



COMET-Farm Training for SWCDs – Agroforestry Training

October 2025



COMET
Farm



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Estimate your whole farm and ranch carbon sequestration and greenhouse gas emissions using COMET-Farm

Describe your farm and ranch management to generate an estimate comparing soil carbon and greenhouse gas emissions between scenarios

[Projects](#)



- Estimation of whole farm greenhouse gas emission and carbon sequestration
- Helps compare scenarios
 - If a farm implements X, greenhouse gas emissions will change Y



- <https://comet-farm.com/home>
- https://comet-farm.com/COMET-Farm_Manual.pdf
 - Agroforestry begins on page 107



- Agroforestry BMP training
 - Background on COMET-Farm
 - Navigating the COMET-Farm Website
 - COMET-Farm organization for agroforestry
 - Project walkthrough for agroforestry
 - Reporting

Why is COMET-Farm a part of our project?



- 10% of total project acres must be run through COMET-Farm
- No individual requirement for each SWCD
- But COMET-Farm provides benefits
 - More information for grower/producer
 - More precise results
 - Silvopasture is not in COMET-Planner in Minnesota



Guide: Select Accounting Activities



Cropland, Pasture, Range, Orchards/Vineyards:

Uses DayCent to account for soil-related emissions resulting from management practices such as planting dates, tillage, and fertilizer application. Emission estimates will only relate to soil-related emissions within the defined entity or entities (i.e., fields, pastures, vineyards, etc.).



Animal Agriculture:

Uses empirical calculations to estimate emissions resulting from livestock management practices, such as how the animals are housed or how manure is handled. Emission estimates will only relate to emissions related to livestock within the defined entity (i.e., heads of cattle, poultry, swine, etc.).



Agroforestry:

Uses empirical calculations to estimate emissions resulting from agroforestry practices such as silvopasture systems, riparian buffers, or windbreaks.



Forestry:

Uses empirical calculations to estimate emissions resulting from forestry management practices such as clear-cut harvesting.



- Silvopasture (381)



- Specifics about type of project
- Tree types

Registering for a COMET-Farm Account



Welcome

Register for COMET-Farm Account

☐

I have read and agree to the [Terms and Conditions](#)*

☐

Subscribe to COMET-Quarterly Newsletter and Tool Updates

Register Account

Registering for a COMET-Farm Account



Welcome

Register for COMET-Farm Account

First Name (Required) *

Last Name (Required) *

Email (Required) *

Password *

Confirm Password *

Sector

Company /Organization Name (Optional)

☐

I have read and agree to the [Terms and Conditions](#) *

☐

Subscribe to COMET-Quarterly Newsletter and Tool Updates

Register Account

Email needs to be
verified before
continuing.



Project "Alliance - Agroforestry" Roadmap [?]



Projects



Agroforestry



Report

Starting a project – naming, selecting activity



New Project

1

Project Name (required)

Project Notes (optional)

2

Select Accounting Activities [?]

You may select multiple activities within one project; however, reported emissions will be each generated in their own report.

- ☐  **Cropland, Pasture, Range, Orchards/Vineyards**
- ☐  **Animal Agriculture**
- ☐  **Agroforestry**
- ☐  **Forestry**

Please select at least one activity.

Cancel

Enter Management



Project "Alliance - Agroforestry" Roadmap [?]



Projects



Agroforestry



Report



1 Operation Location

Select the location of your agroforestry operation

State:

Minnesota



County:

Stevens County





2 Agroforestry Scenario ?

Enter information about your agroforestry practices

Select a Pre-Defined Scenario

Enter My Own Information

a

Scenario ?

Options...

b

Age

0

years

c

Size

0

acres



2 Agroforestry Scenario ?

Enter information about your agroforestry practices

Select a Pre-Defined Scenario

Enter My Own Information

a Scenario ? ...ions...

b

c

Here we have two options: selecting from pre-defined scenarios or entering all the data. For this project, you may do either to capture the silvopasture management.



2 Agroforestry Scenario ?

Enter information about your agroforestry practices

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Enter My Own Information

a

Scenario ?

Options...

b

Age

0

years

c

Size

0

acres



2 Agroforestry Scenario ?

Enter information about your agroforestry practices

Select a Pre-Defined Scenario

Enter My Own

Options...

1-row windbreak (Conifer)

3-row windbreak (Hardwood/Conifer)

5-row windbreak (Hardwood/Conifer)

Alley cropping (Hardwood)

Farm woodlot (Mixed Hardwoods)

Riparian buffer (Mixed Hardwoods with Ash)

Riparian buffer (Mixed Hardwoods)

a

Scenario ?

Options...



b

Age

0

years

c

Size

0

acres



2 Agroforestry Scenario ?

Enter information about your agroforestry practices

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Enter My Own Information

a

Scenario ?

Options...

b

Age

0

years

c

Size

0

acres

Agroforestry – Option 2 enter all data



Select a Pre-Defined Scenario

Enter My Own Information

a

Management Scenario Name

Update Scenario Name

b

Species Group

Options...

c

Select Age or DBH

?

Select an Input...

d

Total Number of Trees

0

Add Species

Agroforestry – Option 2 enter all data



Select a Pre-Defined Scenario

Enter My Own Information

a

Management Scenario Name

Update Scenario Name

b

Species Group

Options...

c

Select Age or DBH

① Select an Input...

d

Total Number of Trees

0

Add Species

Options...

Maple

Other Hardwoods

Cedars (Eastern Red)

Hickory/Pecan/Walnut

Deciduous Oaks/Beech/Chesnut

Ash

Pine

Cottonwood/Willow/Aspen

Agroforestry – Option 2 enter all data



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Options...

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Project "Alliance - Agroforestry" Roadmap [?]



Projects



Agroforestry



Report



Agroforestry

Agroforestry Report Summary

Report Display: ☒ Dual ☐ Graph

Scenario Location: Stevens County, Minnesota

All estimates are presented in terms of metric tonnes of CO₂-equivalent over the indicated decade in the fifty-year scenario period.

Alley cropping (Hardwood)

Scenario		2025	2035	2045	2055	2065
▼	Alley cropping (Hardwood) (Age :5)-(Size :100) (undefined)	1,146.9	2,622.4	3,853.8	4,966.6	6,002.9
▼	Hickory/Pecan/Walnut	1,146.9	2,622.4	3,853.8	4,966.6	6,002.9
	Live Trees	1,146.9	2,622.4	3,853.8	4,966.6	6,002.9



Agroforestry

Agroforestry Report Summary

Results show carbon sequestration and all results are positive

Display: ☒ Dual ☐ Graph

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Results are over a 10-year period. To get annual, subtract 2035 by 2025 and divide by 10.

Agroforestry Report Summary

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Display: ☒ Dual ☐ Graph

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Hickory/Pecan/Walnut				4,966.6	6,002.9
Live Trees				4,966.6	6,002.9

Reporting should only be for CO₂e.
In this scenario, a reduction of 146.55 tonnes of CO₂e per year is expected to occur.



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expected to occur.**



Please list each FSA Farm#, on it's own individual line. Please do not list multiple Farm numbers in one box. Please list every Farm# that was enrolled in the program.

	FSA Farm#	State	Conservation Practice	County	GHG Reduction	CO2 Reduction	CH4 Reduction	N2O Reduction



- The USDA website
 - User guides, office hours, etc.
 - <https://comet-farm.com/home>
- Contact me: Aaron Frankl
 - afrankl@houstoneng.com



COMET
Farm



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U.S. DEPARTMENT OF AGRICULTURE

