

# NATIONAL AGROFORESTRY SURVEY 2022

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**United States  
Department of  
Agriculture**



**NATIONAL  
AGRICULTURAL  
STATISTICS  
SERVICE**

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Please make corrections to name, address and ZIP Code, if necessary.

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## Screener

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1. In the past 12 months, did this operation:

a. Raise or sell any livestock (possible examples include cattle, hogs, sheep, goats, equine, poultry, bees, etc.)?

0001 1  Yes      3  No

b. Own and/or operate cropland, pastureland, woodland, rangeland, or other land with agricultural or forestry activities?

0002 1  Yes      3  No

c. Received any Federal or state agricultural payments and/or participated in a Federal or state agricultural program?

0003 1  Yes      3  No

d. Did you answer **Yes** to any of the questions above?

0004 1  Yes - Continue      3  No - Go to Section 6, page 22

## Section 1 - Windbreaks, Shelterbelts and Hedgerows

Windbreaks, Shelterbelts and Hedgerows are rows of trees and shrubs that are used to create a more favorable environment for soils, crops, livestock, wildlife, and people. In some cases, they are designed to slow wind, while other times they are designed for visual screening, snow management, odor control, shade for livestock/buildings/people, enhancing pollination, field/property borders, etc.

Does this operation have any land in **windbreaks, shelterbelts or hedgerows**?

1000  <sub>1</sub> Yes - Continue       <sub>3</sub> No - Go to Section 2, page 6

1. Does this operation utilize any of the following types of windbreak, shelterbelt and/or hedgerow? Check all that apply

- 1001  **Farmstead** - for use around buildings (shade, energy savings, etc.)
- 1002  **Field** - for use in protecting crops (field, orchards, etc.)
- 1003  **Livestock** - for use in protecting livestock and/or odor control
- 1004  **Boundary** - primarily used for enclosing or separating fields
- 1005  **Living snow fence** - specifically designed for snow management
- 1006  **Hedgerow** - primarily used for natural resource conservation purposes
- 1007  **Other** - Specify: <sup>1008</sup> \_\_\_\_\_

2. Were any of the following activities used to establish windbreaks, shelterbelts, and/or hedgerows on this operation?

Establishment Activities	YES	NO	DON'T KNOW
Hand planted tree seedlings ..... <sup>1009</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Mechanically planted tree seedlings ..... <sup>1010</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Used herbicides for weed control/site preparation prior to planting ..... <sup>1011</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Used cultivation for weed control/site preparation prior to planting ..... <sup>1012</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Used barrier weed control (mulch, plastic, etc.) to establish trees ..... <sup>1013</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Irrigated trees during the 1-3 year establishment period ..... <sup>1014</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Controlled weeds after planting trees during the 1-3 year establishment period .. <sup>1015</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Installed fencing and/or tree tubes to protect trees from wildlife/livestock ..... <sup>1016</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Replanted seedlings to fill gaps ..... <sup>1017</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Established windbreak without planting by allowing trees to grow naturally..... <sup>1018</sup>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>2</sub>
Other establishment activities - Specify: <sup>1019</sup> _____			

3. When were windbreaks, shelterbelts, and/or hedgerows established on this operation? Check all that apply

- 1020  <sub>1</sub> Less than 5 years ago       <sub>4</sub> Greater than 15 years ago
- <sub>2</sub> 5 years - less than 10 years ago       <sub>5</sub> Don't Know
- <sub>3</sub> 10 years - less than 15 years ago

4. Have any of the following activities occurred, or will occur, to manage/maintain the windbreaks, shelterbelts, and/or hedgerows on this operation?

Management/Maintenance Activities	YES	NO	DON'T KNOW
Cultivation for weed control (disking, plowing, mowing, etc.) ..... 1021	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Herbicide for weed control ..... 1022	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Barrier weed control (mulching/fabric) ..... 1023	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Flash or short duration grazing within windbreaks ..... 1024	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of tree branches and stems ..... 1025	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting trees/windbreak vegetation ..... 1026	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of living or dead trees (thinning) ..... 1027	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigation of trees ..... 1028	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fertilization and/or soil amendments for the trees ..... 1029	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Root pruning ..... 1030	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fencing or tree tubes to protect trees from wildlife/livestock..... 1031	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other management activities - Specify: <sup>1032</sup> _____			

5. Of the crops/products originating from windbreak trees and shrubs listed below, please specify whether this operation has:

- sold this before                     
  plan to sell this in the future                     
  use this for personal or on-farm use

Check all that apply

**Crops, Products and Resources from Windbreak, Shelterbelt, and/or Hedgerow Trees and Shrubs**

	Sold this before	Plan to sell this in the future	Use this for personal or on-farm use
a. Firewood .....	1033 <input type="checkbox"/>	1034 <input type="checkbox"/>	1035 <input type="checkbox"/>
b. Trees for timber products (lumber, boards, veneer, utility poles, etc.) .....	1036 <input type="checkbox"/>	1037 <input type="checkbox"/>	1038 <input type="checkbox"/>
c. Trees for non-timber products (pulp, fence posts, woodchips, etc.) .....	1039 <input type="checkbox"/>	1040 <input type="checkbox"/>	1041 <input type="checkbox"/>
d. Forages/hay/fodder for livestock .....	1042 <input type="checkbox"/>	1043 <input type="checkbox"/>	1044 <input type="checkbox"/>
e. Edibles (raspberries, walnuts, maple syrup, etc.) Specify products: <sup>1045</sup> _____	1046 <input type="checkbox"/>	1047 <input type="checkbox"/>	1048 <input type="checkbox"/>
f. Medicinal plants and herbs (American ginseng, goldenseal, etc.) Specify products: <sup>1049</sup> _____	1050 <input type="checkbox"/>	1051 <input type="checkbox"/>	1052 <input type="checkbox"/>
g. Decorative plants and/or materials for landscaping Specify products: <sup>1053</sup> _____	1054 <input type="checkbox"/>	1055 <input type="checkbox"/>	1056 <input type="checkbox"/>
h. Other crops/products - Specify: <sup>1057</sup> _____	1058 <input type="checkbox"/>	1059 <input type="checkbox"/>	1060 <input type="checkbox"/>

6. In the next five years, will the acreage of trees and shrubs in windbreaks, shelterbelts, and/or hedgerows for this operation increase, decrease or stay the same? Check one

1061

1  Increase - Specify reason(s): xxxx \_\_\_\_\_

2  Decrease - Specify reason(s): xxxx \_\_\_\_\_

3  Stay the same

4  Don't Know

7. Do windbreaks, shelterbelts, and/or hedgerows provide any of the following benefits to this operation?

Number	Conservation Benefits		YES	NO	DON'T KNOW
1	Improved erosion control .....	1064	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Improved soil health .....	1065	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	Habitat for pollinators and other beneficial insects .....	1066	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Wildlife habitat .....	1067	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Improved water quality .....	1068	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Improved nutrient management .....	1069	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Chemical drift mitigation (pesticide, herbicide, fertilizer) .....	1070	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Dust mitigation .....	1071	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Increased carbon storage in soils, trees, and vegetation .....	1072	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Economic Benefits</b>					
10	Increased crop production/yield .....	1073	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Improved crop quality .....	1074	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Income from windbreak trees/shrubs (firewood, timber, nuts, etc.) .....	1075	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Crops/products for on-farm or personal use from windbreak trees/shrubs (firewood, timber, nuts, etc.) .....	1076	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Improved welfare of livestock .....	1077	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Increased livestock production .....	1078	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Snow management .....	1079	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Protection of farm buildings, home, and other structures .....	1080	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Income diversification from multiple crops/products .....	1081	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Farmstead energy conservation .....	1082	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
20	Increased crop water use efficiency and/or irrigation efficiency .....	1083	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Revenue from hunting leases .....	1084	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Reduced spread of tree diseases (canker, citrus greening, etc) .....	1085	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
23	Improvement of marginal or unfarmable land .....	1086	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
24	Increased land value .....	1087	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
25	Revenue from conservation payments .....	1088	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
26	Improved resilience to weather extremes (drought, flood, etc.) .....	1089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Other Benefits</b>					
27	Improved working or living environment from less intense wind .....	1090	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
28	Aesthetics/scenic beauty .....	1091	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
29	Privacy/visual screening .....	1092	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
30	Hunting .....	1093	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
31	Recreation (other than hunting) .....	1094	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
32	Odor reduction .....	1095	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
33	Noise reduction .....	1096	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
34	Other benefit(s) - Specify: <sup>1097</sup> _____				

8. Of the windbreak, shelterbelt, and/or hedgerow benefits listed above (1 - 34), which 3 are most important to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
1098 _____	1099 _____	1100 _____

9. Have any of the following been challenges on this operation when establishing or managing windbreaks, shelterbelts, and/or hedgerows?

Number	Potential Challenges	YES	NO	DON'T KNOW
1	Lack of information about establishment ..... 1101	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Difficulty establishing trees/shrubs ..... 1102	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	High startup costs ..... 1103	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Lack of information on management and maintenance ..... 1104	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Difficulty regrowing trees within an established windbreak ..... 1105	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Expense of maintenance ..... 1106	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Lack of information on recommended tree/shrub species ..... 1107	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Lack of knowledge among technical assistance providers ..... 1108	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Lack of examples or demonstration sites ..... 1109	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Lack of financial assistance ..... 1110	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Lack of markets for products from windbreak ..... 1111	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Loss of cropland ..... 1112	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Harbors harmful crop pests (wildlife, insects, weeds, etc.) ..... 1113	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Conflict with farm equipment, practices, or layout ..... 1114	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Trees and crops compete for space, light, water, and nutrients ..... 1115	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Livestock damage to trees ..... 1116	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Wildlife damage to trees ..... 1117	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Tree/shrub pests and diseases ..... 1118	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Herbicide damaging trees/shrubs ..... 1119	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
20	Snow drift issues ..... 1120	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Adds labor and complexity to management ..... 1121	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Other challenge(s) - Specify: <span style="float: right;">1122</span> _____			

10. Of the challenges listed above (1 - 22), which 3 are most significant to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
1123 _____	1124 _____	1125 _____

11. Please estimate the total land area in windbreak, shelterbelt and/or hedgerow for this operation. Include all windbreak types.

<b>INCLUDE:</b> ▶ land owned ▶ rented ▶ leased from others	Estimate as acres <b>OR</b> length and width
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a. Total acres of windbreak.....

ACRES
1126

**OR**

b. Average width of windbreaks.....

FEET
1127

**AND**

total combined length of windbreaks rounded to the nearest 1/4 mile .....

MILES
1128

## Section 2 - Silvopasture

Grazing livestock on a site with trees is considered **silvopasture** if all three components of the system (livestock, trees, and forage) are deliberately integrated and managed. Some examples of silvopasture include:

- ▶ woodland, forest, or forest edge that is managed to produce forage, livestock and trees simultaneously
- ▶ grazing land where trees were added to pasture
- ▶ orchards where livestock are integrated
- ▶ grazing natural savannas

Does this operation have any land in **silvopasture**?

<sup>2000</sup>  Yes - Continue

No - Go to Section 3, page 11

**Silvopasture Acres**

1. How many acres of land does this operation have in silvopasture?

**INCLUDE:** land owned, rented, and leased from others .....

2001

2. Were any of the following activities used to establish silvopasture(s) on this operation?

Establishment Activities	YES	NO	DON'T KNOW
Converted a former pasture or field to silvopasture by planting trees ..... 2002	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an existing tree plantation to silvopasture by removing some trees and incorporating livestock and forage..... 2003	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an existing forest, woodlot, or forested edge to silvopasture by removing some trees and incorporating livestock and forage ..... 2004	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted from a natural savanna to silvopasture by adding livestock ..... 2005	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted a former field or pasture to silvopasture over time by allowing trees to grow naturally ..... 2006	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an orchard to silvopasture by incorporating livestock ..... 2007	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other conversion strategy - Specify: <sup>2008</sup> _____			
<b>Site Preparation and Infrastructure Activities</b>			
Removed stumps (grinding, grubbing, shearing, etc.) ..... 2009	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Cleared debris (slash, downed trees, rocks, etc.) ..... 2010	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used cultivation for site preparation (disking, scarification, etc.) ..... 2011	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used herbicides prior to or during establishment ..... 2012	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used livestock to assist with establishment ..... 2013	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used prescribed fire prior to establishment ..... 2014	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used fertilizer and/or soil amendments to assist with establishment ..... 2015	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Seeded forages - Specify species: <sup>2016</sup> _____ ..... 2017	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Allowed natural regeneration of forages ..... 2018	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used fencing and/or tree tubes to protect trees from wildlife/livestock ..... 2019	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed or improved livestock watering system ..... 2021	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed fence infrastructure (boundary fencing, cross fencing, etc.) ..... 2022	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other establishment activities - Specify: <sup>2023</sup> _____			

3. Please check the box for the type of livestock utilizing the silvopasture(s) on this operation. Also, please specify the average stocking rate of those livestock as animals/acre OR animal units/acre.

Type of Livestock (Mark all that apply)	Animals/Acre		AnimalUnits/Acre
2024 <input type="checkbox"/> Cattle.....	2025	<b>OR</b>	2026
2027 <input type="checkbox"/> Chickens .....	2028	<b>OR</b>	2029
2030 <input type="checkbox"/> Sheep .....	2031	<b>OR</b>	2032
2033 <input type="checkbox"/> Goats .....	2034	<b>OR</b>	2035
2036 <input type="checkbox"/> Hogs and Pigs .....	2037	<b>OR</b>	2038
2039 <input type="checkbox"/> Horses .....	2040	<b>OR</b>	2041
<input type="checkbox"/> Other - Specify: 2042.....	2043	<b>OR</b>	2044

4. Of the crops/products originating from silvopasture listed below, please specify whether this operation has:

- sold this before                     
  plan to sell this in the future                     
  use this for personal or on-farm use

Check all that apply

**Crops, Products and Resources from Silvopasture**

- a. Firewood .....
- b. Trees for timber products (lumber, boards, veneer, utility poles, etc.) .....
- c. Trees for non-timber products (pulp, fence posts, woodchips, etc.) .....
- d. Forages/hay/fodder for livestock .....
- e. Livestock products (milk, meat, stockers, wool, etc.)  
Specify products: 2057 .....
- f. Edibles (walnuts, maple syrup, apples, etc.)  
Specify products: 2061 .....
- g. Medicinal plants and herbs (American ginseng, goldenseal, etc.)  
Specify products: 2065 .....
- h. Materials for landscaping and/or decorative plants  
Specify products: 2069 .....
- i. Other crops/products - Specify:2073 .....

Sold this before	Plan to sell this in the future	Use this for personal or on-farm use
2045 <input type="checkbox"/>	2046 <input type="checkbox"/>	2047 <input type="checkbox"/>
2048 <input type="checkbox"/>	2049 <input type="checkbox"/>	2050 <input type="checkbox"/>
2051 <input type="checkbox"/>	2052 <input type="checkbox"/>	2053 <input type="checkbox"/>
2054 <input type="checkbox"/>	2055 <input type="checkbox"/>	2056 <input type="checkbox"/>
2058 <input type="checkbox"/>	2059 <input type="checkbox"/>	2060 <input type="checkbox"/>
2062 <input type="checkbox"/>	2063 <input type="checkbox"/>	2064 <input type="checkbox"/>
2066 <input type="checkbox"/>	2067 <input type="checkbox"/>	2068 <input type="checkbox"/>
2070 <input type="checkbox"/>	2071 <input type="checkbox"/>	2072 <input type="checkbox"/>
2074 <input type="checkbox"/>	2075 <input type="checkbox"/>	2076 <input type="checkbox"/>

5. When were silvopasture(s) established on this operation? Check all that apply

2077	1 <input type="checkbox"/> Less than 5 years ago	3 <input type="checkbox"/> 10 years - less than 15 years ago	5 <input type="checkbox"/> Don't Know
	2 <input type="checkbox"/> 5 years - less than 10 years ago	4 <input type="checkbox"/> Greater than 15 years ago	

6. Do the silvopasture(s) provide any of the following benefits to this operation?

Number	Conservation Benefits	YES	NO	DON'T KNOW
1	Invasive/noxious plant control ..... 2078	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Habitat for pollinators and other beneficial insects..... 2079	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	Wildlife habitat ..... 2080	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Improved soil health..... 2081	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Improved soil erosion control..... 2082	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Improved nutrient management..... 2083	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Increased carbon storage in soils, trees and vegetation ..... 2084	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Improved water quality ..... 2085	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Economic Benefits</b>				
9	Expansion of pasture acreage..... 2086	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Income from sale of products (meat, eggs, stockers, timber, etc.)..... 2087	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Crops/products for on-farm or personal use..... 2089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Improved animal welfare and health..... 2089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Increased livestock production..... 2090	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Improved forage quality..... 2091	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Increased forage availability throughout the year..... 2092	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Increased forage production on a per acre basis..... 2093	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Reduction in feed purchases..... 2094	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Improvement of marginal, unproductive or unfarmable land..... 2095	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Income diversification from multiple crops/products..... 2096	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
20	Increased land value..... 2097	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Revenue from conservation payments..... 2098	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Revenue from hunting leases..... 2099	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
23	Timber stand improvement..... 2100	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
24	Increased water use efficiency..... 2101	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Other Benefits</b>				
25	Wildfire fuel reduction..... 2102	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
26	Aesthetics/scenic beauty..... 2103	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
27	Hunting ..... 2104	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
28	Recreation (other than hunting)..... 2105	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
29	Odor reduction..... 2106	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
30	Improved resilience to weather extremes (drought, flood, etc.) ..... 2107	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
31	Other benefit(s) - Specify: <sup>2108</sup> _____			

7. Of the silvopasture benefits listed above (1 - 31), which 3 are most important to this operation? Enter the 3 corresponding numbers from the table above ..

Enter Number		
2109 _____	2110 _____	2111 _____



8. Have any of the following activities occurred, or will occur, to manage/maintain the silvopasture on this operation?

<b>Management/Maintenance Activities</b>	<b>YES</b>	<b>NO</b>	<b>DON'T KNOW</b>
Cultivation for weed control (mowing, hand pulling, etc.) ..... 2112	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Herbicide for weed control ..... 2113	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Prescribed fire ..... 2114	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigation ..... 2115	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fertilization and/or soil amendments ..... 2116	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting trees ..... 2117	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting forages ..... 2118	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of trees branches and stems ..... 2119	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of trees (thinning) ..... 2120	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of undesirable understory vegetation ..... 2121	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fencing or tree tubes to protect trees from wildlife/livestock ..... 2122	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Rotational grazing ..... 2123	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Utilize pastures without trees as part of grazing management ..... 2124	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Provide supplements to livestock (minerals, hay, grain, etc.) when in silvopasture 2125	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other management activities - Specify: <sup>2126</sup> _____			

9. Please list up to 3 tree species growing in your silvopastures that are the most useful for your desired goals. List trees by species name (example: loblolly pine, red oak, etc.). If unsure of species name, list trees by common name (example: pine, oak, etc.).

2127	Specify species: _____
2128	Specify species: _____
2129	Specify species: _____

10. Have any of the following been challenges on this operation when establishing or managing the silvopasture(s)?

Number	Potential Challenges	YES	NO	DON'T KNOW
1	Lack of information about establishment ..... 2130	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Difficulty establishing trees, crops, or forage ..... 2131	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	High startup costs ..... 2132	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Lack of information on management and maintenance ..... 2133	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Difficulty regrowing trees within an established silvopasture ..... 2134	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Expense of maintenance ..... 2135	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Lack of information on recommended tree, crop, or livestock species ..... 2136	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Lack of knowledge among technical assistance providers ..... 2137	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Lack of examples or demonstration sites ..... 2138	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Lack of financial assistance ..... 2139	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Lack of markets for products from silvopasture ..... 2140	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Adds labor and complexity to management ..... 2141	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Conflict with farm equipment, practices, or layout ..... 2142	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Trees, forage and livestock competing for space, light, etc. .... 2143	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Livestock damage to trees ..... 2144	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Wildlife damage to trees ..... 2145	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Tree/shrub pests and diseases ..... 2146	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Windthrow (trees falling over after thinning) ..... 2147	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Livestock poisoning from foraging on toxic plants ..... 2148	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
20	Soil compaction from livestock ..... 2149	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Other challenge - Specify: 2150 _____			

11. Of the challenges listed above (1 - 21), which 3 are most significant to this operation? Enter the 3 corresponding numbers from the table above ..... Enter Number

2151 _____	2152 _____	2153 _____
------------	------------	------------

12. In the next five years, will the acreage in silvopasture for this operation increase, decrease or stay the same?  
Check one

2154	1	<input type="checkbox"/> Increase - Specify reason(s): 2155 _____	
	2	<input type="checkbox"/> Decrease - Specify reason(s): 2156 _____	
	3	<input type="checkbox"/> Stay the same	
	4	<input type="checkbox"/> Don't Know	

### Section 3 - Riparian Forest Buffers

A riparian forest buffer is an area adjacent to a stream, river, lake, or wetland that contains a combination of trees and shrubs and is often used for erosion control, bank stabilization, and nutrient runoff control. They are also called: stream management zones, vegetated buffer strips, woody riparian buffers, and riparian forest corridors.

Does this operation have any land in riparian forest buffers?

<sup>3000</sup>  Yes - Continue       No - Go to Section 4, page 15

1. Please estimate the total land area in riparian forest buffer(s) for this operation.

<b>INCLUDE:</b> ▶ land owned ▶ rented ▶ leased from others	Estimate as acres <b>OR</b> length and width
---	--

a. Riparian forest buffer ..... 3001 **ACRES**

**OR**

b. Average width of buffers ..... 3002 **FEET** **AND** total combined length of buffers rounded to the nearest 1/4 mile ..... 3003 **MILES**

2. Were any of the following activities used to establish riparian forest buffers on this operation?

Establishment Activities	YES	NO	DON'T KNOW
Allowed trees and vegetation to grow naturally ..... <sup>3004</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Planted buffer trees and vegetation ..... <sup>3005</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used herbicides for weed control/site preparation prior to planting trees ..... <sup>3006</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used cultivation for weed control/site preparation prior to planting trees ..... <sup>3007</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used barrier weed control (mulch, plastic, etc.) to establish trees ..... <sup>3008</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigated buffer vegetation during the 1-3 year establishment period ..... <sup>3009</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Controlled weeds after planting trees during the 1-3 year establishment period . <sup>3010</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed fencing and/or tree tubes to protect trees/shrubs from wildlife/livestock..... <sup>3011</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanted buffer trees or vegetation to fill gaps ..... <sup>3012</sup>	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other establishment activities - Specify: <sup>3013</sup> _____			

3. When were riparian forest buffers established on this operation? Check all that apply

<sup>3014</sup>  Less than 5 years ago       10 years - less than 15 years ago       Don't Know  
 5 years - less than 10 years ago       Greater than 15 years ago

4. In the next five years, will the acreage in riparian forest buffer(s) for this operation increase, decrease or stay the same? Check one

<sup>3015</sup>  Increase - Specify reason(s): <sup>3016</sup> \_\_\_\_\_  
 Decrease - Specify reason(s): <sup>3017</sup> \_\_\_\_\_  
 Stay the same  
 Don't Know

5. Have any of the following activities occurred, or will occur, to manage/maintain the riparian forest buffers on this operation?

Management/Maintenance Activities	YES	NO	DON'T KNOW
Cultivation for weed control (disking, plowing, mowing, etc.) ..... 3018	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Herbicide for weed control ..... 3019	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Barrier weed control (mulching/fabric) ..... 3020	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Flash or short duration grazing within buffer ..... 3021	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of tree branches and stems ..... 3022	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Root pruning ..... 3023	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of trees/buffer vegetation (thinning) ..... 3024	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of trees/debris that have fallen into waterways ..... 3025	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting trees/vegetation ..... 3026	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigation of trees/shrubs ..... 3027	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fertilization and/or soil amendments for the trees/shrubs ..... 3028	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fencing or tree tubes to protect trees/shrubs from wildlife/livestock ..... 3029	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other management activities - Specify: <sup>3030</sup> _____			

6. Of the crops/products originating from riparian forest buffer trees and shrubs listed below, please specify whether this operation has:

- ▶ sold this before                      ▶ plan to sell this in the future                      ▶ use this for personal or on-farm use

Check all that apply

Crops, Products and Resources from Buffer Trees and Shrubs	Sold this before	Plan to sell this in the future	Use this for personal or on-farm use
a. Firewood ..... 3031 <input type="checkbox"/>	3032 <input type="checkbox"/>	3033 <input type="checkbox"/>	
b. Trees for timber products (lumber, boards, veneer, utility poles, etc.) ..... 3034 <input type="checkbox"/>	3035 <input type="checkbox"/>	3036 <input type="checkbox"/>	
c. Trees for non-timber products (pulp, fence posts, woodchips, etc.) ..... 3037 <input type="checkbox"/>	3038 <input type="checkbox"/>	3039 <input type="checkbox"/>	
d. Forages/hay/fodder for livestock ..... 3040 <input type="checkbox"/>	3041 <input type="checkbox"/>	3042 <input type="checkbox"/>	
e. Edibles (raspberries, walnuts, maple syrup, etc.)			
Specify products: <sup>3043</sup> _____ ..... 3044 <input type="checkbox"/>	3045 <input type="checkbox"/>	3046 <input type="checkbox"/>	
f. Medicinal plants and herbs (American ginseng, goldenseal, etc.)			
Specify products: <sup>3047</sup> _____ ..... 3048 <input type="checkbox"/>	3049 <input type="checkbox"/>	3050 <input type="checkbox"/>	
g. Decorative plants and/or materials for landscaping			
Specify products: <sup>3051</sup> _____ ..... 3052 <input type="checkbox"/>	3053 <input type="checkbox"/>	3054 <input type="checkbox"/>	
h. Other crops/products: Specify: <sup>3055</sup> _____ ..... 3056 <input type="checkbox"/>	3057 <input type="checkbox"/>	3058 <input type="checkbox"/>	

7. Do riparian forest buffers provide any of the following benefits to this operation?

Number	Conservation Benefits	YES	NO	DON'T KNOW
1	Improved erosion control ..... 3059	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Bank stabilization ..... 3060	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	Improved soil health ..... 3061	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Improved water quality ..... 3062	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Improved nutrient management ..... 3063	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Chemical drift mitigation (pesticide, herbicide, fertilizer) ..... 3064	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Shade for aquatic environment ..... 3065	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Increased carbon storage in soils, trees, and vegetation ..... 3066	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Habitat for pollinators and other beneficial insects ..... 3067	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Wildlife habitat (both land and water) ..... 3068	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Economic Benefits</b>				
11	Income from buffer trees/shrubs (firewood, timber, edibles, etc.) ..... 3069	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Crops/products for on-farm or personal use from buffer trees/shrubs (firewood, timber, nuts, etc.) ..... 3070	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Income diversification from multiple crops/products ..... 3071	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Improvement of marginal, unproductive or unfarmable land ..... 3072	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Crop protection ..... 3073	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Increased land value ..... 3074	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Revenue from conservation payments..... 3075	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Revenue from hunting leases ..... 3076	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Traps debris from being deposited on crop fields during flooding ..... 3077	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Other Benefits</b>				
20	Hunting ..... 3078	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Recreation (other than hunting) ..... 3079	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Improved resilience to weather extremes (drought, flood, etc.) ..... 3080	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
23	Scenic beauty and aesthetics ..... 3081	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
24	Other benefit(s) - Specify: <sup>3082</sup> .....			

8. Of the riparian forest buffer benefits listed above (1 - 24), which 3 are most important to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
3083 _____	3084 _____	3085 _____

9. Have any of the following been challenges on this operation when establishing or managing the riparian forest buffers?

Number	Potential Challenges	YES	NO	DON'T KNOW
1	Lack of information about establishment ..... 3086	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Difficulty establishing trees/shrubs ..... 3087	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	High startup costs ..... 3088	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Lack of information on management and maintenance ..... 3089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Difficulty regrowing trees within an established buffer ..... 3090	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Expense of maintenance ..... 3091	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Lack of information on recommended tree/shrub species ..... 3092	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Lack of buffer knowledge among technical assistance providers ..... 3093	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Lack of examples or demonstration sites ..... 3094	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Lack of financial assistance ..... 3095	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Lack of markets for products from buffers ..... 3096	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Loss of cropland ..... 3097	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Adds labor and complexity to management ..... 3098	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Conflict with farm equipment, practices, or layout ..... 3099	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Trees and crops compete for space, light, water, and nutrients ..... 3100	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Trees falling into waterways ..... 3101	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Harbors harmful crop pests (wildlife, insects, weeds, etc.) ..... 3102	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Damage to buffer trees/vegetation from flooding ..... 3103	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Tree/shrub pests and diseases ..... 3104	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
20	Herbicide drift damaging trees/shrubs ..... 3105	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Issues with subsurface drainage tiles ..... 3106	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Snow drift issues ..... 3107	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
23	Damage to buffer trees/vegetation from livestock ..... 3108	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
24	Damage to buffer trees/vegetation from wildlife ..... 3109	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
25	Other challenge(s) - Specify: <sup>3110</sup> _____			

10. Of the challenges listed above (1 - 25), which 3 are most significant to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
3111	3112	3113
__ __	__ __	__ __

### Section 4 - Alley Cropping and Intercropping with Trees and Crops

Alley cropping is the cultivation of crops or forages between rows of trees/shrubs. Orchards and tree plantations are considered as alley cropping if crops or forages are grown/harvested from between the rows of trees/shrubs. Intercropping is the deliberate cultivation of trees with crops or forages on the same field but does not need to be in defined rows and alleys.

Does this operation have any land in **alley cropping** and/or **intercropping** with trees/crops?

4000  1 Yes - Continue                       3 No - Go to Section 5, page 19

1. How many acres of land does this operation have in alley cropping/intercropping?

**INCLUDE:** land owned, rented, and leased from others. Report acreage as the combined total of land in trees, crops, idle or fallow .....

**Alley and Inter Cropping Acres**

4001

2. Does alley cropping/intercropping provide any of the following benefits to this operation?

Number	Conservation Benefits	YES	NO	DON'T KNOW
1	Habitat for pollinators and other beneficial insects..... 4002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Wildlife habitat..... 4003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Improved soil health..... 4004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Improved soil erosion control..... 4005	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Improved nutrient management..... 4006	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Increased carbon storage in soils, trees, and vegetation..... 4007	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Chemical drift mitigation (pesticide, herbicide, fertilizer) ..... 4008	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Improved water quality..... 4009	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Economic Benefits</b>				
9	Income from sale of products (crops, timber, etc.)..... 4010	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Crops/products for on-farm or personal use..... 4011	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Increased production/yield of crops, forage, and/or tree products ..... 4012	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Improved quality of crops, forage, and/or tree products ..... 4013	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Increased crop water use efficiency and/or irrigation efficiency..... 4014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Increased land value..... 4015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Revenue from conservation payments..... 4016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Revenue from hunting leases..... 4017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Improved crop protection from insects and pests..... 4018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Improvement of marginal, unproductive or unfarmable land..... 4019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Income diversification from multiple crops/products..... 4020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other Benefits</b>				
20	Aesthetics/scenic beauty..... 4021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Hunting ..... 4022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Recreation (other than hunting)..... 4023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Improved resilience to weather extremes (drought, flood, etc.) ..... 4024	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Other benefit(s) - Specify: <sup>4025</sup> _____			

3. Of the alley cropping/intercropping benefits listed above (1 - 24), which 3 are most important to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number

4026       4027       4028

4. In the next five years, will the acreage in alley cropping/intercropping for this operation increase, decrease or stay the same? Check one

4029	1	<input type="checkbox"/> Increase - Specify reason(s):	4030	_____
	2	<input type="checkbox"/> Decrease - Specify reason(s):	4031	_____
	3	<input type="checkbox"/> Stay the same		
	4	<input type="checkbox"/> Don't Know		

5. Of the crops/products originating from alley cropping/intercropping listed below, please specify whether this operation has:

- ▶ sold this before                      ▶ plan to sell this in the future                      ▶ use this for personal or on-farm use

Check all that apply

**Crops, Products and Resources from Alley Cropping/intercropping**

- a. Firewood .....
- b. Trees for timber products (lumber, boards, veneer, utility poles, etc.) .....
- c. Trees for non-timber products (pulp, fence posts, woodchips, etc.) .....
- d. Forages/hay/fodder for livestock .....
- e. Edibles/crops (walnuts, apples, pecans, grapes, etc.)  
Specify products: 4044 \_\_\_\_\_
- f. Medicinal plants and herbs (American ginseng, goldenseal, etc.)  
Specify products: 4048 \_\_\_\_\_
- g. Decorative plants and/or materials for landscaping  
Specify products: 4052 \_\_\_\_\_
- h. Other crops/products - Specify: 4056 \_\_\_\_\_

Sold this before	Plan to sell this in the future	Use this for personal or on-farm use
4032 <input type="checkbox"/>	4033 <input type="checkbox"/>	4034 <input type="checkbox"/>
4035 <input type="checkbox"/>	4036 <input type="checkbox"/>	4037 <input type="checkbox"/>
4038 <input type="checkbox"/>	4039 <input type="checkbox"/>	4040 <input type="checkbox"/>
4041 <input type="checkbox"/>	4042 <input type="checkbox"/>	4043 <input type="checkbox"/>
4045 <input type="checkbox"/>	4046 <input type="checkbox"/>	4047 <input type="checkbox"/>
4049 <input type="checkbox"/>	4050 <input type="checkbox"/>	4051 <input type="checkbox"/>
4053 <input type="checkbox"/>	4054 <input type="checkbox"/>	4055 <input type="checkbox"/>
4057 <input type="checkbox"/>	4058 <input type="checkbox"/>	4059 <input type="checkbox"/>

6. Please list the 3 most abundant tree and crop species combinations in alley cropping/intercropping system(s) by common name (example: black walnut, pecan, corn, soybean, etc.). If multiple combinations exist, please describe in the rows below.

TREES and/or SHRUBS	and	CROPS and/or FORAGES
Specify species: 4060 _____	.....	4061 _____
Specify species: 4062 _____	.....	4063 _____
Specify species: 4064 _____	.....	4065 _____

7. When were alley cropping/intercropping systems established on this operation? Check all that apply

4066	1	<input type="checkbox"/> Less than 5 years ago	3	<input type="checkbox"/> 10 years - less than 15 years ago	5	<input type="checkbox"/> Don't Know
	2	<input type="checkbox"/> 5 years - less than 10 years ago	4	<input type="checkbox"/> Greater than 15 years ago		



8. Were any of the following activities used to establish alley cropping/intercropping on this operation?

<b>Establishment Activities</b>	<b>YES</b>	<b>NO</b>	<b>DON'T KNOW</b>
Converted a pasture or field to alley cropping by planting trees ..... 4067	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an existing tree plantation to alley cropping by removing some trees and adding crops or forage ..... 4068	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an existing forest or woodlot to alley cropping by removing some trees and adding crops or forage ..... 4069	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Converted an orchard to alley cropping by adding crops or forage ..... 4070	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other conversion strategy - Specify: <sup>4071</sup> _____			
<b>Site Preparation and Infrastructure Activities</b>			
Used herbicides for weed control/site preparation prior to planting trees ..... 4072	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used cultivation for weed control/site preparation prior to planting trees ..... 4073	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used barrier weed control (mulch, plastic, etc.) to establish trees ..... 4074	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigated trees during the 1- 3 year establishment period ..... 4075	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Controlled weeds after planting trees during the 1 - 3 year establishment period ..... 4076	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanted tree seedlings to fill gaps ..... 4077	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used fertilizer and/or soil amendments prior to or during establishment ..... 4078	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed fencing and/or tree tubes to protect trees from wildlife/livestock ..... 4079	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed or improved irrigation infrastructure ..... 4080	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other establishment activities - Specify: <sup>4081</sup> _____			

9. Have any of the following activities occurred, or will occur, to manage/maintain the alley cropping/intercropping on this operation?

<b>Management/Maintenance Activities</b>	<b>YES</b>	<b>NO</b>	<b>DON'T KNOW</b>
Cultivation for weed control (disking, plowing, mowing, etc.) ..... 4082	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Herbicide for weed control ..... 4083	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Barrier weed control (mulching/fabric) ..... 4084	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Grazing livestock ..... 4085	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pesticide ..... 4086	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigation ..... 4087	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fertilization and/or soil amendments ..... 4088	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting trees ..... 4089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting crops ..... 4090	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of tree branches and stems ..... 4091	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of tree roots to reduce competition with crops ..... 4092	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of living or dead trees (thinning) ..... 4093	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fencing or tree tubes to protect trees or crops from wildlife/livestock ..... 4094	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other management activities - Specify: <sup>4095</sup> _____			

10. Have any of the following been challenges on this operation when establishing or managing the alley cropping/intercropping systems?

Number	Potential Challenges	YES	NO	DON'T KNOW
1	Lack of information about establishment ..... 4096	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Difficulty establishing trees, crops, or forage ..... 4097	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	High startup costs ..... 4098	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Lack of information on management and maintenance ..... 4099	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Difficulty regrowing trees in an established alley cropping system ..... 4100	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Expense of maintenance ..... 4101	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Lack of information on recommended tree/crop species combinations 4102	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Lack of knowledge among technical assistance providers ..... 4103	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Lack of examples or demonstration sites ..... 4104	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Lack of financial assistance ..... 4105	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Lack of markets for products ..... 4106	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Adds labor and complexity to management ..... 4107	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Conflict with farm equipment, practices, or layout ..... 4108	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Trees and crops compete for space, light, water, and nutrients ..... 4109	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Wildlife damage to trees and crops ..... 4110	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Tree/shrub pests and diseases ..... 4111	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Herbicide drift damaging trees/shrubs ..... 4112	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Issues with snow drifts ..... 4113	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Other challenge - Specify: <sup>4114</sup> _____			

11. Of the challenges listed above (1 - 19), which 3 are most significant to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
4115 _____	4116 _____	4117 _____

### Section 5 - Forest Farming / Multi-Story Cropping

Multi-Story Cropping/Forest Farming is the deliberate cultivation of crops under a canopy of trees. The canopy is often modified to provide levels of light that favor growth and enhanced production of the understory crops. Crops may include edibles (fruits, vegetables, nuts, mushrooms, etc.) tapping trees for syrup, nursery or landscaping plants, woodland herbal/medicinal plants, and decorative/floral products. A tree farm or plantation is not considered forest farming unless understory crops are intentionally cultivated underneath the canopy of trees.

Does this operation have any land in **forest farming/multi-story cropping**?

5000 1  Yes - Continue                      3  No - Go to Section 6, bottom of page 22

1. Is the forest farming system on this operation managed in any of the following ways?

- a. Wild-stewarded: Managing existing wild plant populations in a wooded environment with the goal of sustainable harvest. Involves minimal site preparation or inputs ..... 5001 1  Yes 3  No
- b. Wild-simulated: Deliberately cultivating crops in a natural growing environment. Involves minimal management to expose the soil for planting. Can involve modification of the forest canopy to favor growth ..... 5002 1  Yes 3  No
- c. Woods-grown: Cultivation in rows and/or clusters of a single crop under the forest canopy. May involve tilling, fertilizing, weeding and controlling disease and pests. Often includes clearing vegetation in the understory and thinning the forest overstory ..... 5003 1  Yes 3  No

**Forest Farming  
Acres**

2. How many acres of land does this operation have in forest farming/multi-story cropping?

**INCLUDE:** land owned, rented, and leased from others ..... 5004

3. Were any of the following activities used to establish the forest farming system on this operation?

Establishment Activities	YES	NO	DON'T KNOW
Cultivation for weed control/site preparation ..... 5005	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used barrier weed control (mulch, plastic, etc.) to establish crops ..... 5006	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used herbicides for weed control/site preparation ..... 5007	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Used fertilizer and/or soil amendments prior to or during establishment ..... 5008	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Cleared debris (leaf layer, fallen trees, branches, rocks, etc.) ..... 5009	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removed trees (thinning) ..... 5010	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruned tree branches ..... 5011	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removed competing understory vegetation ..... 5012	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed irrigation infrastructure ..... 5013	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Installed fencing and/or tree tubes to protect trees/shrubs from livestock/wildlife ..... 5014	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other establishment activities - Specify: 5015 _____			

4. When were forest farming system(s) established on this operation? Check all that apply

5016

1 <input type="checkbox"/> Less than 5 years ago	3 <input type="checkbox"/> 10 years - less than 15 years ago	5 <input type="checkbox"/> Don't Know
2 <input type="checkbox"/> 5 years - less than 10 years ago	4 <input type="checkbox"/> Greater than 15 years ago	

5. Have any of the following activities occurred, or will occur, to manage/maintain the forest farming system on this operation?

Management Activities	YES	NO	DON'T KNOW
Cultivation for weed control (pulling, disking, plowing, etc.) ..... 5017	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Herbicides for weed control ..... 5018	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Barrier weed control (mulching/fabric) ..... 5019	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Livestock grazing ..... 5020	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Prescribed fire ..... 5021	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Irrigation ..... 5022	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fertilization and/or soil amendments ..... 5023	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting trees ..... 5024	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Replanting understory crops ..... 5025	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of tree branches and stems ..... 5026	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Pruning of understory branches and stems ..... 5027	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal of living or dead trees (thinning) ..... 5028	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Removal/clearing of understory vegetation, rocks, and forest debris ..... 5029	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Fencing or tree tubes to protect trees/crops from wildlife/livestock ..... 5030	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
Other management activities- Specify: <sup>5031</sup> _____			

6. Of the crops/products originating from forest farming systems listed below, please specify whether this operation has:

- ▶ sold this before                      ▶ plans to sell this in the future                      ▶ use this for personal or on-farm use

Check all that apply

**Crops, Products and Resources from Forest Farming**

- a. Firewood .....
- b. Trees for timber products (lumber, boards, veneer, utility poles, etc.) .....
- c. Trees for non-timber products (pulp, fence posts, woodchips, etc.) .....
- d. Edibles (shiitake mushrooms, maple syrup, ramps, etc.)  
Specify products: <sup>5041</sup> \_\_\_\_\_ .....
- e. Medicinal plants and herbs (American ginseng, goldenseal, etc.)  
Specify products: <sup>5045</sup> \_\_\_\_\_ .....
- f. Decorative plants and/or materials for landscaping  
Specify products: <sup>5049</sup> \_\_\_\_\_ .....
- g. Other crops/products - Specify: <sup>5053</sup> \_\_\_\_\_ .....

Sold this before	Plan to sell this in the future	Use this for personal or on-farm use
5032 <input type="checkbox"/>	5033 <input type="checkbox"/>	5034 <input type="checkbox"/>
5035 <input type="checkbox"/>	5036 <input type="checkbox"/>	5037 <input type="checkbox"/>
5038 <input type="checkbox"/>	5039 <input type="checkbox"/>	5040 <input type="checkbox"/>
5042 <input type="checkbox"/>	5043 <input type="checkbox"/>	5044 <input type="checkbox"/>
5046 <input type="checkbox"/>	5047 <input type="checkbox"/>	5048 <input type="checkbox"/>
5050 <input type="checkbox"/>	5051 <input type="checkbox"/>	5052 <input type="checkbox"/>
5055 <input type="checkbox"/>	5056 <input type="checkbox"/>	5057 <input type="checkbox"/>

7. Does forest farming provide any of the following benefits to this operation?

Number	Conservation Benefits	YES	NO	DON'T KNOW
1	Habitat for pollinators and other beneficial insects ..... 5057	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Wildlife habitat ..... 5058	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	Improved soil health ..... 5059	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Improved soil erosion control ..... 5060	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Improved water quality ..... 5061	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Improved nutrient management ..... 5062	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Increased carbon storage in soils, trees, and vegetation ..... 5063	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Invasive weed control ..... 5064	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Economic Benefits</b>				
9	Income from sale of products (edibles, timber, etc.) ..... 5065	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Crops/products for on-farm or personal use ..... 5066	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Increased crop production/yield ..... 5067	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Improved crop quality ..... 5068	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Income diversification from multiple crops/products ..... 5069	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Improvement of marginal unproductive or unfarmable land ..... 5070	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Increased water-use efficiency ..... 5071	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Increased land value ..... 5072	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Revenue from conservation payments ..... 5073	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Revenue from hunting leases ..... 5074	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
19	Timber stand improvement ..... 5075	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
<b>Other Benefits</b>				
20	Cultural/family tradition ..... 5076	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
21	Hunting ..... 5077	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
22	Recreation (other than hunting) ..... 5078	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
23	Improved resilience to weather extremes (drought, flood, etc.) ..... 5079	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
24	Aesthetics/scenic beauty ..... 5080	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
25	Other benefit(s) - Specify: 5081 _____			

8. Of the forest farming benefits listed above (1 - 25), which 3 are most important to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
5082	5083	5084
__ __	__ __	__ __

9. In the next five years, will the acreage in forest farming or multi-story cropping for this operation increase, decrease or stay the same? Check one

5085

1	<input type="checkbox"/> Increase - Specify reason(s):	5086	_____
2	<input type="checkbox"/> Decrease - Specify reason(s):	5087	_____
3	<input type="checkbox"/> Stay the same		
4	<input type="checkbox"/> Don't Know		

10. Have any of the following been challenges when establishing or managing the forest farming system?

Number	Potential Challenges	Yes	No	Don't Know
1	Lack of information about establishment ..... 5088	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
2	Difficulty establishing crops ..... 5089	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
3	High startup costs ..... 5090	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
4	Lack of information on management and maintenance ..... 5091	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
5	Difficulty regrowing trees within an established forest farming system . 5092	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
6	Expense of maintenance ..... 5093	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
7	Lack of information on recommended crop species ..... 5094	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
8	Lack of knowledge among technical assistance providers ..... 5095	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
9	Lack of examples or demonstration sites ..... 5096	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
10	Lack of financial assistance ..... 5097	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
11	Lack of markets for products ..... 5098	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
12	Adds labor and complexity to management ..... 5099	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
13	Conflict with farm equipment, practices, or layout ..... 5100	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
14	Trees and crops compete for space, light, water, and nutrients ..... 5101	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
15	Wildlife damage to trees and/or understory crops ..... 5102	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
16	Tree/shrub pests and diseases ..... 5103	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
17	Theft of forest farming crops ..... 5104	1 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>
18	Other challenge(s) - Specify: <sup>5105</sup> _____			

11. Of the challenges listed above (1 - 18), which 3 are most significant to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
5106	5107	5108
___	___	___

## Section 6 - General Knowledge

Did you fill out at least one of the previous agroforestry sections in this survey (i.e. for windbreaks, silvopasture, riparian forest buffers, alley cropping and/or forest farming)?

6000  Yes - I filled out at least one section - Go to item 1, page 23

6001  No - this operation **never** practiced agroforestry - Go to Section 7, back page

6002  No - this operation **stopped** using agroforestry since filling out the 2017 Census of Agriculture. Specify which agroforestry practice was stopped and why:

6003 \_\_\_\_\_

Go to Section 7, back page

6004  No - this operation uses other forms of agroforestry not specified in this survey. Briefly describe the system:

6005 \_\_\_\_\_

Go to Section 7, back page

1. Do you use any of the following resources when gathering information about agroforestry?

Number	Information Source	YES	NO
1	Neighboring farmers, non-neighbor farmers or farmer groups ..... 6006	1 <input type="checkbox"/>	3 <input type="checkbox"/>
2	Conservation district staff ..... 6007	1 <input type="checkbox"/>	3 <input type="checkbox"/>
3	Private forester ..... 6008	1 <input type="checkbox"/>	3 <input type="checkbox"/>
4	Agricultural or conservation consultant from a for-profit business ..... 6009	1 <input type="checkbox"/>	3 <input type="checkbox"/>
5	Non-profit organization ..... 6010	1 <input type="checkbox"/>	3 <input type="checkbox"/>
6	University Cooperative Extension ..... 6011	1 <input type="checkbox"/>	3 <input type="checkbox"/>
7	State agricultural, environment or forestry staff ..... 6012	1 <input type="checkbox"/>	3 <input type="checkbox"/>
8	Federal agricultural, environment or forestry staff ..... 6013	1 <input type="checkbox"/>	3 <input type="checkbox"/>
9	Internet ..... 6014	1 <input type="checkbox"/>	3 <input type="checkbox"/>
10	Social media ..... 6015	1 <input type="checkbox"/>	3 <input type="checkbox"/>
11	Email/E-newsletter ..... 6016	1 <input type="checkbox"/>	3 <input type="checkbox"/>
12	Farming/conservation magazines ..... 6017	1 <input type="checkbox"/>	3 <input type="checkbox"/>
13	Books, print newsletters, brochures ..... 6018	1 <input type="checkbox"/>	3 <input type="checkbox"/>
14	Peer reviewed scientific journals ..... 6019	1 <input type="checkbox"/>	3 <input type="checkbox"/>
15	Have someone visit this operation ..... 6020	1 <input type="checkbox"/>	3 <input type="checkbox"/>
16	Visit a different operation (field tour, demonstration site, etc.) ..... 6021	1 <input type="checkbox"/>	3 <input type="checkbox"/>
17	Attendance at a conference or workshop ..... 6022	1 <input type="checkbox"/>	3 <input type="checkbox"/>
18	Other information source - Specify: 6023 _____		

2. Of the information sources listed above (1 - 18), which 3 are most useful to this operation? Enter the 3 corresponding numbers from the table above .....

Enter Number		
6024	6025	6026
__ __	__ __	__ __

3. Has this operation used any of the following funding sources to establish, manage and/or support agroforestry practices:

a. Self-funded with own money? ..... 6027 1  Yes 3  No

b. Loans from banks or credit unions?..... 6028 1  Yes 3  No

c. Loans from private investors? ..... 6029 1  Yes 3  No

d. Federal funding (grants, loans, cost share, etc.)?

6030 1  Yes - Please specify program: 6031 \_\_\_\_\_  
 3  No

e. State funding (grants, loans, cost share, etc.)?

6032 1  Yes - Please specify program: 6033 \_\_\_\_\_  
 3  No

f. Funding from a non-governmental organization?

6034 1  Yes - Please specify: 6035 \_\_\_\_\_  
 3  No

g. Other - Please specify: 6036 \_\_\_\_\_

4. If this operation **sells products** originating from any of its agroforestry systems, please indicate where they have been sold. Only fill in column(s) corresponding to the agroforestry practice(s) this operation utilizes.

Places where agroforestry crops/products have been or will be sold	Products from Windbreak	Products from Silvopasture	Products from Riparian Forest Buffer	Products from Alley/ Intercropping	Products from Forest Farming
a. Food distributor, broker, or processor .....	6037 <input type="checkbox"/>	6038 <input type="checkbox"/>	6039 <input type="checkbox"/>	6040 <input type="checkbox"/>	6041 <input type="checkbox"/>
b. Grain elevator .....	6042 <input type="checkbox"/>	6043 <input type="checkbox"/>	6044 <input type="checkbox"/>	6045 <input type="checkbox"/>	6046 <input type="checkbox"/>
c. Ethanol or biodiesel facility .....	6047 <input type="checkbox"/>	6048 <input type="checkbox"/>	6049 <input type="checkbox"/>	6050 <input type="checkbox"/>	6051 <input type="checkbox"/>
d. Restaurants, grocery stores, or institutions like schools and hospitals .....	6052 <input type="checkbox"/>	6053 <input type="checkbox"/>	6054 <input type="checkbox"/>	6055 <input type="checkbox"/>	6056 <input type="checkbox"/>
e. Food cooperative .....	6057 <input type="checkbox"/>	6058 <input type="checkbox"/>	6059 <input type="checkbox"/>	6060 <input type="checkbox"/>	6061 <input type="checkbox"/>
f. Animal stockyards .....	6062 <input type="checkbox"/>	6063 <input type="checkbox"/>	6064 <input type="checkbox"/>	6065 <input type="checkbox"/>	6066 <input type="checkbox"/>
g. Other farmers .....	6067 <input type="checkbox"/>	6068 <input type="checkbox"/>	6069 <input type="checkbox"/>	6070 <input type="checkbox"/>	6071 <input type="checkbox"/>
h. Farmers' market .....	6072 <input type="checkbox"/>	6073 <input type="checkbox"/>	6074 <input type="checkbox"/>	6075 <input type="checkbox"/>	6076 <input type="checkbox"/>
i. U-pick .....	6077 <input type="checkbox"/>	6078 <input type="checkbox"/>	6079 <input type="checkbox"/>	6080 <input type="checkbox"/>	6081 <input type="checkbox"/>
j. Farm stand or store .....	6082 <input type="checkbox"/>	6083 <input type="checkbox"/>	6084 <input type="checkbox"/>	6085 <input type="checkbox"/>	6086 <input type="checkbox"/>
k. Community Supported Agriculture .....	6087 <input type="checkbox"/>	6088 <input type="checkbox"/>	6089 <input type="checkbox"/>	6090 <input type="checkbox"/>	6091 <input type="checkbox"/>
l. Loggers purchasing standing trees (stumpage) .....	6092 <input type="checkbox"/>	6093 <input type="checkbox"/>	6094 <input type="checkbox"/>	6095 <input type="checkbox"/>	6096 <input type="checkbox"/>
m. Wood products direct-to-mill, wood manufacturer, timber supplier, etc. ....	6097 <input type="checkbox"/>	6097 <input type="checkbox"/>	6099 <input type="checkbox"/>	6100 <input type="checkbox"/>	6101 <input type="checkbox"/>
n. Other: Please Specify: <sup>6102</sup> _____	6103 <input type="checkbox"/>	6104 <input type="checkbox"/>	6105 <input type="checkbox"/>	6106 <input type="checkbox"/>	6107 <input type="checkbox"/>

### Section 7 - Conclusion

**Contact Information:** Operation Email:

Operation Phone:

9937	9936 (____) _____ - _____	check if cell phone <input type="checkbox"/>
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Respondent Name:

Respondent Phone: (if different from above)

9912	9911 (____) _____ - _____	check if cell phone <input type="checkbox"/>	9910 MM DD YY Date: _ _ _ _
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This completes the survey. Thank you for your help.

OFFICE USE ONLY											
Response		Respondent		Mode		Enum.	Eval.	Change	Office Use for POID		
1-Comp	9901	1-Op/Mgr	9902	1-PASI (Mail)	9903	9998	9900	9985	9989		
2-R		2-Spouse		2-PATI (Tel)					_____ - _____ - _____		
3-Inac		3-Acct/Bkpr		3-PAPI (Face-to-Face)							
4-Office Hold		4-Partner		6-Email							
5-R - Est		9-Other		7-Fax							
6-Inac - Est				19-Other							
7-Off Hold - Est											
								Optional Use			
								9907	9908	9906	9916
S/E Name											