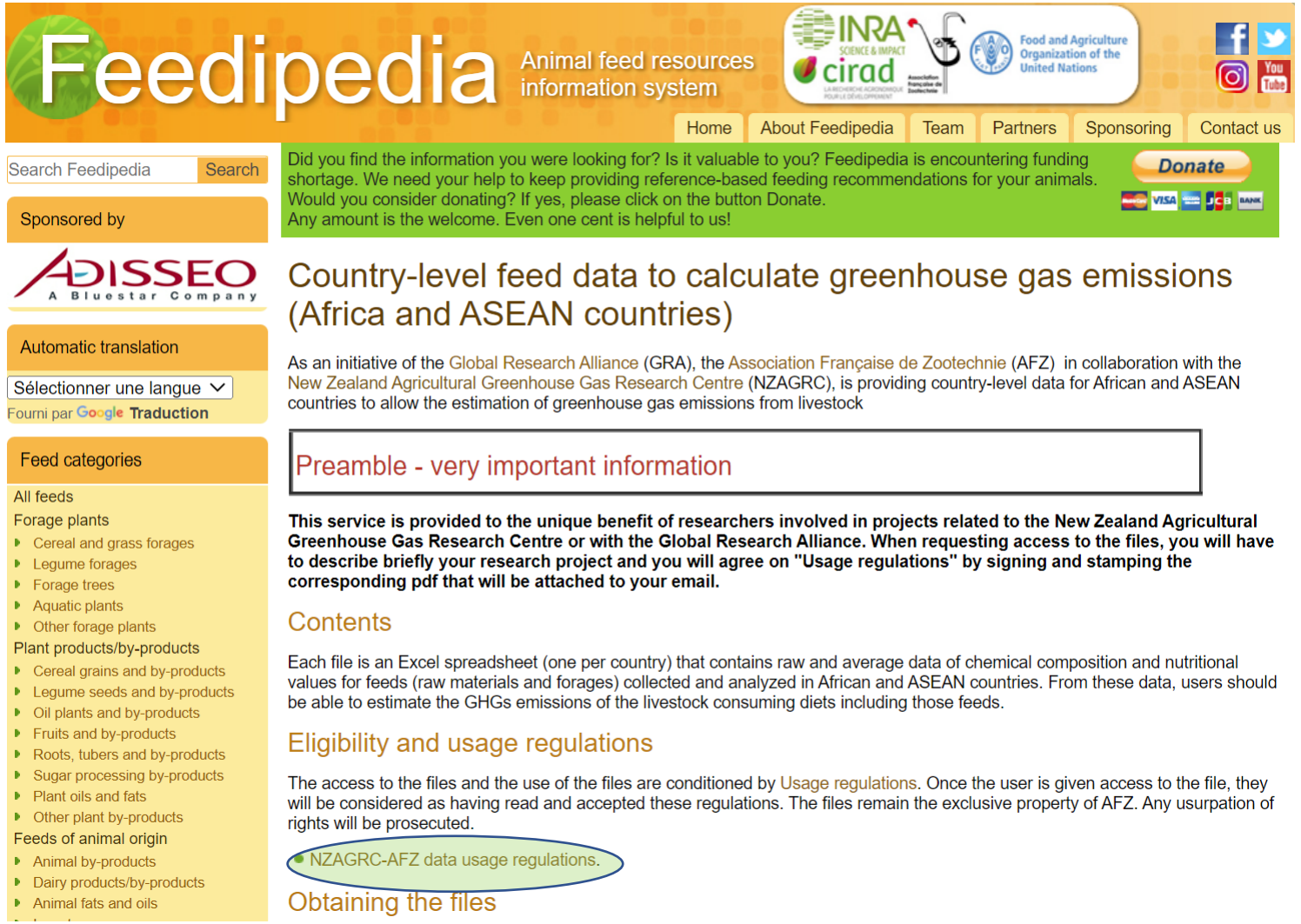
User’s Guide for Feed data in African and ASEAN countries

A project by NZAGRC and AFZ under the initiative of GRA

- https://www.feedipedia.org/content/country-level-feed-data-calculate-greenhouse-gas-emissions-africa-and-asean-countries



ACCESS PROVIDED

Gamba grass (Andropogon gayanus)

Gamba grass (*Andropogon gayanus* Kunth) is a perennial leafy grass of tropical... Read more

Zornia (Zornia glabra)

Zornia (*Zornia glabra* Desv.) is a perennial legume grown for forage in Latin... Read more

False Rhodes grass (Trichloris crinita)

False Rhodes grass (*Trichloris crinita* (Lag.) Parodi) is a perennial grass... Read more

1 2 3 4 5 ... next › last »

make the use of pulses and their by-products as animal feed more efficient. This document will be useful for extension workers, researchers, feed industry, policy-makers and donors alike.

Opinion paper: A regional feed action plan – one-of-a-kind example from East Africa - Opio et al., 2020. Animal, 1-4

Open access document. This paper puts forward a case for formulation of a regional animal feed action plan (RAFAP) and highlights its potential benefits.

More resources...

Editor area

- Login
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- https://www.feedipedia.org/content/country-level-feed-data-calculate-greenhouse-gas-emissions-africa-and-asean-countries

58 country data files

+ 1 Eastern Africa unspecified file

+ 1 South Eastern-Asia unspecified file

Excel files with 4 spreadsheets

Association Française de Zootechnie – New Zealand Agriculture Greenhouse Gas Research Center

An initiative of the Global Research Alliance

Feed data for Alger

This file contains raw and average valu
data originate from the Feedipedia da
Creation date: 03/10/2022

Usage regulations

Click here to read and accept the Usag

Data organization

The 'Raw data' sheet shows the raw d
The 'Averages' sheet shows average d
The 'Parameters' sheet shows the list
Column A: name of the country and t
Column C: total number of samples ('
Please read each row up to the right a
first columns for easier use.

Data filtering

By default, the sheets display all the d
on the arrow button next to each colu

Filter by item

To filter by Feed class or Feed name ('
column header arrow and choose one
practical to uncheck first 'Select all', a

Filter by value

In the 'Raw data' and 'Averages' sheet
the rows with a crude protein value hi
the filter critera (10), and press OK.

Sorting the rows

For any numeric column, the sorting a
(Sort Largest to Smallest) value. For te

Algeria - raw data

126 samples

Feed class	Feed name	Sample	DM (% as fed	Ash (% DM
Wheat	Wheat, soft	423941	87,20	
Wheat	Wheat,			
Wheat	Wheat,			
Wheat	Wheat,			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize			
Maize	Maize,			
Maize	Maize,			
Maize	Maize,			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat milling byproducts	Wheat			
Wheat starch byproducts	Wheat			
Soybean meal	Soybean			
Soybean meal	Soybean			

Algeria - averages

57 feeds

Feed class	Feed name	Coun	DM (% as fed	Ash (% DM	DMd_Ruminant (%
Wheat	Wheat, soft	4	87,68	1,59	
Maize					
Maize					
Wheat milling byproducts					
Wheat milling byproducts					
Wheat milling byproducts					
Wheat starch byproducts					
Soybean meal					
Olive pulp and meal					
Olive pulp and meal					
Grapeseed pulp and meal					
Grapeseed pulp and meal					
Fruits and vegetables					
Molasses					
Hulls and pods					
Other plant byproducts					
Other plant byproducts					
Dehydrated alfalfa					
Hays and dry roughages from othe					
Hays and dry roughages from othe					
Straws					
Straws					
Fresh roughages from legumes					
Fresh roughages from legumes					
Fresh roughages from legumes					
Fresh roughages from legumes					
Fresh roughages from legumes					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					
Fresh roughages from other plants					

Algeria - list of parameters

Parameter	Full name	Class name	Definition
ADF (% DM)	ADF	Main analysis	Acid Detergent Fiber, fraction of the cell walls according
Ash (% DM)	Ash	Main analysis	Ash remaining after incineration, a rough approximation
AshSulf (% DM)	Sulfated ash	Main analysis	The solid residue left after treatment with sulfuric acid a
Ca (% DM)	Calcium	Main analysis	Calcium (Ca).
CF (% DM)	Crude fibre	Main analysis	Crude fibre, also known as Weende cellulose, insoluble r
CFd_Ruminant (%)	Crude fibre digestibility, ruminant	Ruminant nutritive values	Crude fibre digestibility, ruminant
Chlorides (% DM)	Chorides (expressed in NaCl)	Secondary minerals and trace elements	Chorides, expressed in NaCl : NaCl = Chlorine x 58.5/35.5
Cl (% DM)	Chlorine	Secondary minerals and trace elements	Chlorine (Cl), not expressed as chloride. NaCl = Chlorine
CP (% DM)	Crude protein	Main analysis	Crude protein, calculated as mineral N x 6.25. N is obtain
Cu (mg/kg DM)	Copper	Secondary minerals and trace elements	Copper (when a trace element)
DM (% as fed)	Dry matter	Main analysis	Dry matter, difference between the total weight and the
DMd_Ruminant (%)	Dry matter digestibility, ruminant	Ruminant nutritive values	Dry matter digestibility, ruminant
DMdPeps (%)	Dry matter digestibility, pepsine	In vitro digestibility and solubility	Dry matter digestibility, pepsine
DMdPepsCell (%)	Dry matter digestibility, pepsine-cellulase	In vitro digestibility and solubility	Dry matter digestibility, pepsine-cellulase
Fat (% DM)	Crude fat	Main analysis	Crude fat, extracted by diethyl ether, petroleum ether or
Fatd_Ruminant (%)	Crude fat digestibility, ruminant	Ruminant nutritive values	Crude fat digestibility, ruminant
GasProd (ml/200g)	Gas production	Ruminant nutritive values	Gas production obtained by fermentation of a 200 mg sa
GE (kcal/kg DM)	Gross energy	Main analysis	Gross energy, obtained by the total combustion in an cal
InsolAsh (% DM)	Insoluble ash	Main analysis	Insoluble ash, residue after incineration and treatment w
K (% DM)	Potassium	Main analysis	Potassium
Lignin (% DM)	Lignin	Main analysis	Lignin, usually obtained by the Van Soest method. Acid D
Mg (% DM)	Magnesium	Main analysis	Magnesium
Mn (mg/kg DM)	Manganese	Secondary minerals and trace elements	Manganese (when a trace element)
Na (% DM)	Sodium	Main analysis	Sodium (Na)
Nd_Ruminant (%)	Nitrogen digestibility, ruminant	Ruminant nutritive values	Nitrogen digestibility, ruminant
NDF (% DM)	NDF	Main analysis	NDF, fraction of the cell walls according to Van Soest, co
OMd_Ruminant (%)	Organic matter digestibility, ruminant	Ruminant nutritive values	Organic matter digestibility, ruminant
OMdPepsCell (%)	Organic matter digestibility, pepsine-cellulase	In vitro digestibility and solubility	Organic matter digestibility, pepsine-cellulase
P (% DM)	Phosphorus	Main analysis	Total phosphorus (P)
PSoluble (% P)	Phosphorus solubility (citric acid)	Secondary minerals and trace elements	Phosphorus solubility in citric acid. It is a measure of pho
SolN_KOH (% N)	Nitrogen solubility (KOH)	In vitro digestibility and solubility	Nitrogen solubility in KOH
SolNBuffer (% N)	Nitrogen solubility, buffer solution	In vitro digestibility and solubility	Nitrogen solubility in a buffer solution (Durand method a
SolProtKOH (% DM)	Soluble proteins, KOH	In vitro digestibility and solubility	Soluble proteins = total proteins x N solubility in a KOH s
StarchPolarimetry (% DM)	Starch (polarimetry)	Main analysis	Starch measured by polarimetry, usually the Ewers meth
Sugars (% DM)	Total sugars	Main analysis	Total sugars, obtained by various methods

Introduction spreadsheet

Provides the name of the country

Refers (again ;-)) to the « Usage regulations » file and allows to go there by clicking on the link

Explains what kind of data can be found in the file and how they are displayed

Provides tips to filter the data according to your needs

Introduction spreadsheet

Association Française de Zootechnie – New Zealand Agriculture Greenhouse Gas Research Center

Country

Feed data for Algeria

This file contains raw and average values of chemical composition and in vivo data for feeds (raw materials and forages) collected in Algeria. The data originate from the Feedipedia database operated by AFZ.

Important information about the correct use of these data

Usage regulations

Click here to read and accept the Usage regulations for this file.

Type of data and how they are displayed

Data organization

The 'Raw data' sheet shows the raw data for feed samples. One

The 'Averages' sheet shows average data calculated for each fe

The 'Parameters' sheet shows the list of parameters (nutriments, digestibility etc.) available, with their definitions.

Column A: name of the country and type of data (raw or average)

Column C: total number of samples ('Raw data' sheet) or total number of feeds ('Averages' sheet)

Please read each row up to the right as there may be more than 100 columns. Information useful to calculate GHG emissions have been put in the first columns for easier use.

Tips to filter and sort the data according to your needs

Data filtering

By default, the sheets display all the data sorted by F
column header. This will open a panel with various sorting and filtering options.

Filter by item

To filter by Feed class or Feed name ('Raw data' and 'Averages' sheets), or by Parameter, Full name, or Class name ('Parameters' sheet), click on the column header arrow and choose one or several items by clicking on the check boxes. Since all the check boxes are checked by default, it is practical to uncheck first 'Select all', and then select the boxes you want to show.

Filter by value

In the 'Raw data' and 'Averages' sheet, you can filter the sheets by value using the Number filters in the filter options panel. For instance, to filter the rows with a crude protein value higher than 10%, click on the 'CP (% DM)' header arrow, choose Number filters, click on Greater than..., enter the filter critera (10), and press OK.

Sorting the rows

For any numeric column, the sorting and filtering panel makes it possible to sort the rows by increasing (Sort Smallest to Largest) or decreasing (Sort Largest to Smallest) value. For text columns, the rows can be sorted alphabetically (Sort A to Z) or in reverse order ('Sort Z to A').

Raw data spreadsheet

- Provides all composition and nutritive raw data about feeds and forages that have been analysed in the country and collected in our database for 30 years
- The **Raw data** spreadsheet is a table of 38 columns and 128 lines for the AgResNZ_Algeria.xlsx file:
- The 38 columns include Feed Class and Feed Name and 35 parameters of composition and nutritive value
- The rows represent the number of samples present in the database for Algeria:
  - One row = one sample
- Empty cells : since feedstuffs are rarely fully analysed, there are many empty cells and it is advised to move to the end of the row to see all parameters
  - Composition parameters
    - DM (dry matter) or CP (Crude Protein) are very important and they are commonly reported.
    - NDF, ADF or Lignin, or amino acids are scarcer.
  - Nutritive values
    - DM digestibility, which is important for the calculation of GHGs, as well as other *in vivo* parameters are difficult and expensive to obtain, and are thus seldom available.

Raw data spreadsheet content explained

Total number of samples for Algeria in our database

Among the Wheat feed class, 4 samples of wheat, soft

Algeria - raw data

126 samples

Feed class	Feed name	Sample	DM (% as fed)	Ash (% DM)	DMd_Ruminant (%)	DMdPeps (%)	DMdPepsCell (%)	OMd_Ruminant (%)	OMdPepsCell (%)	CP (% DM)	NDF (% DM)	ADF (% DM)	CF (% DM)	Lignin (% DM)	Fat (% DM)	GE (kcal/kg DM)
Wheat	Wheat, soft	423941	87.20							12.73						
Wheat	Wheat, soft	424223	88.00	1.59						13.52			2.84		1.82	
Wheat	Wheat, soft	467043	88.50							13.33						
Wheat	Wheat, soft	467045	87.00							12.18						
Fruits and vegetables	Dates (Phoenix dactylifera), pitted, dehydrated	669517	83.50	7.96												3.24
Fruits and vegetables	Dates (Phoenix dactylifera), pitted, dehydrated	669524	90.40	4.18	72.20								76.39			4.17

Only one value of DMd_Ruminant in one sample

2 feed classes: *Wheat* and *Fruits and vegetables*

Averages spreadsheet

- The average data spreadsheet shows the number of feeds available in the database for the country (column C)
- Provides average composition and nutritive data for a feed name (Column B)
- One row = average value for one feed
  - Average values for “wheat, soft”
- Composition parameters and nutritive values are averaged: the values indicated for “Wheat, soft” are the average values of the 4 samples listed in the Raw data spreadsheet
- If there are empty cells, the average value is calculated only on cells that contain values:
  - For “Dates (Phoenix dactylifera), pitted, dehydrated”, there were only one sample with a DMd_ruminants (72.20) so the average value will be 72.20.

Averages sheet

Total number of feeds (Feed names) for Algeria in our database

Count: number of samples of the same Feed

DMd_Ruminant average value is calculated only on cells that are not empty. Here the average value is that on the unique sample with a DMd_Ruminant value

Algeria - averages

57 feeds

Feed class	Feed name	Count	DM (% as fed)	DM)	DMd_Ruminant (%)	DMdPeps (%)	DMdPepsCell (%)	OMd_Ruminant (%)	OMdPepsCell (%)	CP (% DM)
Wheat	Wheat, soft	4	87.68	1.59						12.94
Maize	Maize	13	86.19	1.40						9.32
Maize	Maize, protein > 11%	3	91.37	1.77						13.57
Wheat milling byproducts	Wheat bran, crude fibre 6-13%	3	87.40	5.01						16.97
Wheat milling byproducts	Wheat feed flour, crude fibre < 3%	5	87.19	1.71						13.59
Wheat milling byproducts	Wheat middlings, crude fibre 2.5-10%	3	87.83	2.73						.80
Wheat starch byproducts	Wheat germs	1	88.40							.86
Soybean meal	Soybean meal, oil < 5%	9	88.91	7.59						.86
Olive pulp and meal	Olive oil cake, oil < 5%	1	76.20	3.02						.82
Olive pulp and meal	Olive oil cake, oil > 5%	1	91.48							.87
Grapeseed pulp and meal	Grape pomace, dehydrated	1	90.80	12.22						.42
Grapeseed pulp and meal	Grape pomace, ensiled	1	43.10					28.20		14.20
Fruits and vegetables	Dates (Phoenix dactylifera), pitted, dehydrated	2	86.95	6.07	72.20			76.39		3.71

Parameters spreadsheet

- The **Parameters** spreadsheet is the list of the 35 parameters reported in the **Raw data** and **Average data** spreadsheets
- Each row corresponds to a single Parameter. It has 4 columns:
    1. The short name and unit of expression of the Parameter,
    2. Its Full Name,
    3. Its Category : Main analysis, Ruminant Nutritive value, Secondary minerals and trace elements, In vitro digestibility and solubility, etc.
    4. Its Definition with a brief description of the method used to measure it.

Parameters sheet

Algeria - list of parameters

Parameter	Full name	Class name	Definition
ADF (% DM)	ADF	Main analysis	Acid Detergent Fiber, fraction of the cell walls according to Van Soest, considered to be roughly equivalent to true cellulose and lignin. ADF = cellulose + lignin
Ash (% DM)	Ash	Main analysis	Ash remaining after incineration, a rough approximation of mineral matter.
AshSulf (% DM)	Sulfated ash	Main analysis	The solid residue left after treatment with sulfuric acid and incineration (800°C) in the presence of oxygen. This method is used for sugar products, including molasses.
Ca (% DM)	Calcium	Main analysis	Calcium (Ca).
CF (% DM)	Crude fibre	Main analysis	Crude fibre, also known as Weende cellulose, insoluble residue of an acid hydrolysis followed by an alkaline one. This residue contains true cellulose and insoluble lignin. It is also used to assess hair, hoof or feather residues in animal byproduct.
CFd_Ruminant (%)	Crude fibre digestibility, ruminant	Ruminant nutritive values	Crude fibre digestibility, ruminant

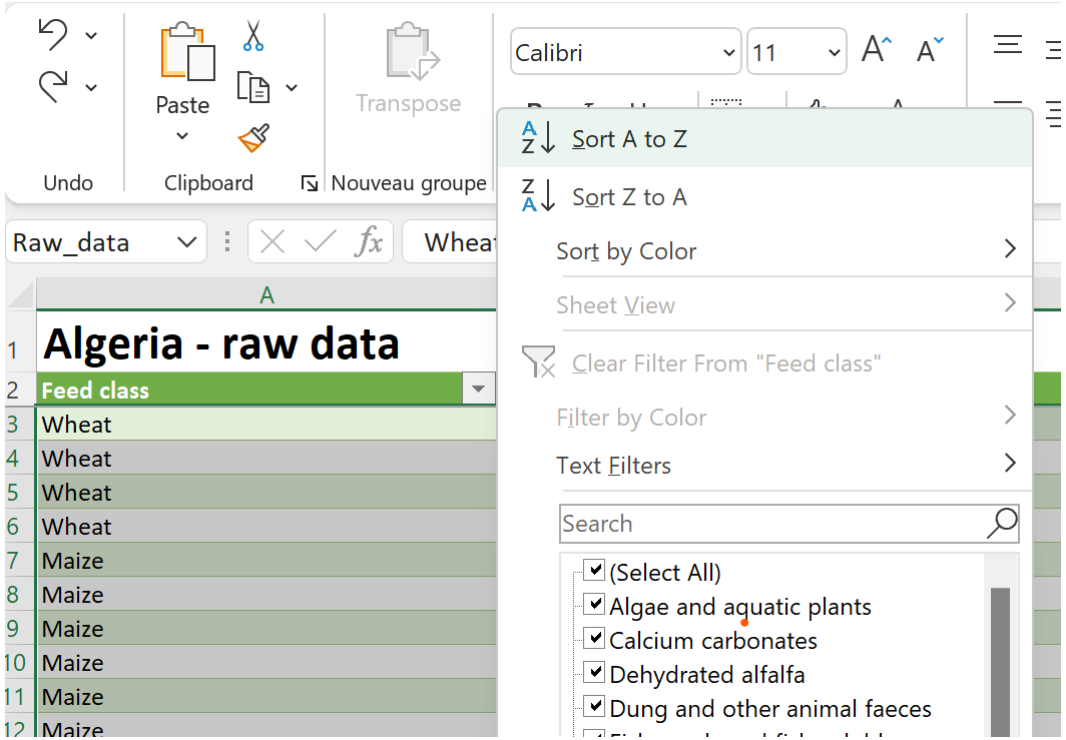
Visualisation of data by filtering and/or sorting

- All sheets can be filtered and sorted so as to go only to the feeds or values you are interested in.
- The file appears with arrows at the corner of each cell of the second line which means that the filtering option is set

Algeria - raw data		126 samples			
Feed class	Feed name	Sample	DM (% as fed)	Ash (% DM)	DMd_Ruminant (%)
Wheat	Wheat, soft	423941	87,20		
Wheat	Wheat, soft	424223	88,00	1,59	

- By default, the sheets display all the data sorted by Feed class and Feed name. If you want to see only part of the rows or sort them differently, click on the arrow button next to each column header. This will open a panel with various sorting and filtering options.

Sorting the data



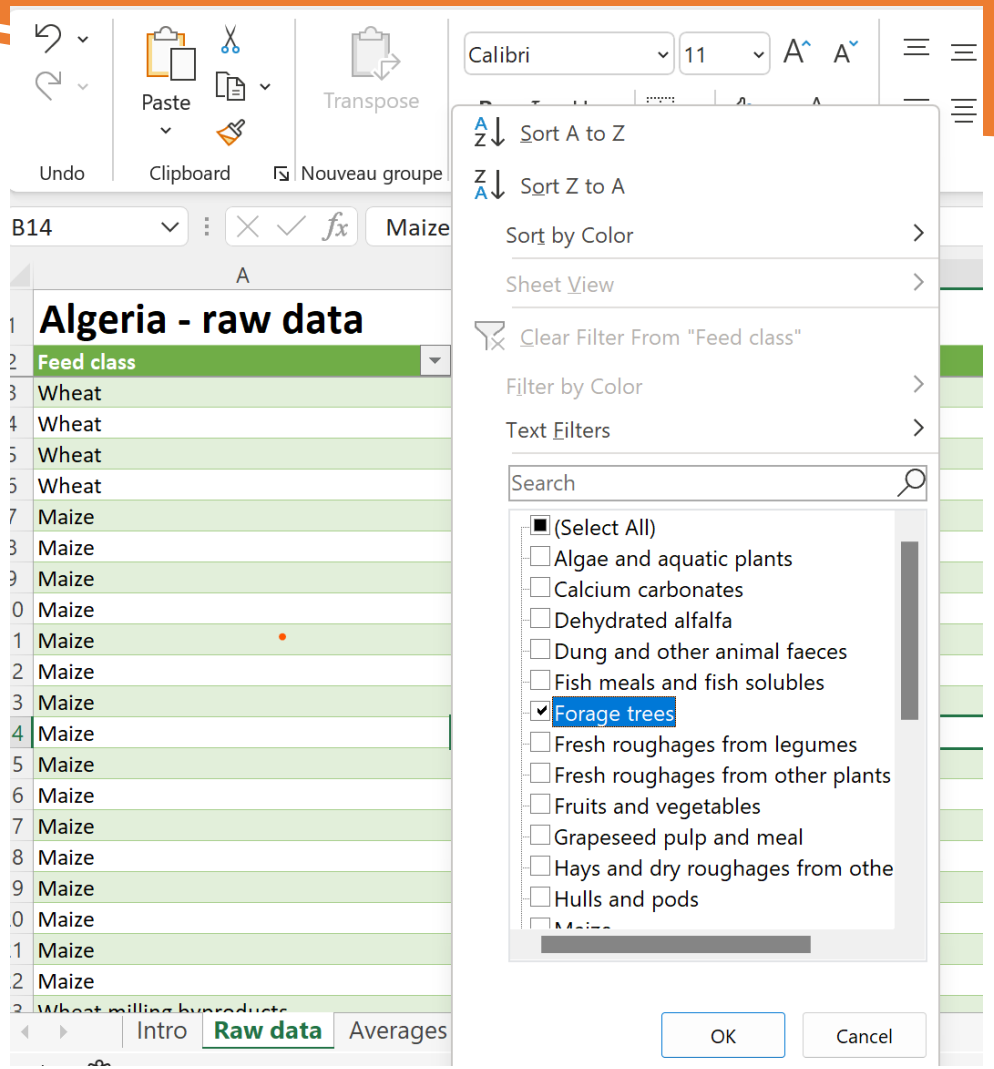
- All sheets can be sorted by increasing or decreasing order (alphabetical or numerical): here sorted from A to Z

Algeria - raw data — 126 samples

Feed class	Feed name	Sample
Algae and aquatic plants	Seaweed (Ulva lactuca), dried	657773
Calcium carbonates	Marble, coarsely ground	383365
Calcium carbonates	Marble, coarsely ground	383366
Calcium carbonates	Marble, coarsely ground	383368
Calcium carbonates	Marble, finely ground	455166
Dehydrated alfalfa	Alfalfa, dehydrated, protein < 12%	648739
Dung and other anim	Poultry droppings, dried	673907
Fish meals and fi	Fish meal, protein < 50%, ash > 50%	620991
	a (Acacia horrida), aerial part, fresh	686602
	a (Acacia saligna), aerial part, fresh	686603
	ree (Faidherbia albida), aerial part, fresh	686604

Note that the black arrow in the grey case shows that the data are sorted

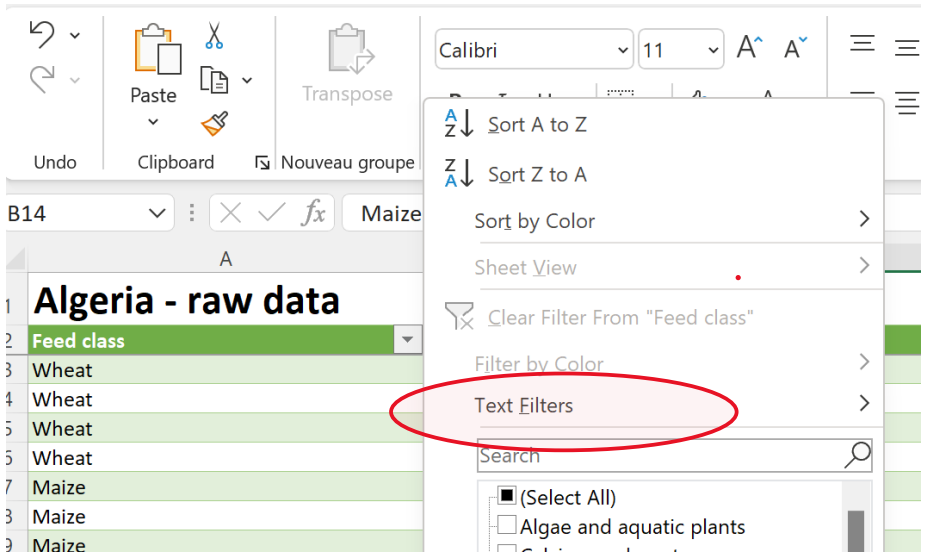
Filtering the data by item

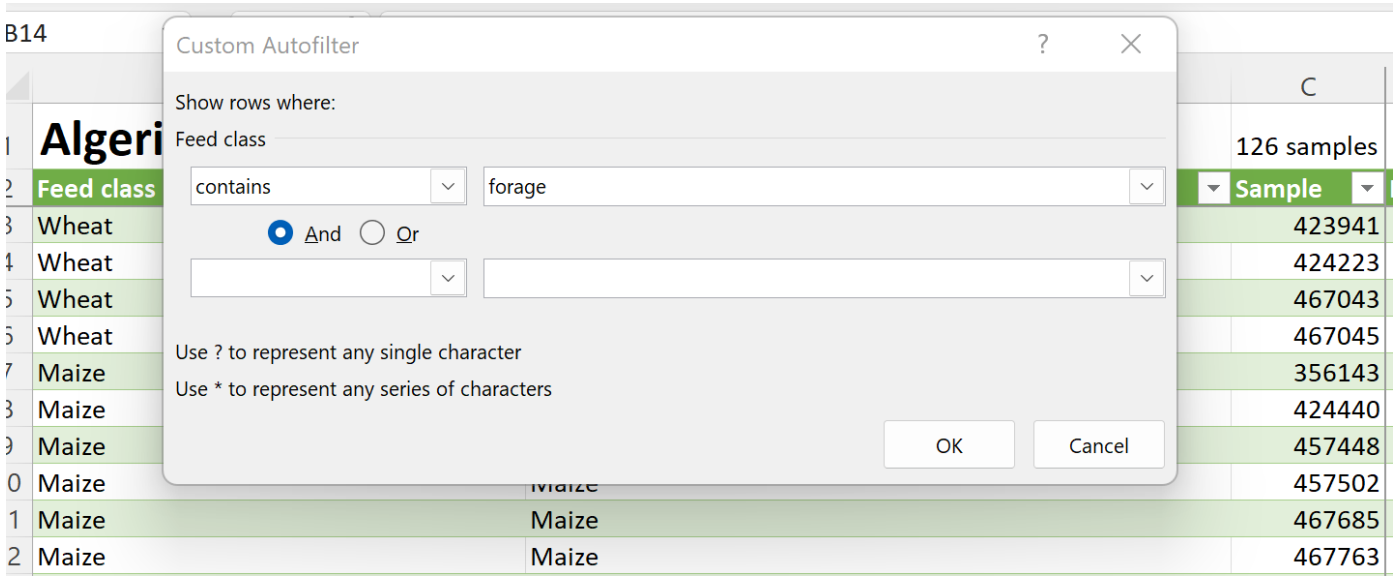


- to filter by Feed class or Feed name ('Raw data' and 'Averages' sheets), or by Parameter, Full name, or Class name ('Parameters' sheet), click on the column header arrow and choose one or several items by clicking on the check boxes. Since all the check boxes are checked by default, it is practical to uncheck first 'Select all', and then select the boxes you want to show.

Filtering the data by item

- It is also possible to filter on text containing words or some characters using the “text filters” as shown in red hereafter, which will open the next panel on the right





Filtering the data by item: the results

- Filtering by item: results after selecting « forage trees » in the list appearing below the arrow of Feed class

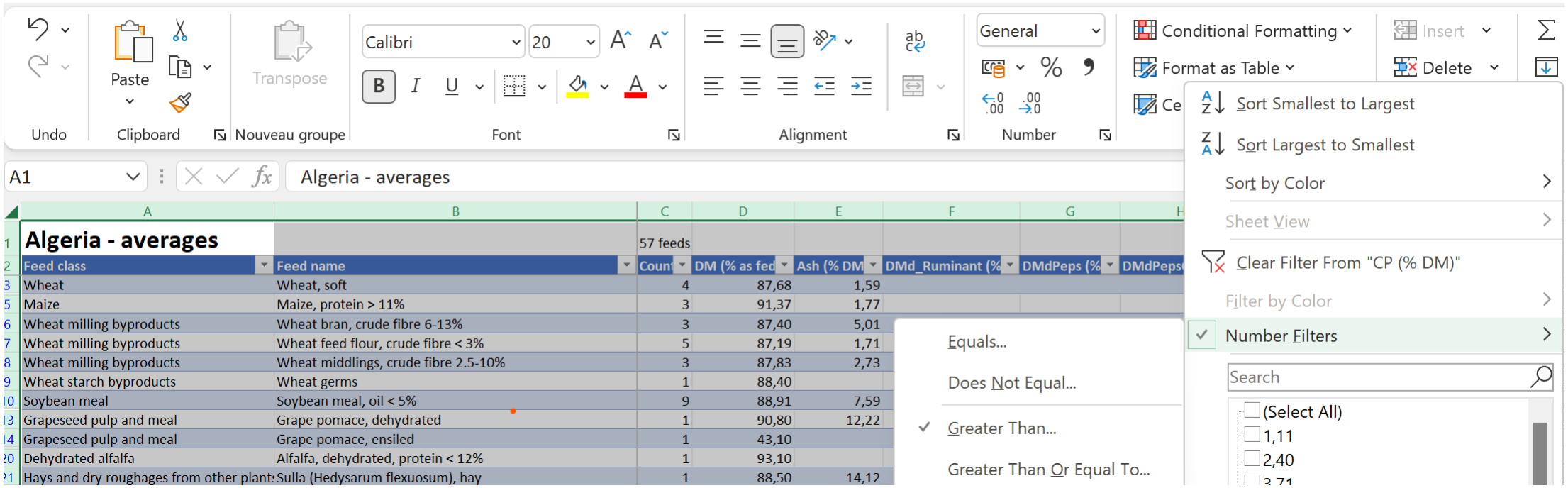
Algeria - raw data — 126 samples

Feed class	Feed name	Sample	DM (% as fed)	Ash (% DM)	DMd_Ruminant (%)
Forage trees	Acacia (Acacia horrida), aerial part, fresh	686602		10,50	
Forage trees	Acacia (Acacia saligna), aerial part, fresh	686603		10,10	
Forage trees	Ana tree (Faidherbia albida), aerial part, fresh	686604		6,40	
Forage trees	Babul (Acacia nilotica), aerial part, fresh	686601		8,00	
Forage trees	Date (Phoenix dactylifera), aerial part, dry	669521	94,37	15,25	37,80
Forage trees	Mimosa (Albizia julibrissin), aerial part, fresh	686605		12,80	
Forage trees	Pomegranate (Punica granatum), aerial part, fresh	686607		8,90	

Note that the black filter in the grey case shows that the data are filtered

Filtering the data by value (1/3)

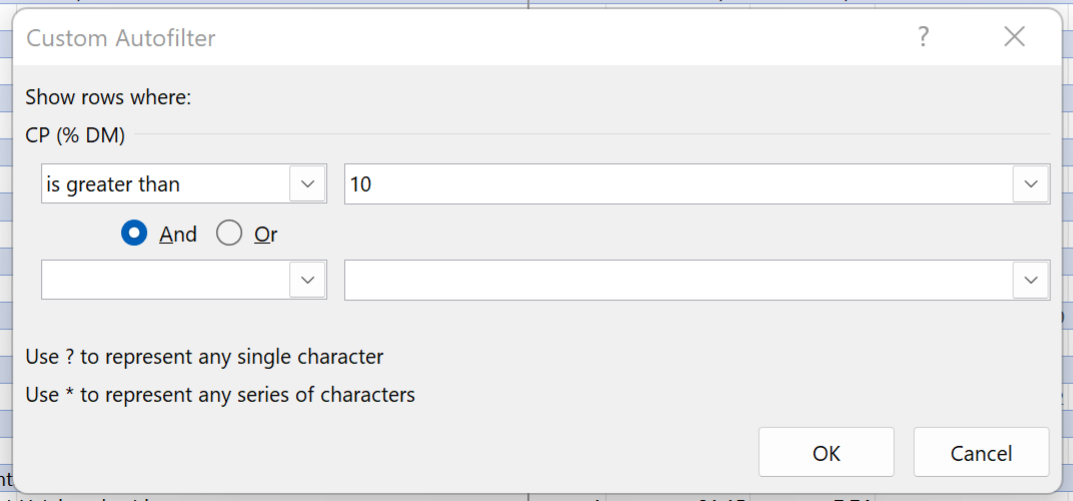
- In the 'Raw data' and 'Averages' sheet, you can filter the sheets by value using the Number filters in the filter options panel. For instance, to filter the rows with a crude protein value higher than 10%, click on the 'CP (% DM)' header arrow, choose Number filters, click on Greater than...



	A	B	C	D	E	F	G
1	**Algeria - averages**		57 feeds				
2	Feed class	Feed name	Count	DM (% as fed	Ash (% DM	DMd_Ruminant (%	DMdPeps (%
3	Wheat	Wheat, soft	4	87,68	1,59		
5	Maize	Maize, protein > 11%	3	91,37	1,77		
6	Wheat milling byproducts	Wheat bran, crude fibre 6-13%	3	87,40	5,01		
7	Wheat milling byproducts	Wheat feed flour, crude fibre < 3%	5	87,19	1,71		
8	Wheat milling byproducts	Wheat middlings, crude fibre 2.5-10%	3	87,83	2,73		
9	Wheat starch byproducts	Wheat germs	1	88,40			
10	Soybean meal	Soybean meal, oil < 5%	9	88,91	7,59		
13	Grapeseed pulp and meal	Grape pomace, dehydrated	1	90,80	12,22		
14	Grapeseed pulp and meal	Grape pomace, ensiled	1	43,10			
20	Dehydrated alfalfa	Alfalfa, dehydrated, protein < 12%	1	93,10			
21	Hays and dry roughages from other plant	Sulla (Hedysarum flexuosum), hay	1	88,50	14,12		

Filtering the data by value (2/3)

Algeria - averages		57 feeds									
Feed class	Feed name	Count	DM (% as fed	Ash (% DM	DMd_Ruminant (%	DMdPeps (%	DMdPepsCell (%	OMd_Ruminant (%	OMdPepsCell (%	CP (% DM	NDF (
Wheat	Wheat, soft	4	87,68	1,59						12,94	
Maize										9,32	
Maize										13,57	
Wheat milling byproducts										16,97	
Wheat milling byproducts										13,59	
Wheat milling byproducts										14,80	
Wheat starch byproducts										29,86	
Soybean meal										51,86	
Olive pulp and meal										6,82	
Olive pulp and meal										6,87	
Grapeseed pulp and meal										15,42	
Grapeseed pulp and meal								28,20		14,20	
Fruits and vegetables								76,39		3,71	
Molasses										1,11	
Hulls and pods							73,96		73,92	7,22	
Other plant byproducts							52,42	48,08	51,89	9,58	
Other plant byproducts										6,31	
Dehydrated alfalfa										12,35	
Hays and dry roughages from other plant										16,61	
Hays and dry roughages from other plant	Vetch and oat hay	1	91,15	7,74						8,05	



- Filtering values of CP higher than 10% : after clicking on Greater than the next panel shows Custom autofilter panel: enter the filter criteria (10), and press OK.

Filtering the data by value: the results (3/3)

All value of CP higher than 10%

Algeria - averages

Feed class	Feed name	OMd_Ruminant (%)	OMdPepsCell (%)	CP (% DM)
Wheat	Wheat, soft			12,94
Maize	Maize, protein > 11%			13,57
Wheat milling byproducts	Wheat bran, crude fibre 6-13%			16,97
Wheat milling byproducts	Wheat feed flour, crude fibre < 3%			13,59
Wheat milling byproducts	Wheat middlings, crude fibre 2.5-10%			14,80
Wheat starch byproducts	Wheat germs			29,86
Soybean meal	Soybean meal, oil < 5%			51,86
Grapeseed pulp and meal	Grape pomace, dehydrated			15,42
Grapeseed pulp and meal	Grape pomace, ensiled	28,20		14,20
Dehydrated alfalfa	Alfalfa, dehydrated, protein < 12%			12,35
Hays and dry roughages from other plants	Sulla (Hedysarum flexuosum), hay			16,61
Fresh roughages from legumes	Barrel medic (Medicago truncatula), aerial part, fresh			24,74
Fresh roughages from legumes	Ciliate medick (Medicago ciliaris), aerial part, fresh			27,31
Fresh roughages from legumes	Faba bean, aerial part, fresh			19,38
Fresh roughages from legumes	Hedgehog medick (Medicago intertexta), aerial part, fresh			22,76
Fresh roughages from legumes	Sulla (Hedysarum coronarium) aerial part, fresh			18,36

Using the filtered /sorted results

Once you have filtered the values/items you can copy and paste the results in a new file to start making your own calculations.

Always think about removing prior filters or sorts when you start a new task

Thanks for reading !