

COMET-Farm Training for SWCDs – Agroforestry Training

October 2025





USDA
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

What is COMET-Farm?



- 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 training



- 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

Starting a project – selecting activity



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.

Agroforestry– Alliance Project BMPs



• Silvopasture (381)

Agroforestry Project – What you need



- Specifics about type of project
- Tree types

Registering for a COMET-Farm Account



Welcome Register for COMET-Farm Account First Name (Required) * Last Name (Required) * Email (Required) * Password * Confirm Password * Company /Organization Name (Optional) Sector I have read and agree to the <u>Terms and Conditions</u>* Subscribe to COMET-Quarterly Newsletter and Tool Updates **Register Account**

Registering for a COMET-Farm Account



Welcome Register for COMET-Farm Account Email needs to be verified before continuing. I have read and agree to the *Terms and Conditions** Subscribe to COMET-Quarterly Newsletter and Tool Updates





Starting a project – naming, selecting activity



New Project



Project Name (required)

Project Notes (optional)



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







1 Operation Location ②

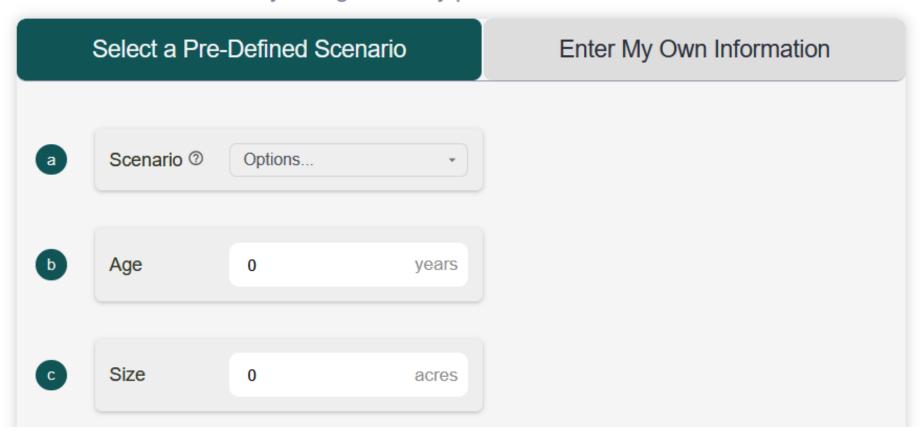
Select the location of your agroforestry operation

State:	Minnesota +
County:	Stevens County •

Agroforestry – entering a scenario



2 Agroforestry Scenario ②



Agroforestry – entering a scenario



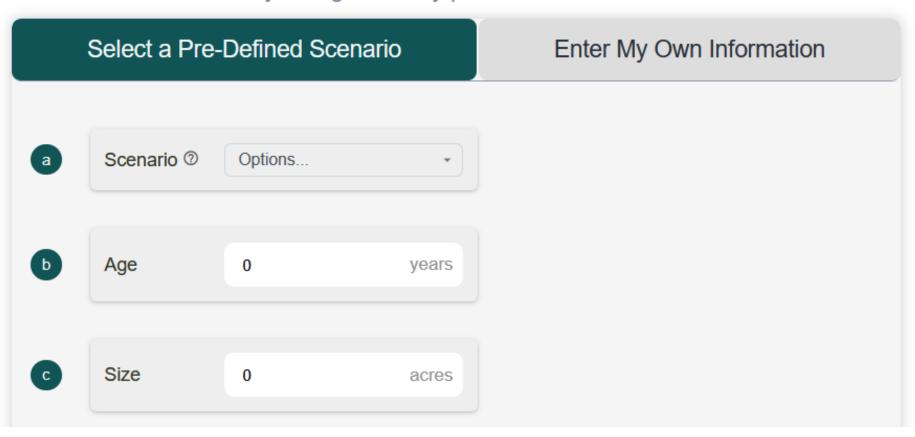
2 Agroforestry Scenario ②



Agroforestry – Option 1 pre-defined scenario



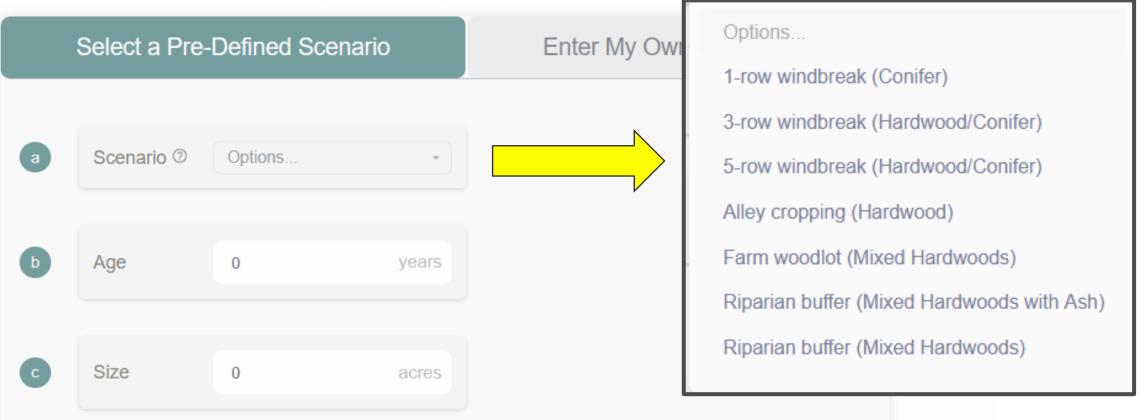
2 Agroforestry Scenario ?



Agroforestry – Option 1 pre-defined scenario



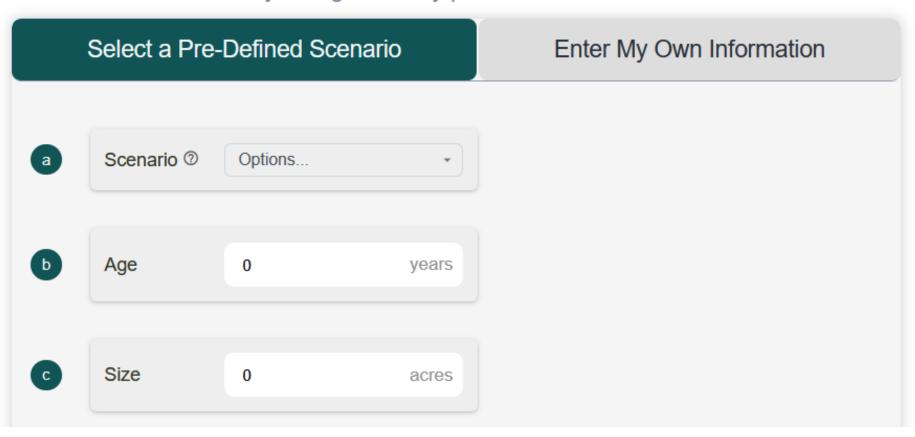
2 Agroforestry Scenario ?



Agroforestry – Option 1 pre-defined scenario

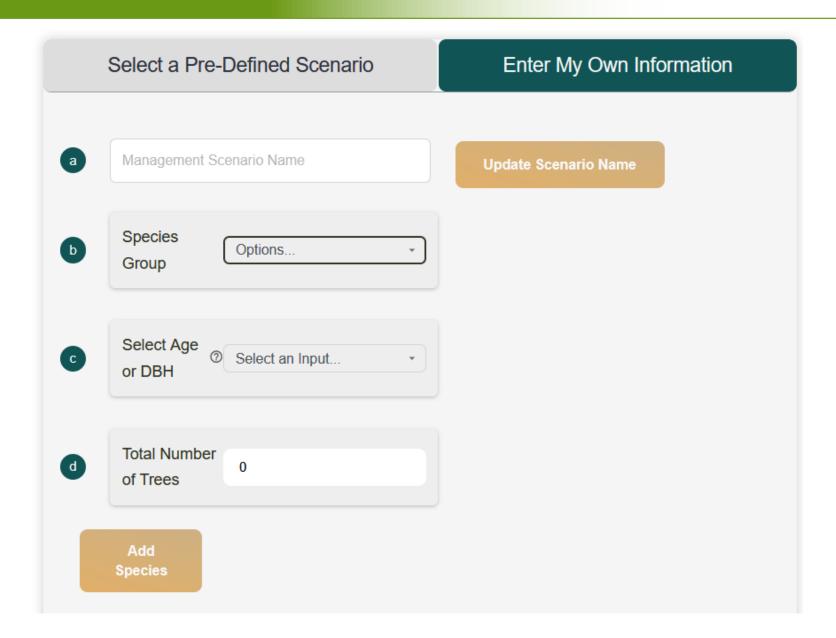


2 Agroforestry Scenario ?



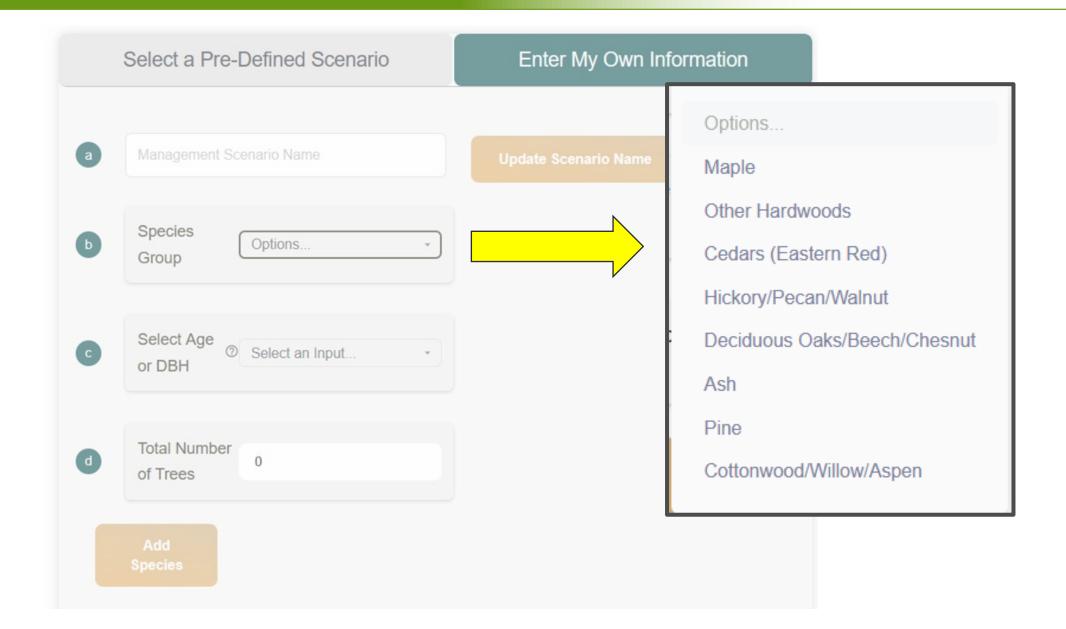
Agroforestry – Option 2 enter all data





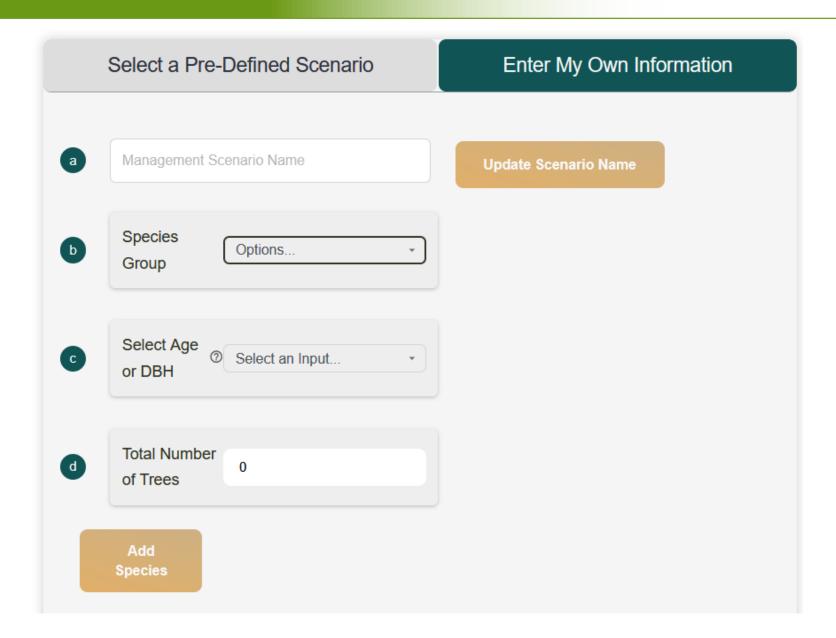
Agroforestry – Option 2 enter all data





Agroforestry – Option 2 enter all data











Agroforestry

Agroforestry Report Summary

Report Display:

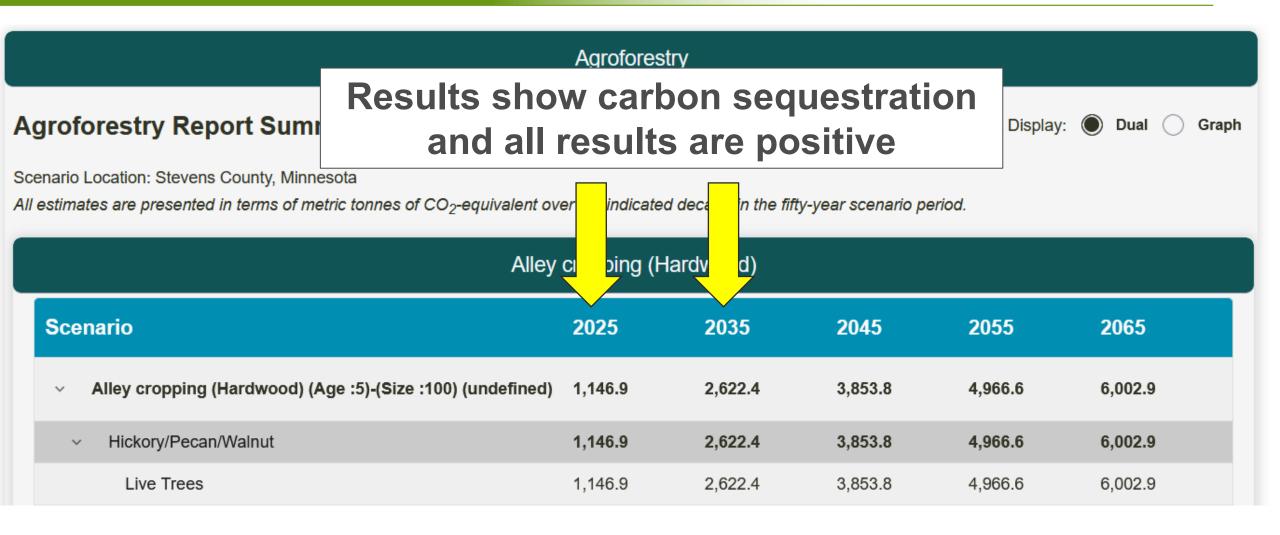
Scenario Location: Stevens County, Minnesota

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

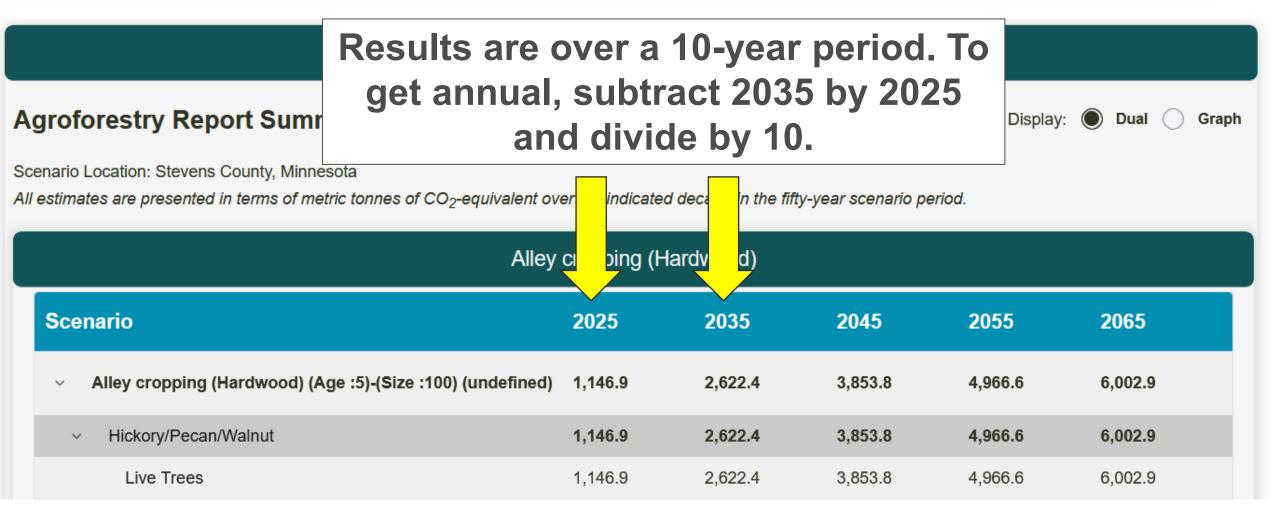
Alley cropping (Hardwood)

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

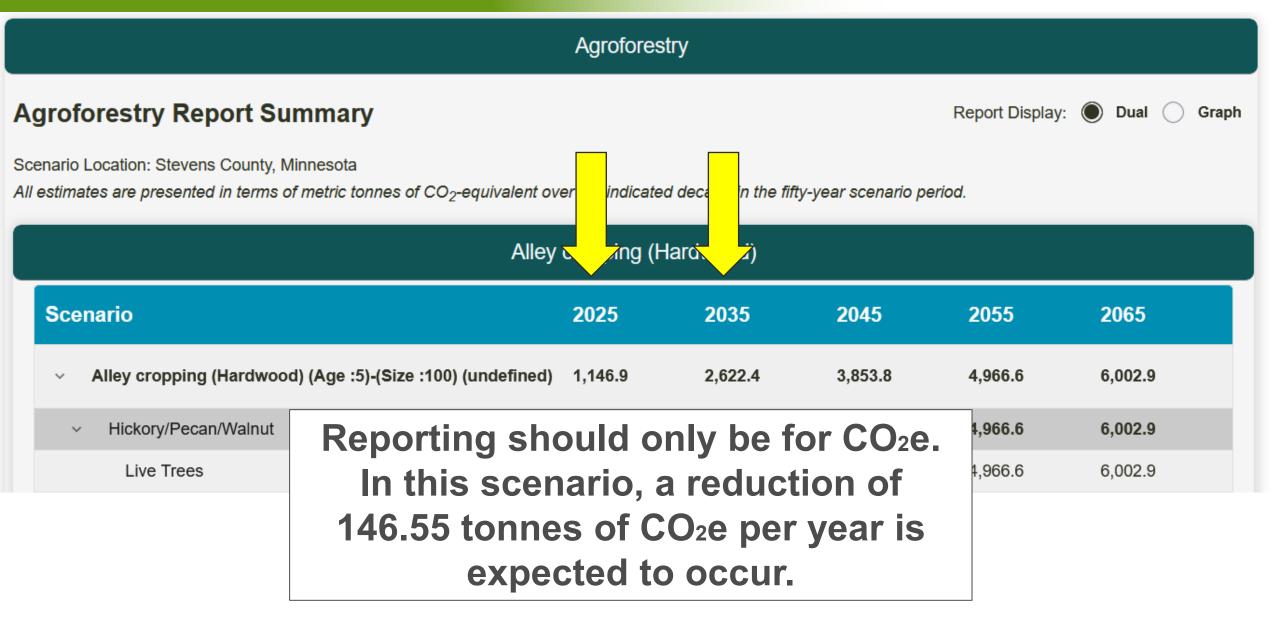














Reporting should only be for CO₂e. In this scenario, a reduction of 146.55 tonnes of CO₂e per year is expected to occur.

Please list each FSA Farm#, on it's own individual line. Please do not list multiple Farm numbers in one box. Pleas

every Farm# that was enrolled in the program.

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

COMET Farm Modeling Tool Version Number

Contacts



- The USDA website
 - User guides, office hours, etc.
 - https://comet-farm.com/home
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COMET USDA Natural Resources Conservation Service U.S. DEPARTMENT OF AGRICULTURE

