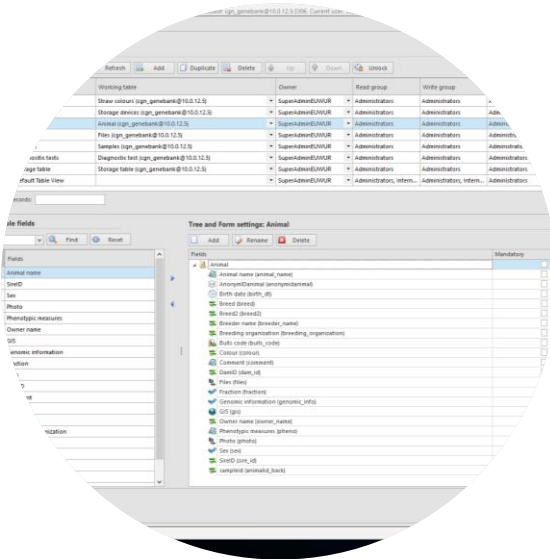


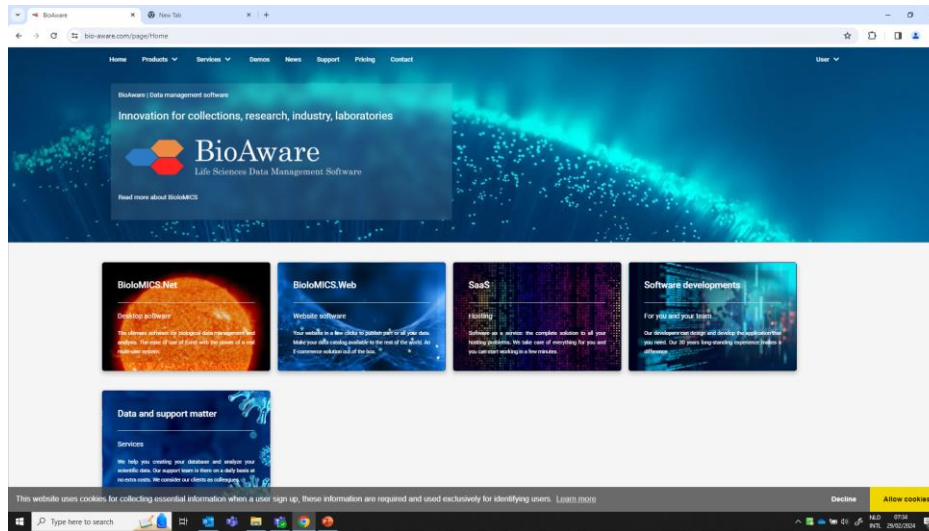
BioloMICS Gene Bank

TF database software

4-3-2024, Ina Hulsegge and Annemieke Rattink

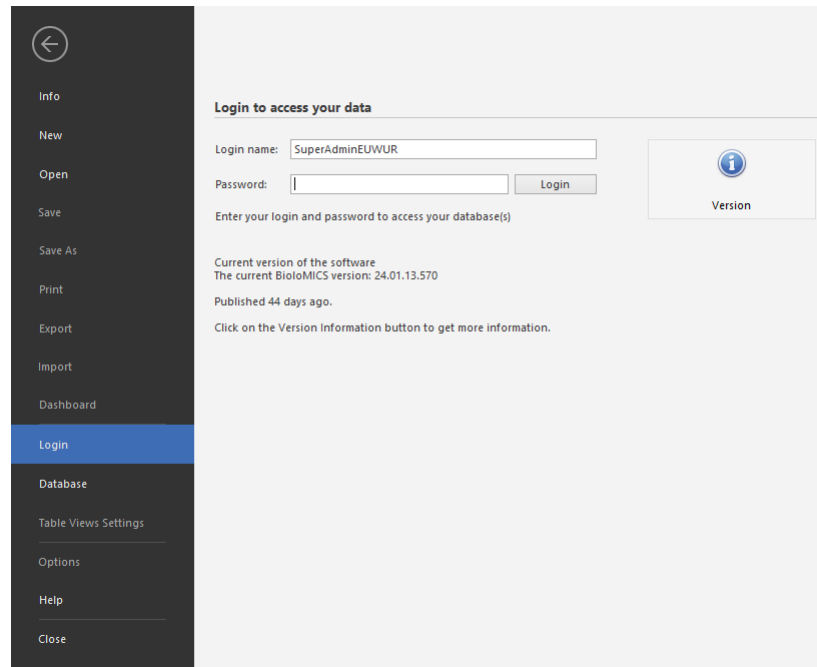


BioAware / BioloMICS

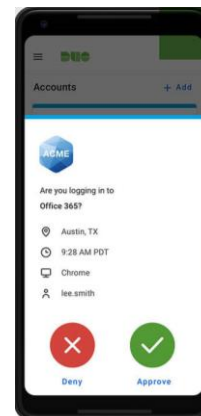


- BioloMICS is a software application that has been designed to allow to:
 - Store
 - Manage
 - Analysis
 - Publish (to the web)
 - ... biological data

BioloMICS Login Dialogue Box



■ Two-factor authentication: DUO



Database

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

Database related actions

Management

- Open database**
Open one of the previously opened databases
- Create a new database**
Create a new database with a specific format
- Delete selected database**
Use this button to physically remove the selected database from the server. Reserved to administrators only

Database Properties

- Edit users of the current database**
Add, modify or delete users profiles
- Edit groups of current database**
Add, modify or delete groups of the current database
- Edit tables of current database**
Change tables settings of current databases. Add, modify and remove tables and their properties
- Edit fields**
Add, modify, remove or change the properties of fields of the current database
- Display database schema**
Show a graphic representation of the current database structure: tables, fields and their relations

Maintenance & Tools

- Check database structure**
Check tables, fields and internal consistency of the current database
- Convert to MongoDB**
Convert a MySQL database into a MongoDB Database
- Convert to Sql Server**
Convert a MySQL database into an MS Sql Server Database
- Export tables structure**
Export BioloMICS tables and associated fields to XML to import them in another BioloMICS database
- Import tables structure from another database**
Import BioloMICS tables and associated fields from another BioloMICS database

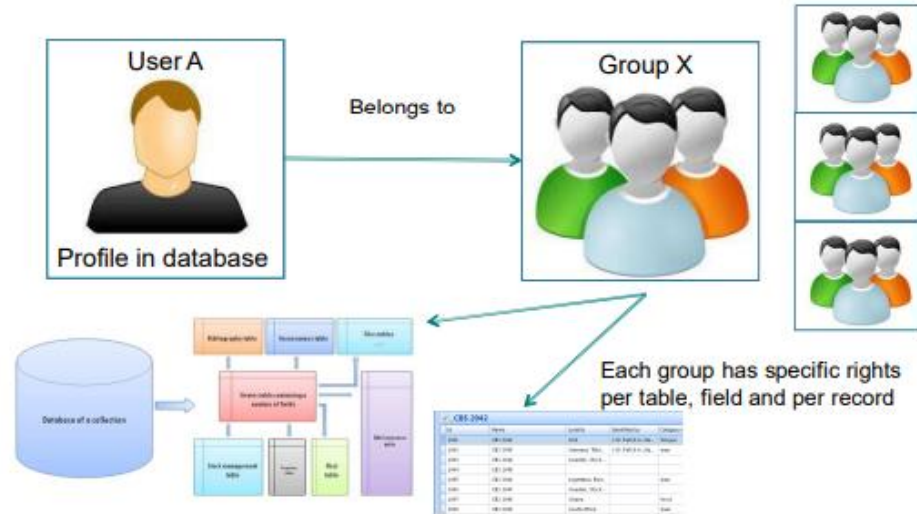
Open databases

- EU WUR**
Location: euwur@10.0.12.5:3306
User: SuperAdminEUWUR
Status: Reachable as administrator
Type: MySQL
- CGN Gene bank**
Location: cgn_genebank@10.0.12.5:3306
User: SuperAdminEUWUR
Status: Reachable as administrator
Type: MySQL

Log off connection
New connection
Edit connection
Remove connection

8:19 AM
2/26/2024

User Access



- Rights are given to a group and not a single user.
- Rights can be applied at three different levels:
 - Table
 - Field
 - Record

Add table/fields

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

Database related actions

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- Open database**
Open one of the previously opened databases
- Create a new database**
Create a new database with a specific name
- Delete selected database**
Use this button to physically remove a database from the server. Reserved for administrators

Database Properties

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Add, modify or delete users profiles
- Edit groups of current database**
Add, modify or delete groups of the current database
- Edit tables of current database**
Change tables' settings of current database. Add, modify and remove tables and their fields
- Edit fields**
Add, modify, remove or change the properties of fields of the current database
- Display database schema**
Show a graphic representation of the database structure: tables, fields and their relationships

Maintenance & Tools

- Check database structure**
Check tables, fields and internal consistency of the current database
- Convert to MongoDB**
Convert a MySQL database into a MongoDB database
- Convert to Sql Server**
Convert a MySQL database into an MS SQL Server Database
- Export tables structure**
Export BioIoMICs tables and associated fields to XML to import them in another BioIoMICs database
- Import tables structure from another database**
Import BioIoMICs tables and associated fields from another BioIoMICs database

Open databases

EU WUR
Location: euwur@10.0.12.5:3306
User: SuperAdminEUWUR
Status: Reachable as administrator
Type: MySQL

Field settings

Select table: Animal (cgn_genebank@10.0.12.5)

Search:

Buttons: Add, Delete, Filter, Reload, More

Id	Name	Sql column	Field type	Target database	Target table
262	Animal name	animal_name	E: Text, admin...		
263	Anonymous animal	anonymousanimal	I: 64 bit integ...		
264	Birth date	birth_dt	H: DateTime		
265	Breed	breed	RLink: Link to...	cgn_genebank	Breed species
266	Breed2	breed2	RLink: Link to...	cgn_genebank	Breed species
267	Breeder name	breeder_name	RLink: Link to...	cgn_genebank	Contacts
268	Breeding organization	breeding_organ...	RLink: Link to...	cgn_genebank	Contacts
269	Bulls code	bulls_code	D: Continuou...		
270	Colour	colour	RLink: Link to...	cgn_genebank	Coat colour
271	Comment	comment	E: Text, admin...		
272	DamID	dam_id	RLink: Link to...	cgn_genebank	Animal
273	Files	files	FLink: Link to...	cgn_genebank	Files
274	Fraction	fraction	V: Discrete da...		
275	Genomic information	genomic_info	V: Discrete da...		
276	GIS	gis	L: GIS Locatio...		
277	Owner name	owner_name	RLink: Link to...	cgn_genebank	Contacts
278	Phenotypic measures	pheno	E: Text, admin...		
279	Photo	photo	FLink: Link to...	cgn_genebank	Files
285	sampleid	animalid_back	RLink: Link to...	cgn_genebank	Samples

21 field(s) in list

Privileges

Group name	Read	Write
Administrators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Internet users	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Buttons: Save, Cancel

Fieldtypes

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

Database related actions

Management

- Open database**
Open one of the previously opened databases
- Create a new database**
Create a new database with a specific name
- Delete selected database**
Use this button to physically remove a database from the server. Reserved for administrators

Database Properties

- Edit users of the current database**
Add, modify or delete users profiles
- Edit groups of current database**
Add, modify or delete groups of the current database
- Edit tables of current database**
Change tables' settings of current database. Add, modify and remove tables and their fields
- Edit fields**
Add, modify, remove or change the privileges of fields of the current database
- Display database schema**
Show a graphic representation of the database structure: tables, fields and their relationships

Maintenance & Tools

- Check database structure**
Check tables, fields and internal consistency of the current database
- Convert to MongoDB**
Convert a MySQL database into a MongoDB database
- Convert to Sql Server**
Convert a MySQL database into an MS Sql Server Database
- Export tables structure**
Export Bioinformatics tables and associated fields to XML to import them in another Bioinformatics database
- Import tables structure from another database**
Import Bioinformatics tables and associated fields from another Bioinformatics database

Open databases

- EU WUR**
Location: euwur@10.0.12.5:3306
User: SuperAdminEUWUR
Status: Reachable as administrator
Type: MySQL

Field settings

Select table: Animal (cgn_genebank) | Search: | Add

Id	Name
262	Animal name
263	AnonymiDanim
264	Birth date
265	Breed
266	Breed2
267	Breeder name
268	Breeding organ
269	Bulls code
270	Colour
271	Comment
272	DamID
273	Files
274	Fraction
275	Genomic inform
276	GIS
277	Owner name
278	Phenotypic mes
279	Photo
285	sampleid

Privileges

New field wizard

Step 1: New field details
Please give the name and type of field you want to create. You can also add a comment related to this new field.

Field name: Field Name here

Field type: E: Text, administrative field

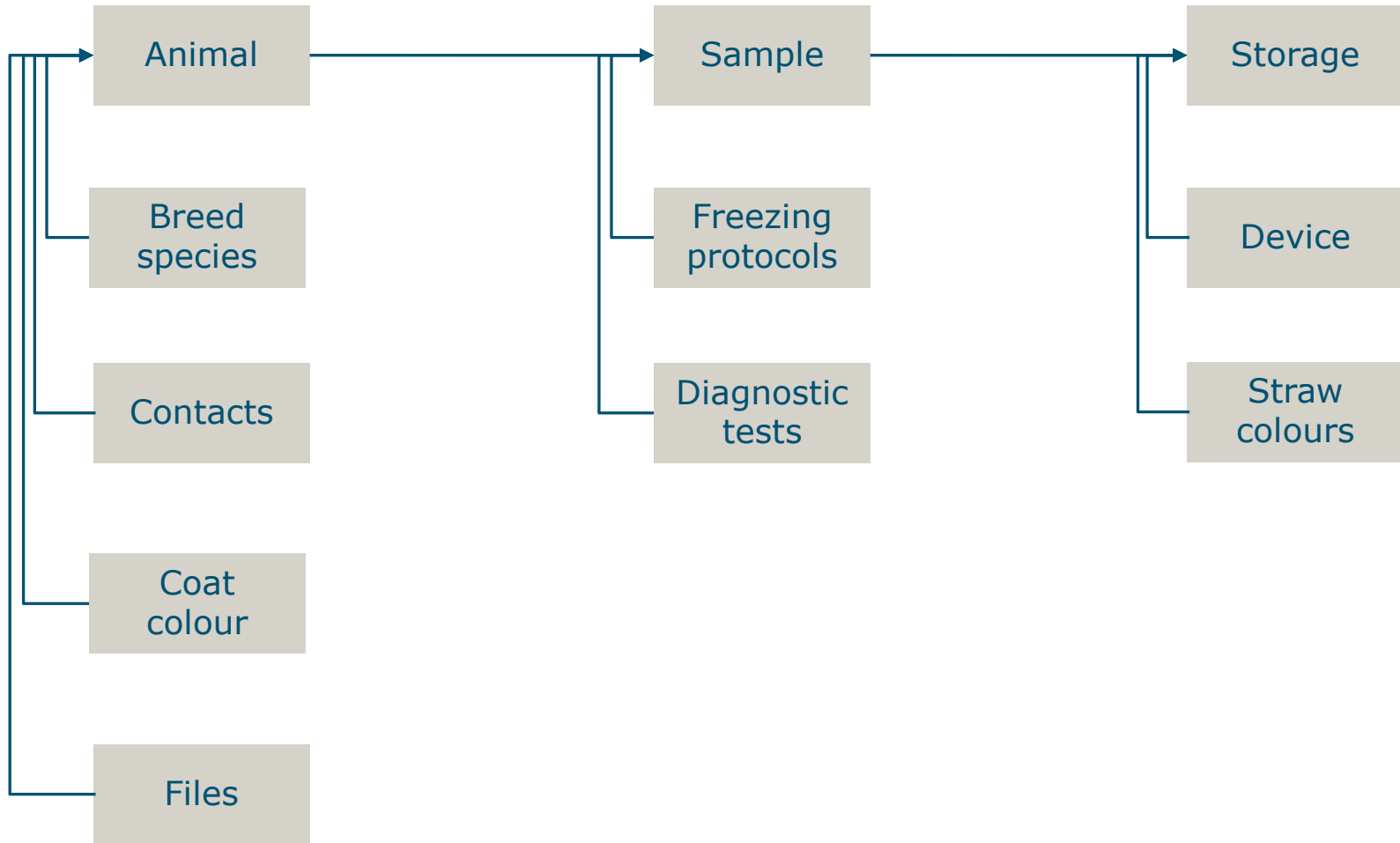
Comment:

- A: Vector of discrete data (results from microplates [-, +, weak], DNA chips etc.
- A-Link: Link to a vector of microplate data
- C: Vector of discrete data, 4 possible states each (unknown, variable, absent, present)
- C-Link: Link to a vector of 4 states discrete data
- D: Continuous data, single value
- D-Link: Link to continuous data
- E: Text, administrative field

< Back | Next > | Cancel

21 field(s) in list | Save | Cancel

Structure



Add a record



CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

File Home Insert Page Layout Formulas Data View Analytics Molecular Tools Other Tools

Table View Spreadsheet History Word Document Cloud Folders Shortcuts Paste Copy Paste Special Clipboard

Calibri 11 Font Wrap Text Merge cells Auto Height of Tree cells Alignment Number Conditional Formatting Normal Bad Good Neutral Calculation Check Cell Explanatory ... Followed Hy... Styles Cells Editing

Storage table #2 Samples #3 Animal #4 x

Animal NL 452430781

Animal	A	B	C	D	E	F	G	H	I
15880	40606	528004202001934							
15881	40607	528004202001152							
15882	40608	528004201900889							
15883	40609	528004201900364							
15884	40610	528004201500356							
15885	40611	NL 548597622							
15886	40612	NL 503982838							
15887	40613	NL 305870227							
15888	40614	NL 11-77109							
15889	40615	NL 09-331999							
15890	40616	DE 0362052128							
15891	40617	NL 875403687							
15892	40618	NL 658101689							
15893	40619	NL *-80246							
15894	40620	NL 407494794							
15895	40621	NL 452430781							
15896	40622	NL 628200684							
15897	40623	NL 634806993							
15898	40624	528004202000009							
15899	40625	528004202000230							
15900	40626	528004202000174							
15901	40627	528004202001746							
15902	40628	NL-S8 2019 6492							
15903	40629	NL-S8 2021 15710							
15904	40630	NL-S9 2018 8197							
15905	40631	NL-S8 2022 2425							
15906	40632	NL 2022 2851							
15907	40633	NL-S7 2022 1589							
15908	40634	NL-S7 2022 1603							
15909	40635	NL-S7 2022 1608							
15910	40636	NL-S9 2021 4013							
15911	40637	NL-S9 2021 7502							
15912	40638	NL-S9 2021 7508							
15913	40639	NL-S9 2022 1218							
15914	40640	NL-S8 2020 63							
15915	40641	NL-S9 2021 7500							
15916	40642	NL-S8 2022 11440							
15917	40643	NL-S8 2022 5217							

Fields Values

- Description [40621] NL 452430781
- id 40621
- Animal ID NL 452430781
- Creation date 10/10/2023 17:39:31
- Last change date 06/02/2024 16:00:47
- Owner SuperAdminEUWUR
- Last change user SuperAdminEUWUR
- details
- Rights on the record
- Animal
 - Animal name (animal_name) JEANINES FRANS
 - AnonymIDanimal (anonymidanimal) 139865
 - Birth date (birth_dt) 01/10/1983
 - Breed (breed) Dutch Friesian [Breed species]
 - Breed2 (breed2)
 - Breeder name (breeder_name)
 - Breeding organization (breeding_organization)
 - Bulls code (bulls_code) 14052
 - Colour (colour) Zwartbont [Coat colour]
 - Comment (comment) Short name: JEANINES FRANS; v: Kastanje Frans 101 Gt x mv: Woudhoeve 478 Rf Zn
 - DamID (dam_id) NL 407494794 [Animal]
 - Files (files)
 - Fraction (fraction) 8
 - Genomic information (genomic_info) ?
 - GIS (gis) [?; ?; ?] ± ? km
 - Owner name (owner_name)
 - Phenotypic measures (pheno)
 - Photo (photo)
 - Sex (sex) Male
 - SireID (sire_id) NL 01-145971 [Animal]
 - sampleid (animalid_back) NL 452430781_29-06-1985 [Samples]

Tree view Form view

15988 records found. Records 1 to 15988 displayed | 1 record selected | Page # of 1

8:12 AM 2/29/2024

Add a record

The screenshot displays a web application interface for managing a database. The main window shows a table with columns 'id' and 'Animal ID'. A 'New Record wizard' dialog box is open, showing 'Step 1 of 2: Record header' with fields for 'Description', 'id', 'Animal ID', 'Creation date', 'Last change d...', 'Owner', and 'Last change u...'. The 'id' field is set to 40716, and 'Animal ID' is set to 528003199902709 Stb_2. The 'Owner' is 'SuperAdminEUWUR'. Below the wizard, there are fields for 'Sex (sex)' (Male), 'SireID (sire_id)', and 'sampleid (animalid_back)'. The taskbar at the bottom shows the system time as 8:48 AM on 2/26/2024.

id	Animal ID
24722	NL 00-8051
24723	NL 00-8125
24724	NL 05-2127
24725	NL 05-4458
24726	NL 05-5794
24727	NL 05-5828
24728	NL 05-6216
24729	NL 05-6937
24730	NL 05-7468
24731	NL 05-7713
24732	392
24733	NL 133476497
24734	NL 344351305
24735	NL 357253108
24736	NL 361622792
24737	NL 800889278
24738	NL 801007415
24739	NL 801348888
24740	NL 113469964
24741	NL 512916707
24742	NL 739935549
24743	003NG652
24744	3962BDNB
24745	NL 176362355
24746	NL 176368531
24747	NL 173164277
24748	NL HX326010
24749	NL LM285568
24750	NL HX260337
24751	NL 130629889
24752	04/392
24753	NL 000000000
24754	528004200306594
24755	NL 802499118
24756	NL 133898110
24757	NL 800801241
24758	NL 807212190

Add a record

The screenshot displays a web application interface for managing a database of animal records. The main window shows a table with columns 'id' and 'Animal ID'. The table contains 38 rows of data, with the first row highlighted in blue. A 'New Record wizard' dialog box is open, showing 'Step 2 of 2: Animal (21 fields)'. The dialog box has a table with 'Fields' and 'Values' columns. The fields listed are: Animal name (an...), Anonymi(Danima...), Birth date (birth...), Breed (breed), Breed2 (breed2), Breeder name (b...), Breeding organ..., Bulls code (bulls...), Colour (colour), Comment (comm...), DamID (dam_id), Files (files), Fraction (fraction), Genomic inform..., GIS (gis), Owner name (o...), Phenotypic meas..., and Photo (photo). The 'Breed (breed)' and 'Fraction (fraction)' fields are highlighted in red. The dialog box has 'Back', 'Next >', and 'Cancel' buttons.

id	Animal ID
24722	NL 00-8051
24723	NL 00-8125
24724	NL 05-2127
24725	NL 05-4458
24726	NL 05-5794
24727	NL 05-5828
24728	NL 05-6216
24729	NL 05-6937
24730	NL 05-7468
24731	NL 05-7713
24732	392
24733	NL 133476497
24734	NL 344351305
24735	NL 357253108
24736	NL 361622792
24737	NL 800889278
24738	NL 801007415
24739	NL 801348888
24740	NL 113469964
24741	NL 512916707
24742	NL 739935549
24743	003NG652
24744	3962BDNB
24745	NL 176362355
24746	NL 176368531
24747	NL 173164277
24748	NL HX326010
24749	NL LM285568
24750	NL HX260337
24751	NL 130629889
24752	04/392
24753	NL 000000000
24754	528004200306594
24755	NL 802499118
24756	NL 133898110
24757	NL 800801241
24758	NL 807212190

Add a record

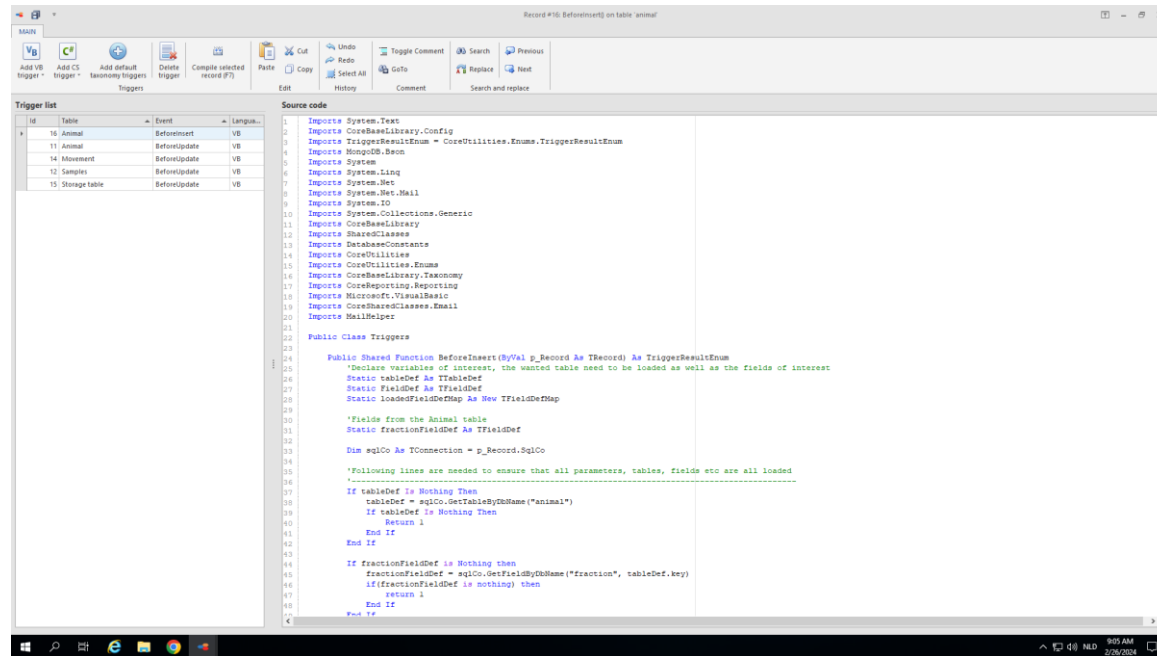
The screenshot displays a web application interface for adding a record to a database. The interface includes a spreadsheet view of animal records, a 'New Record wizard' dialog box, and a 'Choose record(s) to link' dialog box.

The spreadsheet shows columns for 'id' and 'Animal ID'. The 'New Record wizard' is at 'Step 2 of 2: Animal (21 fields)'. The 'Choose record(s) to link' dialog shows a search for 'Breed name' and a table of results with columns for 'id', 'Breed name', 'Breed name NL', 'Efabis name', and 'Species'.

id	Breed name	Breed name NL	Efabis name	Species
2	unknown	unknown		Cattle
3	Belgian Blue	Belgisch Blauw	Belgisch Blauw	Cattle
4	Belgian Red	Belgisch Rood Vlees		Cattle
5	Blonde d'Aquitaine	Blonde d'Aquitaine	Blonde d'Aquitaine	Cattle
6	Deep Red	Brandrood	Brandrood	Cattle
7	British Friesian	British Friesian		Cattle
8	Brown Swiss	Brown Swiss	Brown Swiss	Cattle
9	Fleckvieh	Fleckvieh	Fleckvieh	Cattle

Triggers

- A trigger allows you to specify actions (additional work or validation) that should be executed automatically when a specific event occurs in the database.
- A trigger is a set of SQL statements that run every time a row is inserted, updated, or deleted in a table.



The screenshot displays a software interface with a 'Trigger list' table and a 'Source code' editor. The 'Trigger list' table contains the following data:

ID	Table	Event	Language
10	Animal	BeforeInsert	VB
11	Animal	BeforeUpdate	VB
14	Movement	BeforeUpdate	VB
12	Samples	BeforeUpdate	VB
13	Storage table	BeforeUpdate	VB

The 'Source code' editor shows the following code:

```
1 Imports System.Text
2 Imports CoreBaseLibrary.Config
3 Imports TriggerResultEnum = CoreUtilities.Enums.TriggerResultEnum
4 Imports MongoDB.Bson
5 Imports System
6 Imports System.Linq
7 Imports System.Net
8 Imports System.Net.Mail
9 Imports System.ID
10 Imports System.Collections.Generic
11 Imports CoreBaseLibrary
12 Imports SharedClasses
13 Imports DatabaseConstants
14 Imports CoreUtilities
15 Imports CoreUtilities.Enums
16 Imports CoreBaseLibrary.Taxonomy
17 Imports CoreReporting.Reporting
18 Imports Microsoft.VisualBasic
19 Imports CoreSharedClasses.Email
20 Imports MailHelper
21
22 Public Class Triggers
23
24     Public Shared Function BeforeInsert(ByVal p_Record As TRecord) As TriggerResultEnum
25         'Declare variables of interest, the wanted table need to be loaded as well as the fields of interest
26         Static tableDef As TTableDef
27         Static fieldDef As TFieldDef
28         Static loadedFieldDefMap As New TFieldDefMap
29
30         'Fields from the Animal table
31         Static fractionFieldDef As TFieldDef
32
33         Dim sqlCo As TConnection = p_Record.SqlCo
34
35         'Following lines are needed to ensure that all parameters, tables, fields etc are all loaded
36         -----
37         If tableDef Is Nothing Then
38             tableDef = sqlCo.GetTableByTableName("animal")
39             If tableDef Is Nothing Then
40                 Return 1
41             End If
42         End If
43
44         If fractionFieldDef Is Nothing then
45             fractionFieldDef = sqlCo.GetFieldByTableName("fraction", tableDef.key)
46             If(fractionFieldDef Is nothing) then
47                 return 1
48             End If
49         End If
50     End Function
51 End Class
```

Data import

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

File Home Insert Page Layout Formulas Data View Analytics Molecular Tools Other Tools

Table View Spreadsheet Word Document History Cloud Folders Paste Copy Paste Special Shortcuts Clipboard Font Alignment Number Styles Cells Editing

Animal #3 Samples #4 Storage table #5

Animal

	A	B	C	D
1	id	Animal ID		
2	24722	NL 00-8051		
3	24723	NL 00-8125		
4	24724	NL 05-2127		
5	24725	NL 05-4458		
6	24726	NL 05-5794		
7	24727	NL 05-5828		
8	24728	NL 05-6216		
9	24729	NL 05-6937		
10	24730	NL 05-7468		
11	24731	NL 05-7713		
12	24732	392		
13	24733	NL 133476497		
14	24734	NL 344351305		
15	24735	NL 357253108		
16	24736	NL 361622792		
17	24737	NL 800889278		
18	24738	NL 801007415		
19	24739	NL 801348888		
20	24740	NL 113469964		
21	24741	NL 512916707		
22	24742	NL 739935549		
23	24743	003NG652		
24	24744	3962BDNB		
25	24745	NL 176362355		
26	24746	NL 176368531		
27	24747	NL 173164277		
28	24748	NL HX326010		
29	24749	NL LM285568		
30	24750	NL HX260337		
31	24751	NL 130629889		
32	24752	04/392		
33	24753	NL 000000000		
34	24754	528004200306594		
35	24755	NL 802499118		
36	24756	NL 133898110		
37	24757	NL 800801241		
38	24758	NL 807212190		

Importation of data

Step 1: Get data
Open tab, CSV delimited or FASTA files or paste tab delimited or FASTA data from the clipboard

Paste tabular data Paste Fasta data Open tabulated file Open CSV file Open Fasta file More options

	animalID	ID	Name	breed	fraction	breed2	birthdate	colour	db_dam	d
▶	255	154256	Proloog	Gelders Paard	8		1974	Vos		1396
	793919	154257	VORATIENA	Gelders Paard	8		1979	Vos	12673	255
	1380 Sgldt	154258	Gloriant	Gelders Paard	8		1965	Bruin		1098
	12673	154259	ORATINA	Gelders Paard	8		1973	Vos		1380

< Back Next > Cancel

Tree view Form view

15988 records found. Records 1 to 15988 displayed | 1 record selected | Page # 1 of 1

10:22 AM 2/26/2024

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)

File Home Insert Page Layout Formulas Data View Analytics Molecular Tools Other Tools

Table View Spreadsheet Word Document History Cloud Folders Paste Copy Paste Special Shortcuts Clipboard Font Alignment Number Styles Cells Editing

Animal #1 x

Animal	A	B	C	D
1	id	Animal ID		
2	24722	NL 00-8051		
3	24723	NL 00-8125		
4	24724	NL 05-2127		
5	24725	NL 05-4458		
6	24726	NL 05-5794		
7	24727	NL 05-5828		
8	24728	NL 05-6216		
9	24729	NL 05-6937		
10	24730	NL 05-7468		
11	24731	NL 05-7713		
12	24732	392		
13	24733	NL 133476497		
14	24734	NL 344351305		
15	24735	NL 357253108		
16	24736	NL 361622792		
17	24737	NL 800889278		
18	24738	NL 801007415		
19	24739	NL 801348888		
20	24740	NL 113469964		
21	24741	NL 512916707		
22	24742	NL 739935549		
23	24743	003NG652		
24	24744	3962BDNB		
25	24745	NL 176362355		
26	24746	NL 176368531		
27	24747	NL 173164277		
28	24748	NL HX326010		
29	24749	NL LM285568		
30	24750	NL HX260337		
31	24751	NL 130629889		
32	24752	04/392		
33	24753	NL 000000000		
34	24754	528004200306594		
35	24755	NL 802499118		
36	24756	NL 133898110		
37	24757	NL 800801241		
38	24758	NL 807212190		

Importation of data

Step 3: Importation options
Select how data should be imported in the database

No Undo for this import (much faster)

Main table import options:

- Append records at the end of the table
- Merge with existing records on the basis of the unique ID number of the record
- Merge with existing records on the basis of the Name of the record (Note: if several records have the same Name, only the first one will be updated)

Main table merging options:

- Replace existing data when merging with existing records
- Merge with existing data

Target table import options:

- Append records at the end of the table
- Merge with existing records on the basis of the unique ID number of the record
- Merge with existing records on the basis of the Name of the record (Note: if several records have the same Name, only the first one will be updated)

Target table merging options:

- Replace existing data when merging with existing records
- Merge with existing data

< Back Next > Cancel

16103 records found. Records 1 to 16103 displayed | 1 record selected | Page # 1 of 1

Tree view Form view

8:06 AM NLD 3/4/2024

Data export

CGN Gene bank - MySql database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEJWUR (info@bio-aware.com)

Export records

Export selected records only
 Export all records

Create new template

- PDF
- Word document
- Excel
- CSV
- Labels

Existing templates

- PDF
- Word document
- Excel
- CSV
- Labels

Others

- Export to Fasta**
Export sequences to fasta and format for blast queries

Data export

The screenshot displays the 'CGN Gene bank - MySql database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)' interface. The left sidebar contains navigation options: Info, New, Open, Save, Save As, Print, **Export**, Import, Dashboard, Login, Database, Table Views Settings, Options, Help, and Close. The main area shows 'Export records' with options for 'Export selected records only' (selected) and 'Export all records'. A 'Template chooser' dialog box is open, displaying a tree view of fields to be exported. The dialog includes a search bar and a table of fields.

Template chooser

Tree page
In this page you can select fields that you want to export to your file.

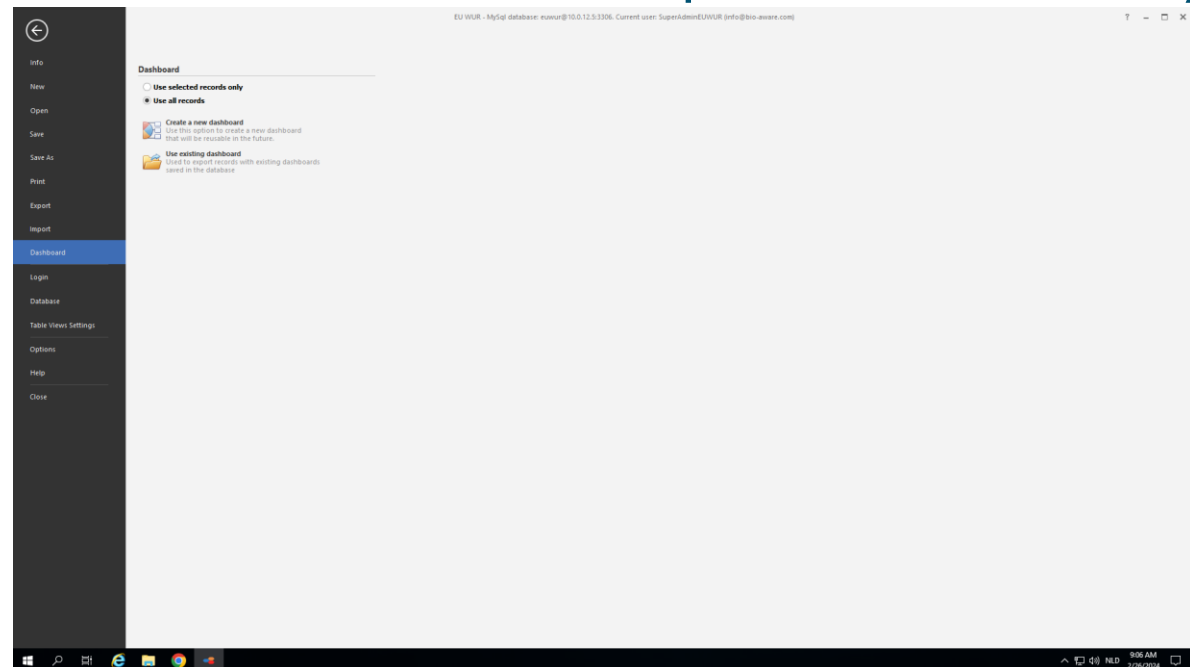
Enter text to search... Find

Field name	Field Type	Table Name
<input checked="" type="checkbox"/> Description	Description	Animal
<input type="checkbox"/> Rights on the record	Privileges	Animal
<input type="checkbox"/> Animal name (animal_name)	E: Text, administrative field	Animal
<input type="checkbox"/> SireID (sire_id)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Sex (sex)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Photo (photo)	FLink: Link to File	Animal
<input type="checkbox"/> Phenotypic measures (pheno)	E: Text, administrative field	Animal
<input type="checkbox"/> Owner name (owner_name)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> GIS (gis)	L: GIS Location (latitude, longitu...	Animal
<input type="checkbox"/> Genomic information (genomic_info)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Fraction (fraction)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Files (files)	FLink: Link to File	Animal
<input type="checkbox"/> DamID (dam_id)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Comment (comment)	E: Text, administrative field	Animal
<input type="checkbox"/> Colour (colour)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Bulls code (bulls_code)	D: Continuous data, single value	Animal
<input type="checkbox"/> Breeding organization (breeding_organization)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Breeder name (breeder_name)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Breed2 (breed2)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Breed (breed)	RLink: Link to one or more recor...	Animal

< Back Next > Cancel

Dashboard

- Structuring data and visualizing data. With BioloMICS, you can create a dashboard on the fly, displaying your data exactly how you want it. Whether it's maps, grids, pies, cards or more, there's no limit to the number of dashboards you can create. Plus, you can easily share them with other database users or publish them on your website.



Create a dashboard

CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEJWUR (info@bio-aware.com)

Dashboard

Use selected records only

Use all records

Create a new dashboard
Use this option to create a new dashboard that will be reusable in the future.

Use existing dashboard
Used to export records with existing dashboards saved in the database

Template chooser

Tree page
In this page you can select fields that you want to use in your dashboard.

Enter text to search... Find

Field name	Field Type	Table Name
<input checked="" type="checkbox"/> id	Record id	Animal
<input checked="" type="checkbox"/> Animal ID	Record name	Animal
<input type="checkbox"/> Creation date	Creation date	Animal
<input type="checkbox"/> Last change date	Date of last change to this record	Animal
<input type="checkbox"/> Owner	Owner	Animal
<input type="checkbox"/> Last change user	Last change user	Animal
<input type="checkbox"/> Details	Details	Animal
<input type="checkbox"/> Animal name (animal_name)	E: Text, administrative field	Animal
<input type="checkbox"/> SireID (sire_id)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Sex (sex)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Photo (photo)	FLink: Link to File	Animal
<input type="checkbox"/> Phenotypic measures (pheno)	E: Text, administrative field	Animal
<input type="checkbox"/> Owner name (owner_name)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> GIS (gis)	L: GIS Location (latitude, longitu...	Animal
<input type="checkbox"/> Genomic information (genomic_info)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Fraction (fraction)	V: Discrete data, unlimited num...	Animal
<input type="checkbox"/> Files (files)	FLink: Link to File	Animal
<input type="checkbox"/> DamID (dam_id)	RLink: Link to one or more recor...	Animal
<input type="checkbox"/> Comment (comment)	E: Text, administrative field	Animal
<input type="checkbox"/> Colour (colour)	RLink: Link to one or more recor...	Animal

< Back Next > Cancel

Create a dashboard

The screenshot shows a web application interface for creating a dashboard. The main window is titled "Dashboard" and contains two radio buttons: "Use selected records only" (unselected) and "Use all records" (selected). Below this, a "Create a new dashboard" dialog box is open, titled "DashBoardDesigner". The dialog has a ribbon with tabs for "Home", "Data Source", and "View". The "Data Source" tab is active, showing a "Data Source" dropdown set to "Dashboard" and a "Query" dropdown set to "dashboard". A tree view on the left lists the fields available for the dashboard, including "Calculated Fields" (creation_date, last_change_date), "Animal" (Animal ID, animal_id), and "Breed species (breed)" (Breed name NL, Breed name, details). The main area of the dialog is empty, with a message: "To add a dashboard item to your dashboard, click the corresponding button in the Ribbon or the Toolbar". The background shows a sidebar with navigation options like "Info", "New", "Open", "Save", "Print", "Export", "Import", "Dashboard", "Login", "Database", "Table Views Settings", "Options", "Help", and "Close". The top status bar indicates the database connection: "CGN Gene bank - MySql database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)". The Windows taskbar at the bottom shows the time as 9:27 AM on 2/26/2024.

Create a dashboard

The screenshot displays a dashboard design tool interface. The main window is titled "DashboardDesigner" and shows a "Filter Editor for Animal ID(animal.name) (Count)" dialog box. The dialog box contains the following text:

```
And  
Species (Breed species (breed).species) Begins with Duck(domestic)  
  
Startswith([Species (Breed species (breed).species)], 'Duck(domestic)')
```

The background shows a dashboard with a sunburst chart. The chart displays data for various animal breeds, with the following labels and percentages:

- Cattle, Holstein Friesian roodbont: 11.9%
- Chicken, Hollandse kuifhoenders: 0.09%
- Chicken, Bovenwilde: 0.37%
- Chicken, Bovenwilde: 0.37%
- Pig, Chien-Normand: 0.10%
- Horse, Zangers: 0.39%
- Sheep, Zwartbles: 0.10%
- Goedde: 0.10%
- Pig, Toberna: 0.15%
- Sheep, Scherpe: 0.15%
- Chicken, Lakert: 0.04%
- Horsd...

The interface includes a sidebar on the left with navigation options like "Info", "New", "Open", "Save", "Print", "Export", "Import", "Dashboard", "Login", "Database", "Table Views Settings", "Options", "Help", and "Close". The top menu bar includes "Home", "Data Source", "View", "Data", and "Design". The bottom status bar shows the system tray with the time 9:39 AM and date 2/26/2024.

Create a dashboard

The screenshot shows a dashboard designer interface for a MySQL database. The main window displays a pie chart titled "Filtered Animal ID(animal.name) (Count)". The chart is divided into four segments, each with a label and a percentage:

- Duck(domestic), Krombek: 48.65%
- Duck(domestic), Overbergse eend: 1.35%
- Duck(domestic), Kwaker: 24.32%
- Duck(domestic), Noord Hollandse witborstaend: 25.68%

The interface includes a sidebar on the left with navigation options like "Info", "New", "Open", "Save", "Print", "Export", "Import", "Dashboard", "Login", "Database", "Table Views Settings", "Options", "Help", and "Close". The top of the dashboard shows the database connection details: "CGN Gene bank - MySQL database: cgn_genebank@10.0.12.5:3306. Current user: SuperAdminEUWUR (info@bio-aware.com)". The dashboard designer toolbar includes options for "Data Source", "View", "Data", "Design", and various chart types like "Pie", "Gauges", "Cards", "Choropleth Map", "Geo Point Maps", "Range Filter", "Filter Elements", "Text Box", "Group", "Scatter Chart", "Sankey", "Treemap", "Sunburst", "Duplicate", "Delete", "Remove Data Items", "Transpose", "Convert To", "Title", "Currency", "Update", "Automatic Updates", "Edit Colors", and "Parameters".

website

The screenshot shows a web browser window with the URL <https://livestock.bio-aware.com/account/logout>. The page features a header with three images: a chicken, a group of sheep, and a cow. The central image contains the text "CGN Genebank" and "Centrum voor Genetische Bronnen Nederland". Below the images is a navigation menu with links: HOME, Search animal(s), Add New Sample, CONTACT, NEWS, Blast, Statistics, Custom, and Order. The user is logged in as "Unknown user".

The main content area displays a "Login" form with the following fields and buttons:

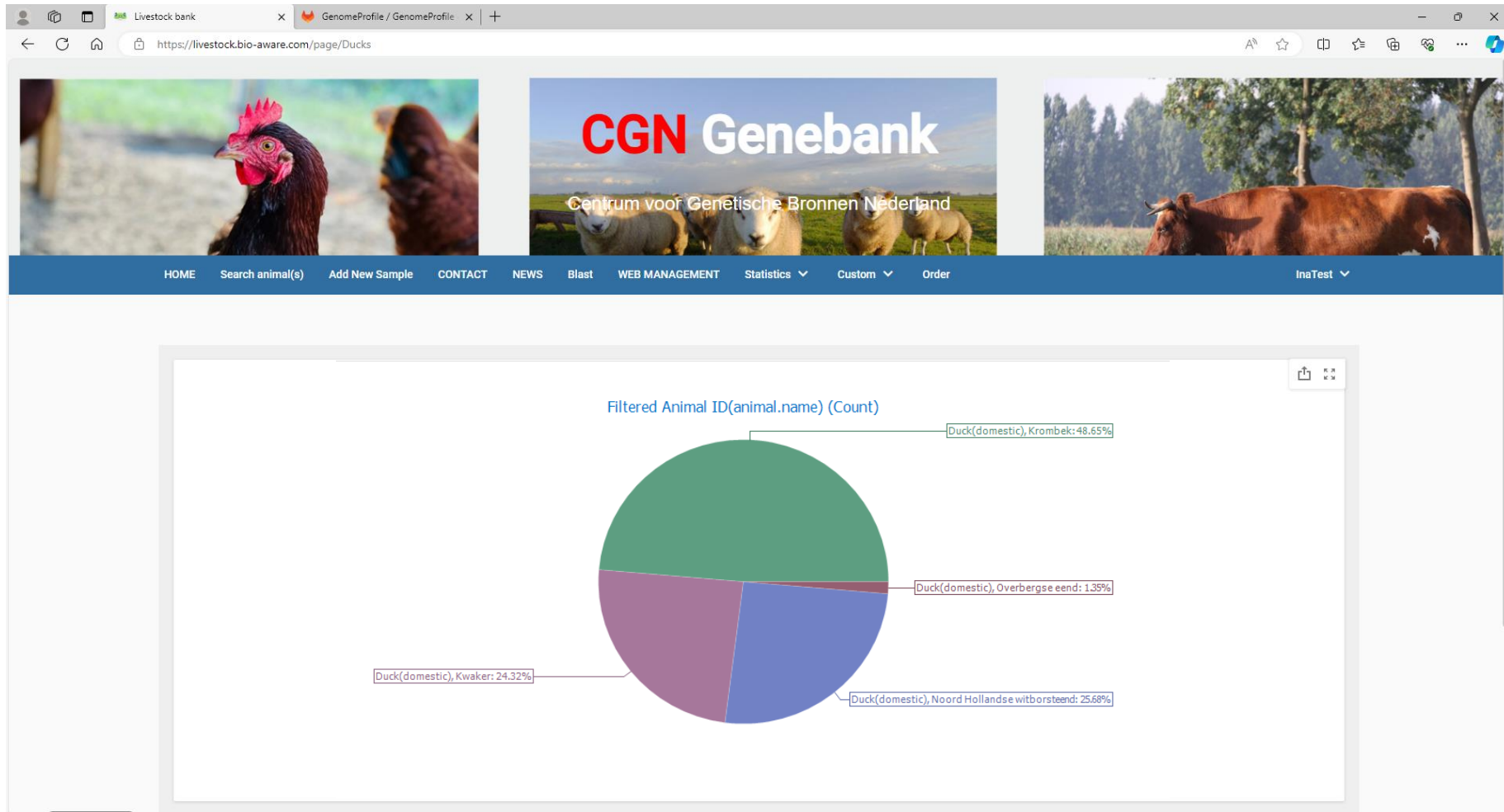
- Input field: Your email *
- Input field: Your password *
- Button: Log in
- Text: Not a member? Register

The footer contains social media links (Facebook, Twitter, LinkedIn, YouTube, Instagram) and four columns of text:

- About us**: Lorem ipsum dolor sit amet consectetur, adipiscing elit. Iste atque ea quis molestias. Fugiat pariatur maxime quis culpa corporis vitae repudiandae aliquam voluptatem veniam, est atque cumque eum delectus sint!
- Useful links**: Privacy policy, Media, Job offers, Cooperation
- Products**: Electronics, Fashion, Beauty, Automotive
- Support**: Complaints, Help center, Community, FAQ

© 2023 Copyright: Lorem ipsum

Link dashboard to website



Template search an animal

The screenshot shows a web browser window displaying the CGN Genebank website. The browser's address bar shows the URL: <https://livestock.bio-aware.com/page/Search%20animal%28s%29>. The website header features three images: a chicken, a group of sheep, and a cow. The main navigation bar includes links for HOME, Search animal(s), Add New Sample, CONTACT, NEWS, Blast, WEB MANAGEMENT, Statistics, Custom, Order, and InaTest. The search interface is a form with the following structure:

Search			
Q0	Criteria ▼ Animal	Operation ▼ Starts with ...	▼ Animal + X
Q1	And	Criteria ▼ Breed	Operation ▼ Target record name starts with
		▼ Breed	+ X

Below the search criteria is an "Expression" input field and "Reset" and "Search" buttons. A "Search logical expression" button is located below the search form. The footer contains social media links, an "About us" section with placeholder text, "Useful links" (Privacy policy, Media, Job offers, Cooperation), "Products" (Electronics, Fashion, Beauty, Automotive), and "Support" (Complaints, Help center, Community, FAQ). The copyright notice at the bottom reads: © 2023 Copyright: Lorem ipsum.

Example

The screenshot shows the CGN Genebank website dashboard. The header includes navigation links: HOME, Search animal(s), Add New Sample, CONTACT, NEWS, Blast, WEB MANAGEMENT, Statistics, Custom, Order, and InaTest. The main content area is titled "Dashboard" and contains several widgets:

- List Box 1:** A list of checkboxes for filtering by year: (All), Dutch call duck, Dutch call duck, 2007, Dutch call duck, 2009, Dutch call duck, 2010, and Dutch call duck, 2011.
- Grid 1:** A table listing animal records with columns for Animal ID and Breed Name.
- Cards 1:** Two cards showing counts for "Dutch call duck" (99) and "Hook Bill" (169).
- Combo Box 1:** A dropdown menu labeled "Select...".
- Pivot 1:** A pivot table summarizing data by breed.
- Chart 1:** A bar chart showing the count of breeds from 2006 to 2012.
- Line Chart:** A line chart showing the count of breeds from 2006 to 2012.

Animal ID	Breed Name
NL H06-14-19436	Noord Hollandse witborsteend
NL H07-14-2193	Hook Bill
NL H09-14-3882	Noord Hollandse witborsteend
NL H10-07-12957	Dutch call duck
NL H10-07-5062	Dutch call duck

	Dutch call duck	Hook Bill	Noord Hollandse witborsteend	Overber-eend
Grand Total	17	23	17	

Year	Breed Name (Count)
2006	0
2007	10
2009	50
2010	60
2011	200
2012	100

Year	Breed Name (Count)
2006	0
2007	10
2008	30
2009	50
2010	80
2011	200
2012	100

Disadvantages

- Meaning different fieldtypes
- A suggested animal ID is provided automatically
- Creating SQL actions on multiple tables is difficult

Advantages

- Data structure is fully flexible
- Large amounts of data can be imported in one go
- Data can be displayed as and edited in spreadsheets and hierarchical trees
- Data can be easily searched
- The history of changes tool keeps track of all the changes ever made in the database
- Different levels of rights can be assigned
- Support BioAware
 - Not only for database questions, but also for other questions like e.g. security

Question

- Suggestions for fields like:
 - PRRS (porcine)
 - Scrapie (goat/sheep)

Thank you

Questions ?

