase letters[1]		
LVBES	Verband inseminator	integer	1..99	
NBES	Nummer inseminator	integer	1..99	
L4A	Country of 4a-queen resp. 1b-queen (depending on SUBPAARTYP)	2 uppercase letters[1]		
LV4A	Association of 4a-queen	1-99		
Z4A	Breeder code of 4a-queen	1-999		
NR4A	Studbook number of 4a-queen	1-99999		
J4A	Birth year of 4a-queen	1900-2100		
PAARTYP	Type of mating 1 artificial insemination, 2 island mating station, 3 line mating station, 4 race mating station, 5 apiary mating, 6 AGT-mating station with more than one 4a	1-6		yes
DROHNEN	Number of drones (optional, only for artificial insemination)	integer	1..100	
DVOELKER	Number of drone colonies (optional, only for artificial insemination and PAARSUBTYP a)	integer	1..100	
SCHLUPF	Date of hatch	dd.mm.		
ZEICHEN	Mark of queen	text		
BESAMT	Date of mating	dd.mm.		
EIABLAGE	Start of laying eggs	dd.mm.		
VERBL	Colony number	Text		
BEMERK	Remark	Text		

[1] ISO 3166-2 Code

Name	Meaning	Format
GESAMT	Total yield honey incl. stockpile	decimal
TEIL1	Yield until 15.6.	decimal
TEIL2	Yield from 16.6 to 15.8.	decimal
TEIL3	Yield from 16.8.	decimal
VORRAT	Stockpile	decimal
SANFT	Aggressiveness	decimal
WABEN	Calmness	decimal
SCHWARM	Swarming tendency	decimal
ENTWICK	Spring development	decimal
VOLKSS	Colony strength	decimal
WINTER	Overwintering strength	decimal
VITTEST	Vitality test	j
AUSRAUM	Pintest clearance rate in percent	decimal
AUSRAUMH	Pintest waiting hours	decimal
BOMI	Mite fall at sallow bloom	decimal
BOMITG	Days of this measurement	decimal
BOMID	Date of this measurement	dd.mm.yyyy or dd.mm. or ww
KALKBRUT	Chalkbrood	0 or 1
NOSEMA	Nosema	0 or 1
SACKBRUT	Sacbrood	0 or 1
EFAULBRUT	european foulbrood	0 or 1
AFAULBRUT	american foulbrood	0 or 1
DWV	deformed wing-virus pathology	0 or 1
CPV	chronic bee paralysis pathology	0 or 1
RASSEA	Workers race typical	j or n
UNRA	Investigation number for race analysis workers	Text
RASSED	Drones race typical	j or n
UNRD	Investigation number for race analysis / drones	Text
LP	Dataset status	0 - in process, 1 - performance test complete, 2 - performance test al
FG	Release by administrator	0 or 1
KOER	License class	A, B, P or J
KOERBEST	License confirmation by administrator: 0 - undecided, 1 - confirmed, 2 - rejected	0, 1
KSDATUM	License date	
AGRUND	Passing/loss	
ADATUM	Passing/loss, date, 1 - sold/passed, 2 - swarmed, 3 - dead/requeened, 4 - handling error/damage, 5 - colony dissolved, 6 - colony loss, 7- unknown	dd.mm.yy

Name	Meaning	Format	Values	Obligatory
BOMI1	1. measurement mite fall	decimal	0..100	
BOMITG1	Days of this measurement	decimal		
BOMID1	Date of this measurement	dd.mm. or ww		
BOMI2	2. measurement mite fall	decimal	0..100	
BOMITG2	Days of this measurement	decimal	7..28	
BOMID2	Date of this measurement	dd.mm. or ww		
BOMI3	3. measurement mite fall	decimal	0..100	
BOMITG3	Days of this measurement	decimal	7..28	
BOMID3	Date of this measurement	dd.mm. or ww		
BOMI4	4. measurement mite fall	decimal	0..100	
BOMITG4	Days of this measurement	decimal	7..28	
BOMID4	Date of this measurement	dd.mm. or ww		
BOMI5	5. measurement mite fall	decimal	0..100	
BOMITG5	Days of this measurement	decimal	7..28	
BOMID5	Date of this measurement	dd.mm. or ww		
BOMI6	6. measurement mite fall	decimal	0..100	
BOMITG6	Days of this measurement	decimal	7..28	
BOMID6	Date of this measurement	dd.mm. or ww		
BOMI7	7. measurement mite fall	decimal	0..100	
BOMITG7	Days of this measurement	decimal	7..28	
BOMID7	Date of this measurement	dd.mm. or ww		
BIMI1	1. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR1	Weight (g) of this bee sample	decimal	0..150	
BIMID1	Date of this measurement	dd.mm. or ww		
BIMI2	2. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR2	Weight (g) of this bee sample	decimal	0..150	
BIMID2	Date of this measurement	dd.mm. or ww		
BIMI3	3. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR3	Weight (g) of this bee sample	decimal	0..150	
BIMID3	Date of this measurement	dd.mm. or ww		
BIMI4	4. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR4	Weight (g) of this bee sample	decimal	0..150	
BIMID4	Date of this measurement	dd.mm. or ww		
BIMI5	5. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR5	Weight (g) of this bee sample	decimal	0..150	
BIMID5	Date of this measurement	dd.mm. or ww		
BIMI6	6. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR6	Weight (g) of this bee sample	decimal	0..150	
BIMID6	Date of this measurement	dd.mm. or ww		
BIMI7	7. measurement mite infestation on bee sample	decimal	0..200	
BIMIGR7	Weight (g) of this bee sample	decimal	0..150	
BIMID7	Date of this measurement	dd.mm. or ww		