

The logo for the Global Research Alliance is a large, stylized globe composed of a grid of blue circles of varying shades, creating a textured, spherical effect. It is positioned in the upper right corner of the slide.

GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

The background of the lower half of the slide is a photograph of a field of golden wheat. The wheat stalks are tall and thin, with their heads of grain clearly visible. The lighting is warm, suggesting a late afternoon or early morning setting, with a soft glow over the entire scene.

Managing Agricultural Greenhouse Gases Network (MAGGnet)

GRA-CRG Meeting
Embrapa Soils Center, Rio de Janeiro, Brazil
11 August 2018

Responded to Metadata Requests...

- CRG Conservation Agriculture Network (Craig Drury)
- FACCE ERA-GAS, RESIDUEGAS (Kate Smith)

Presented Project Overview...

- MAGGnet/GRAMP poster presentation at 2017 SSSA annual meeting, Tampa, FL

Added New Metadata...

- 40 additional study sites (Canada, Finland, Italy, New Zealand, USA)

Created ArcView Mapping Feature...

- Organized by crop type

Managing Agricultural Greenhouse Gases Network (MAGGnet)

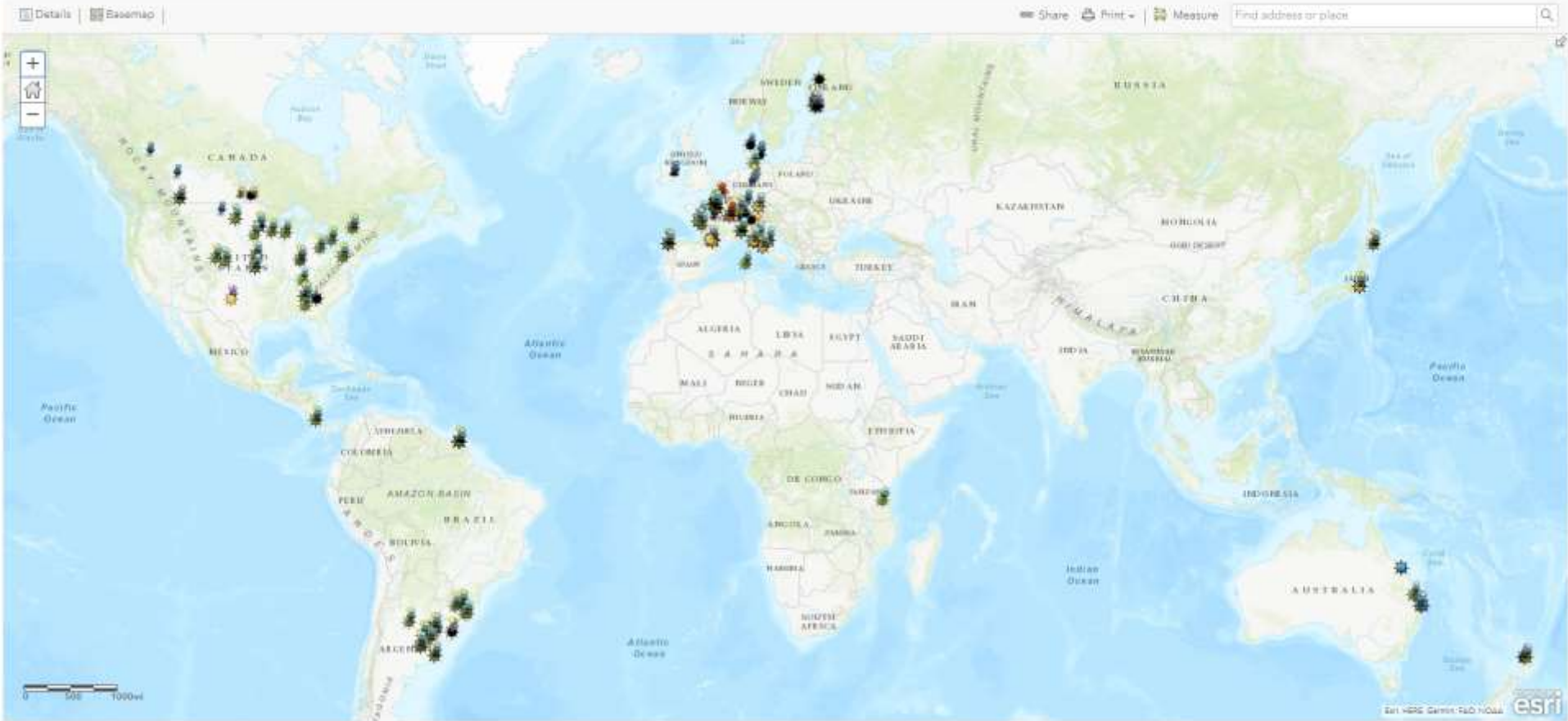
ArcView Mapping Feature

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ON AGRICULTURAL GREENHOUSE GASES

Home - Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites

Modify Map & Sign In



Website link opens Basemap of all sites (icon specific to crop)

Managing Agricultural Greenhouse Gases Network (MAGGnet)

ArcView Mapping Feature

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Home > Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites

Modify Map & Sign in

The screenshot shows the ArcView web interface for the MAGGnet Experimental Sites. On the left, a sidebar contains a 'Content' tab (highlighted with a red circle) and a list of crops with checkboxes: MAGGnet Sorghum, MAGGnet Sugarcane, MAGGnet Sugarbeet, MAGGnet Soybean, MAGGnet Sorghum, MAGGnet Rye, MAGGnet Rapeseed, MAGGnet Pea, MAGGnet Oat, MAGGnet Maize, MAGGnet Grasslands, MAGGnet Fababeen, MAGGnet Barley, and MAGGnet Alfalfa. Below the list are options for 'MAGGnet All' and 'Topographic'. The main map area shows a world map with colored markers representing experimental sites in North America, Europe, Africa, South America, and Australia. The interface includes a search bar at the top right, a scale bar at the bottom left, and the Esri logo at the bottom right.

Crops with site metadata listed in left column (under Content)

Managing Agricultural Greenhouse Gases Network (MAGGnet)

ArcView Mapping Feature

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Home » Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites

Modify Map & Sign In

The screenshot displays the ArcView web interface for the Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites. The interface includes a navigation bar at the top with 'Home' and 'Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites'. On the right, there are options for 'Modify Map' and 'Sign In'. Below the navigation bar, there are tabs for 'Details' and 'Basemap'. The main content area is divided into a left sidebar and a central map. The sidebar contains a 'Contents' panel with a list of crop types: MAGGnet Wheat, MAGGnet Triticale, MAGGnet Sunflower, MAGGnet Sugarcane, MAGGnet Sugarbeet, MAGGnet Soybean, MAGGnet Sorghum, MAGGnet Rye, MAGGnet Rapeseed, MAGGnet Pea, MAGGnet Oat, MAGGnet Maize, MAGGnet Grasslands, and MAGGnet Fababeen. The 'MAGGnet Barley' entry is selected and circled in red. The central map shows a world map with several dark blue pins representing experimental sites. The pins are located in North America (USA and Canada), Europe, and South America. The map also shows the Atlantic Ocean, Pacific Ocean, Indian Ocean, and Arctic Ocean. A scale bar at the bottom left indicates 500 and 1000 miles. The Esri logo is visible in the bottom right corner.

Sites sharing a particular attribute (e.g., barley) can be isolated on the map.

Managing Agricultural Greenhouse Gases Network (MAGGnet)

ArcView Mapping Feature

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Home - Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites

Details | Basemap | Share | Print | Measure | Find address or place

About | Comment | Legend

Contents

- MAGGnet Wheat
- MAGGnet Triticale
- MAGGnet Sunflower
- MAGGnet Sugarcane
- MAGGnet Sugarbeet
- MAGGnet Soybean
- MAGGnet Sorghum
- MAGGnet Rye
- MAGGnet Rapeseed
- MAGGnet Pea
- MAGGnet Oat
- MAGGnet Maize
- MAGGnet Grasslands
- MAGGnet Fababean
- MAGGnet Barley
- MAGGnet Alfalfa

MAGGnet_Barley_test

Exp_ID	CENTS-PL
Location	Flakkebjerg Denmark
Latitude	55.33
Longitude	11.39
MAP	559
MAT	7.8
Soil_Type	Oxyaquic-Agrudoll
Texture	Sandy loam
SOC_Data	Yes
CO2_Data	Yes
CH4_Data	No
N2O_Data	Yes
Zoom to	

0 200 400km

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Selection of individual sites on map provides associated metadata.

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- MAGGnet Wheat
- MAGGnet Tribale
- MAGGnet Sunflower
- MAGGnet Sugarcane
- MAGGnet Sugarbeet
- MAGGnet Soybean
- MAGGnet Sorgum
- MAGGnet Rye
- MAGGnet Rapeseed
- MAGGnet Pea
- MAGGnet Oat
- MAGGnet Maize
- MAGGnet Grasslands
- MAGGnet Faba bean
- MAGGnet Barley**
- MAGGnet Alfalfa



MAGGnet Barley (Features: 112, Selected: 0)

Exp_ID	Location	Latitude	Longitude	MAP	MAP	Soil_Type	Texture	SOC_Data	CO2_Data
CAN004	Lethbridge Alberta Canada	49.70	-112.77	401	6.2	Orthic Dark Brown Chernozem	Loam to Clay Loam	No	Yes
CAN004	Lethbridge Alberta Canada	49.70	-112.77	401	6.2	Orthic Dark Brown Chernozem	Loam to Clay Loam	No	Yes
CAN011	Lethbridge Alberta Canada	49.63	-112.78	396	6.4	Orthic Dark Brown Chernozem	Clay Loam	No	No
CAN011	Lacombe Alberta Canada	52.45	-113.75	457	2.9	Black Chernozem	Clay Loam		
CAN011	Beaverlodge Alberta Canada	55.21	-119.42	441	2.6	Grey Luvisol	Loam to Clay Loam		
CENTS_Fo	Foulum Denmark	56.20	9.35	626	7.3	Typic Hapludalf	Sandy loam	Yes	Yes
CENTS-FL	Flakkebjerg Denmark	55.33	11.39	559	7.8	Oxyaquic Agriudoll	Sandy loam	Yes	Yes
CENTS-FL	Flakkebjerg Denmark	55.33	11.30	559	7.8	Oxyaquic Agriudoll	Sandy loam	Yes	Yes
CENTS-FL	Flakkebjerg Denmark	55.33	11.39	559	7.8	Oxyaquic Agriudoll	Sandy loam	Yes	Yes

Selection of the table feature displays metadata for all sites sharing an attribute.

Managing Agricultural Greenhouse Gases Network (MAGGnet)

ArcView Mapping Feature

Home - Managing Agricultural Greenhouse Gases Network (MAGGnet) Experimental Sites

Modify Map & Sign In

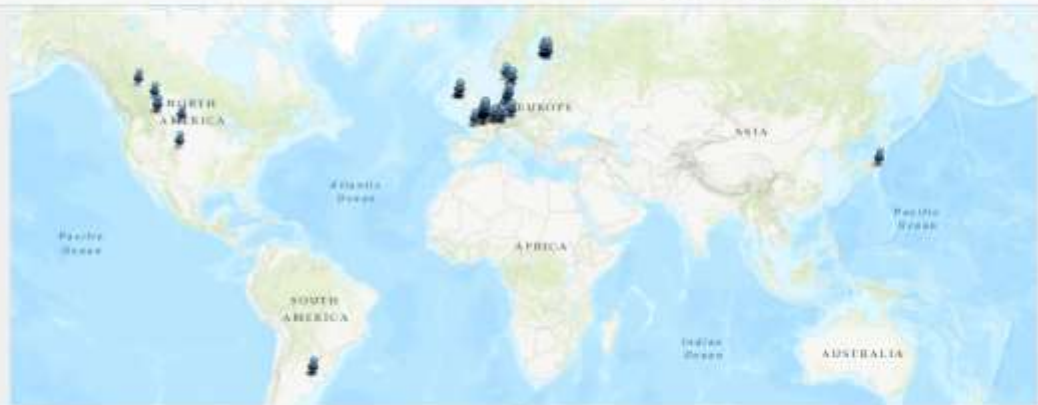
Details | Basemap

Share | Print | Measure | Find address or place

About | Content | Legend

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- MAGGnet Triticale
- MAGGnet Sunflower
- MAGGnet Sugarcane
- MAGGnet Sugarbeet
- MAGGnet Soybean
- MAGGnet Sorghum
- MAGGnet Rye
- MAGGnet Rapeseed
- MAGGnet Pea
- MAGGnet Oat
- MAGGnet Maize
- MAGGnet Grasslands
- MAGGnet Fababean
- MAGGnet Barley**
- MAGGnet Alfalfa



MAGGnet Barley (Features: 112, Selected: 0)

Texture	SOC_Data	CO2_Data	CH4_Data	N2O_Data	Grain_Data	Stover_Data	Root_Data	1st_Crop	2nd_Crop
Loam to Clay Loam	No	Yes	Yes	Yes	No	No	No	Alfalfa	Wheat
Loam to Clay Loam	No	Yes	Yes	Yes	No	No	No	Wheat	Barley
Clay Loam	No	No	No	Yes	Yes	Yes	No	Canola-barley	
Clay Loam								Canola-barley	
Loam to Clay Loam								Canola-barley	
Sandy loam	Yes	Yes	No	Yes	Yes	Yes	Yes	Winter wheat	Barley
Sandy loam	Yes	Yes	No	Yes	Yes	Yes	Yes	Winter wheat	Barley
Sandy loam	Yes	Yes	No	Yes	Yes	Yes	Yes		
Sandy loam	Yes	Yes	No	Yes	Yes	Yes	Yes		

0 1000 2000m

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Additional metadata shown by scrolling to the right (e.g., type of data collected, crops in rotation, etc.)

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- MAGGnet Barley
- MAGGnet Alfalfa

MAGGnet Barley (Features: 112, Selected: 0)

5th_Crop	6th_Crop	Tillage	Fertilizer	Cover_Crop	Remove_Res	Irrigation	PI_Name	PI_Email	Field31
Fababean		Other	None	None	Yes	Yes	B.H. Ellert	Ellert@agr.gc.ca	
		Other	Synthetic_Normal	None	Yes	Yes			
		No_Till	Synthetic_Normal	None	Partial	Yes	X. Hao	xivling.hao@agr.gc.ca	
		No_Till	Synthetic_SlowRelease	None	Partial	Yes			
		No_Till	Synthetic_Normal	None	Partial	Yes			
		Sub_Till	Synthetic_Normal	None	No	No	Lars Munkholm	Lars.munkholm@agr.gc.ca	
		Conservation_Till	Synthetic_Normal	None	No	No			
		No_Till	Synthetic_Normal	None	No	No			
		Conventional_Till	Synthetic_Normal	Fodder radish	No	No			

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Managing Agricultural Greenhouse Gases Network (MAGGnet)

ArcView Mapping Feature

Easy to Use...

- Visual interface facilitates site selection
- Just need URL link (special software not required)

Easy to Update...

- Incorporating additional sites can be done quickly

Complements Excel spreadsheet...

- Currently organized by crop type, but could sort differently (management attributes, measurement groups, etc.)

Once complete, provide access to mapping feature through the GRA website (proposed)

Continue to generate awareness of MAGGnet metadata

- Next MAGGnet presentation at *International Conference on Agricultural GHG Emissions and Food Security*, 10-13 September 2018, Berlin, Germany.

Resume expansion of meta-database, but move call for new metadata to October

Seek out options to develop online interface for collection and retrieval of metadata

Facilitate increase in engagement among underrepresented GRA countries

- Perhaps part of a CLIF-GRADS student project?

Identify and secure resources to build online interface for metadata collection and retrieval

- Aligned with broader effort by *Global Open Data for Agriculture & Nutrition* (a GRA partner).



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Questions/Comments

Mark Liebig, MAGGnet Coordinator
mark.liebig@ars.usda.gov