

APPENDIX A-2

VERMONT SOIL SURVEY FOR PEAR THRIPS  
PROTOCOL FOR REGIONAL SOIL SAMPLING PROGRAM

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SURVEY OBJECTIVES:

The objective of this regional survey is to determine the density and distribution of pear thrips in forest soils within the native range of the sugar maple (Acer saccharum). In cooperating states, soil samples will be taken in forest stands that have shown damage from thrips feeding and stands believed susceptible to pear thrips. Using previous experiences in Vermont as a guideline, potential damage by pear thrips next spring can be estimated from the current number of thrips in the soil. This sampling protocol was developed from research on pear thrips distribution in forest soils conducted by the University of Vermont in 1988 and 1989.

It must be recognized that the population density of pear thrips in the ground does

SITE SELECTION:

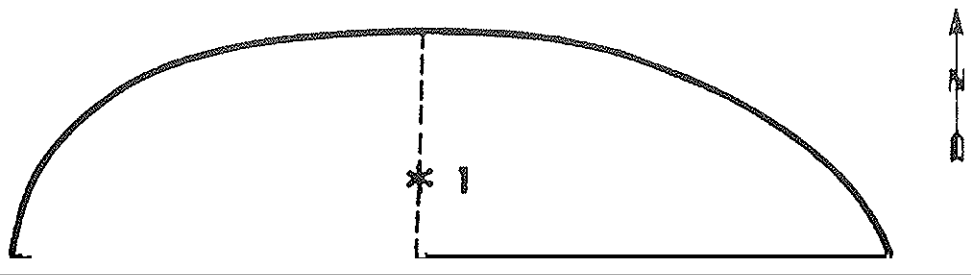
Sugarbushes, tapped or untapped, and hardwood forest stands with sugar maple comprising about 75% or more of the basal area should be chosen for sampling. Sites must have an area of 2 hectares (5 acres).

SAMPLE COLLECTION:

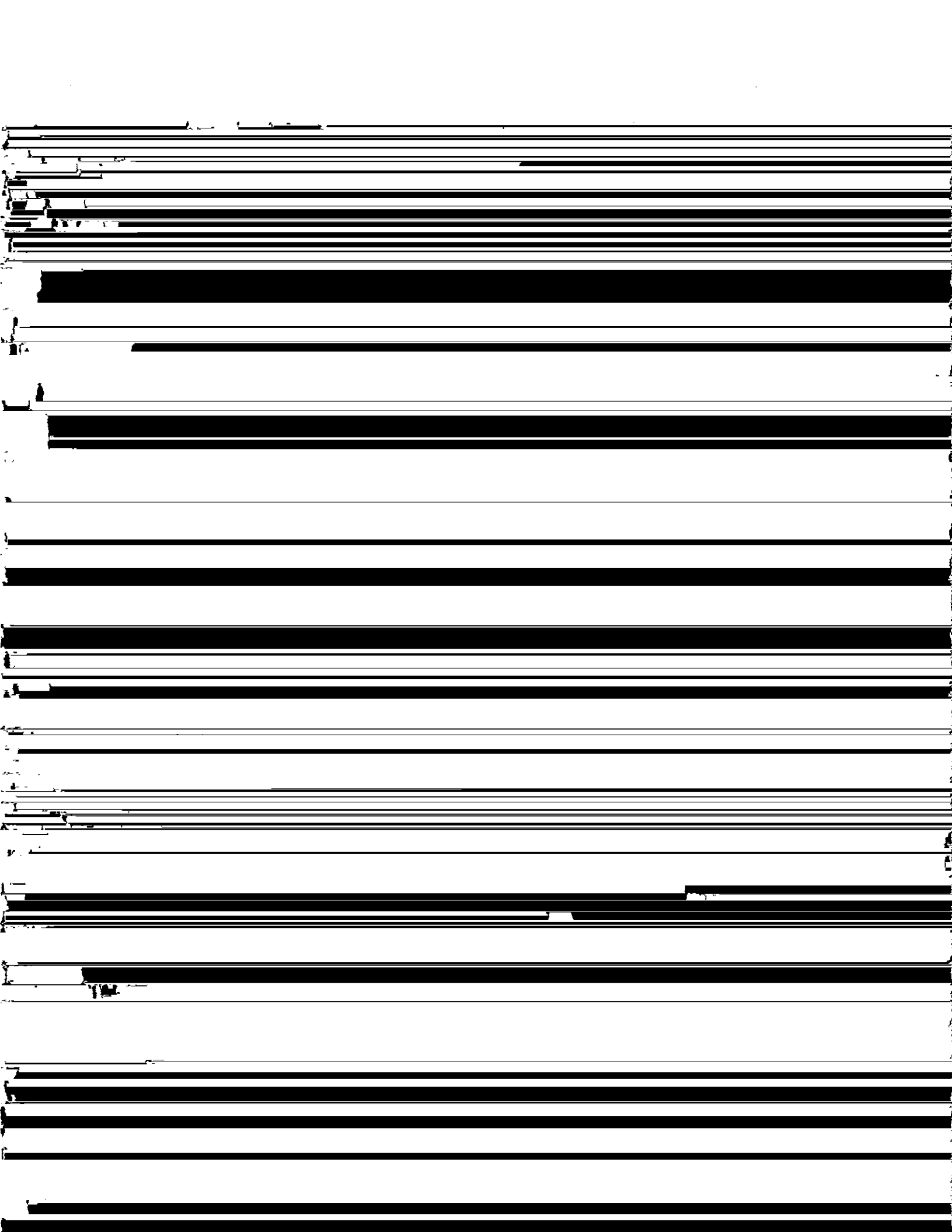
Sampling location. Analysis of our recent results on thrips distribution in two sugarbushes showed that, with 10 samples/sugarbush, the mean number of thrips/sample could be estimated in a range of accuracy of  $\pm 7$  thrips with 95% confidence. Therefore, for this survey ten soil samples, two from each of five sugar maples should be taken from each site.

One living, dominant or co-dominant sugar maple tree, having a DBH greater than 20 cm (8 in) in approximately the center of the site.

Four additional sugar maple trees meeting the above criteria should also be randomly selected for sampling. These four trees should be located approximately



A. Star-shaped plot



REGIONAL PEAR THRIPS SOIL SAMPLING LOG

1. Sample site (Town & Co.): \_\_\_\_\_
2. Collectors: \_\_\_\_\_
3. Bearing and distance from center tree: \_\_\_\_\_
4. Approximate total area of site (acres): \_\_\_\_\_
5. Site type (circle one):  
tapped sugarbush      untapped sugarbush      hardwood stand
6. Landowner Name:  
Address:  
Telephone number:
7. Date of collection: \_\_\_\_\_
8. Damage rating (previous spring) (circle one):  
0 - light      light - moderate      moderate - severe
9. Previous history of thrips damage (if known):
10. Previous history of other potential stress factors (if known):
11. Total stand basal area (optional):

Tree 1 \_\_\_\_\_ Tree 2 \_\_\_\_\_ Tree 3 \_\_\_\_\_ Tree 4 \_\_\_\_\_ Tree 5 \_\_\_\_\_

12. Basal area of sugar maple (optional):

Tree 1 \_\_\_\_\_ Tree 2 \_\_\_\_\_ Tree 3 \_\_\_\_\_ Tree 4 \_\_\_\_\_ Tree 5 \_\_\_\_\_

Saplings \_\_\_\_\_  
(Yes or no) (optional)

Seedling \_\_\_\_\_  
(Yes or no) (optional)

13. Other comments:

VERMONT STATEWIDE PEAR THRIPS SOIL SURVEY

Amended Protocol for September, 1992

Entomology Research Laboratory  
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South Burlington, VT

Soil samples should be taken at 2 and 4 m from the same trees that have been sampled in the previous years. Because of the potential soil disruption caused by sampling or emergence trapping we would like you to take





NORTHEAST REGION

County	Plot Name (#)	Town	Sampler
1. Washington	Hall (Cleaves)(4)	E. Montpelier	B. Barton
2. Washington	Carpenter (5)	Cabot	B. Barton
3. Washington	Morse (6)	E. Montpelier	B. Barton
4. Washington	W. Smith (8)	Marshfield	B. Barton
5. Washington	Bravakis (10)	Worcester	B. Barton
6. Washington	Angney(Badger)(11)	E. Montpelier	B. Barton
7. Washington	Cottonbrook I (13)	Waterbury*	B. Barton
8. Washington	Jewitt (15)	Barre	J. Lackey
9. Washington	Ralph (17)	Warren	J. Lackey
*replacement for Cottonbrook if necessary:			
7. Washington	Cate (9)	E. Montpelier	B. Barton
10. Orleans	Drown (1)	Coventry	J. St. Arn.
11. Orleans	Whitcomb (3)	Albany	J. St. Arn.
12. Orleans	Shelton (4)	Glover	J. St. Arn.
13. Orleans	Bald Mtn. (5)	Westmore	J. St. Arn.
14. Orleans	Davis (6)	Derby	J. St. Arn.
15. Caledonia	Laggis (1)	Walden	J. St. Arn.
16. Caledonia	Bowen (2)	Derby	J. St. Arn.

SITES FOR SOIL SAMPLING 1993-94

SOUTHEAST REGION

County	Plot Name (#)	Town	Sampler
1. Bennington	Twitchell (8)	Landgrove	N. Fice
2. Windham	Hazelton 1 (1)	Dummerston	A. Sands
3. Windham	Plummer (3)	Grafton	A. Sands
4. Windham	Thurber (4)	Brattleboro	A. Sands
5. Windham	Crocker (9)	Westminister W.	B. Burns
6. Windham	Mullen (10)	Rockingham	A. Sands
7. Windham	Matt (11)	Marlboro	A. Sands
8. Windsor	Barlow (3)	Springfield	A. Sands
9. Windsor	Fisher (4)	Pomfret	A. Sands
10. Windsor	Motchman (5)	Hartland	A. Sands
11. Windsor	Hunter (8)	Weathersfield	B. Burns
12. Windsor	Harlow (11)	Reading	A. Sands
13. Windsor	Wiswell (13)	Hartland	A. Sands
14. Windsor	Goodhouse (14)	Woodhouse	B. Burns

SITES OMITTED FROM SOIL SAMPLING IN 1993-94

NORTHWEST REGION

1. Grand Isle	Church Lot	(2)	North Hero	P. Reed
2. Addison	Folino	(1)	Starksboro	P. Reed

NORTHEAST REGION

3. Washington	Fitch	(7)	E. Montpelier	B. Barton
4. Washington**	Mad Riv. Gl.	(2)	Waitsfield	J. Lackey
*replacement for Cottonbrook if necessary:				
5. Washington	Cate	(9)	E. Montpelier	B. Barton

7. Caledonia	Willard	(9)	Peacham	H. Prior
8. Caledonia	Black Hill	(4)	...	...