



Northern New York Agricultural Development Program 2016 Project Report: APPENDIX

Identification, and Grower Education, of Key Pests in Apple Orchards in Northern New York

**Table 1. Rate of Infestation of Overwintering Obliquebanded Leafroller in NNY
Apple Orchards, May 2016.**

Table 1. Overwintering OBLR Infested Terminals (% of 600) Rated May 23, 2016		
Location	IPM	Control
Chazy	1.17%	0.33%
Banker	1.00%	2.50%
Valcour	2.67%	10.67%
Burrells	6.83%	4.17%
Northern	0.17%	0.67%
Average	2.37%	3.67%

Table 2. Average Insect Damage at Harvest for 5 Commercial Orchards in Northern NY, September 2016
(% of 600 fruit rated)

Damage*	Control		IPM	
	Average	SD**	Average	SD
Sting	0.0%	0.00%	0.0%	0.00%
Early	0.1%	0.15%	0.1%	0.15%
Late	0.1%	0.22%	0.4%	0.55%
AM	0.4%	0.65%	0.8%	0.62%
PC	1.5%	1.25%	1.0%	1.32%
TPB	1.0%	0.47%	0.9%	0.43%
RAA	0.0%	0.00%	0.0%	0.00%
SJS	0.0%	0.00%	0.0%	0.00%
EAS	0.3%	0.34%	0.2%	0.22%
SB	0.0%	0.00%	0.0%	0.00%
Clean	100.0%	8.36%	96.4%	1.52%

*OBLR=obliquebanded leafroller, AM=apple maggot, PC=plum curculio, TPB=tarnished plant bug, RAA=rosy apple aphid, SJS=San Jose scale, EAS=European apple sawfly, SB=stink bug
**Standard Deviation

Table 3. Average Fruit Grade at Harvest, September 2016, NNY.
(% of 600 fruit sampled)

Grade	Control		IPM	
	Average	SD	Average	SD
Fancy	99.4%	9.07%	96.6%	1.47%
#1	1.5%	1.12%	2.3%	1.51%
Cull	1.4%	0.57%	1.1%	0.89%

Table 4. Date of First Trap Capture (Biofix) for insects in regions of NY, 2015 & 2016

Region	OFM		CM		OBLR		AM	
	2015	2016	2015	2016	2015	2016	2015	2016
Highland, ENY	5/4	4/25	5/11	5/23	6/1	5/23	7/13	7/11
Geneva, WNY	5/4	5/2	5/13	5/20	6/1	5/31	7/2	7/8
Peru, NNY	5/11	5/15	5/25	5/31	6/1	6/13	7/6	7/18

Table 5. DD50 of First Trap Capture (Biofix) for insects in regions of NY, 2015 & 16

Region	OFM		CM		OBLR		AM	
	2015	2016	2015	2016	2015	2016	2015	2016
Highland, ENY	.	138.4	.	278.8	.	278.8	.	1290.2
Geneva, WNY	86.9	60.8	225.9	122.2	449.5	331.4	922.7	994.8
Peru, NNY	166.7	86.6	289.4	310.2	412.5	459.7	904.7	1142.4

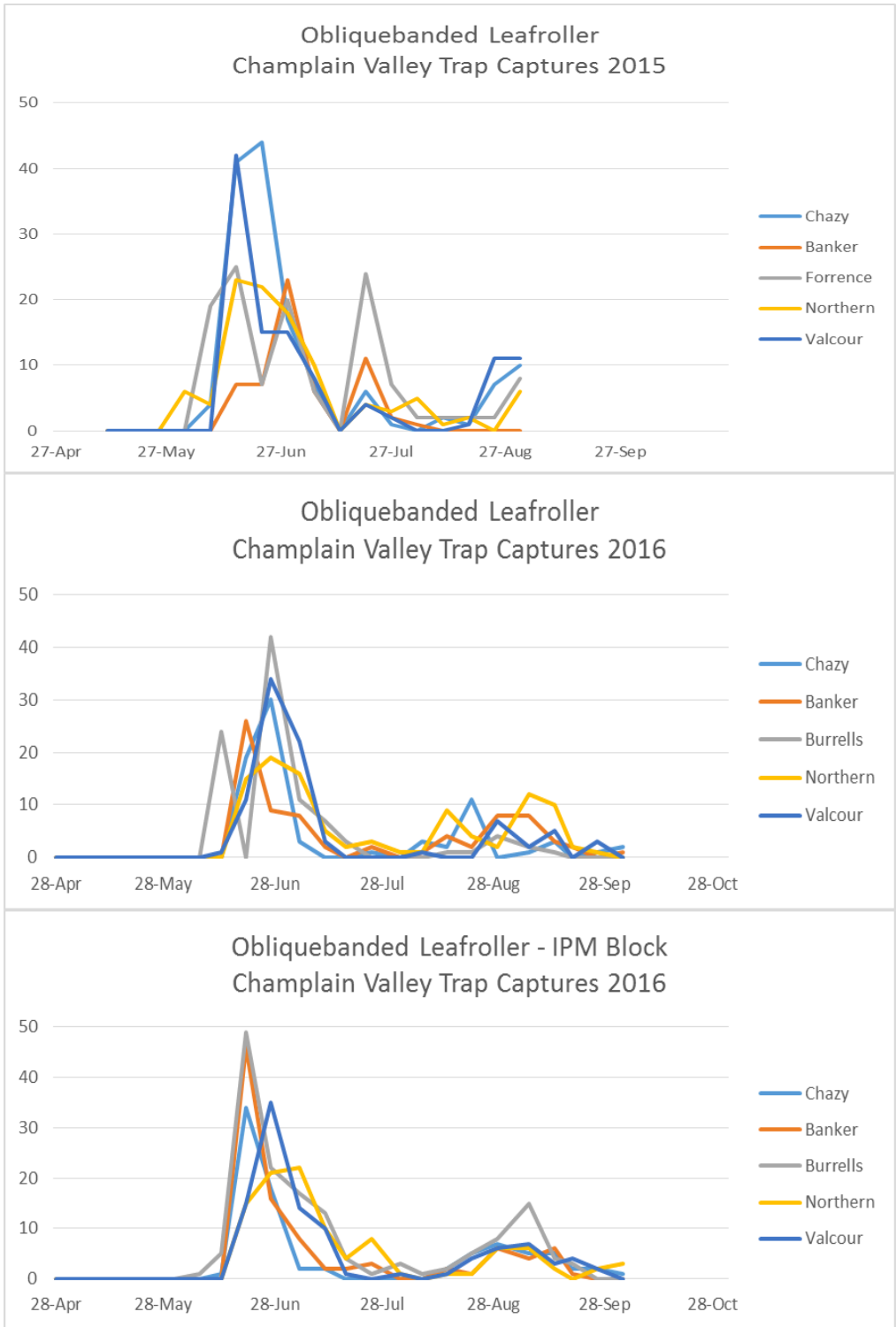


Figure 1. Obliquebanded Leafroller Trap Captures at 5 Sites in NNY, 2015 and 2016. In 2016, control blocks (middle) exhibited similar insect patterns to IPM blocks (bottom). In 2015, first flight was slightly earlier than 2016; a second flight was observed in July in a number of locations in 2015, but not in 2016.

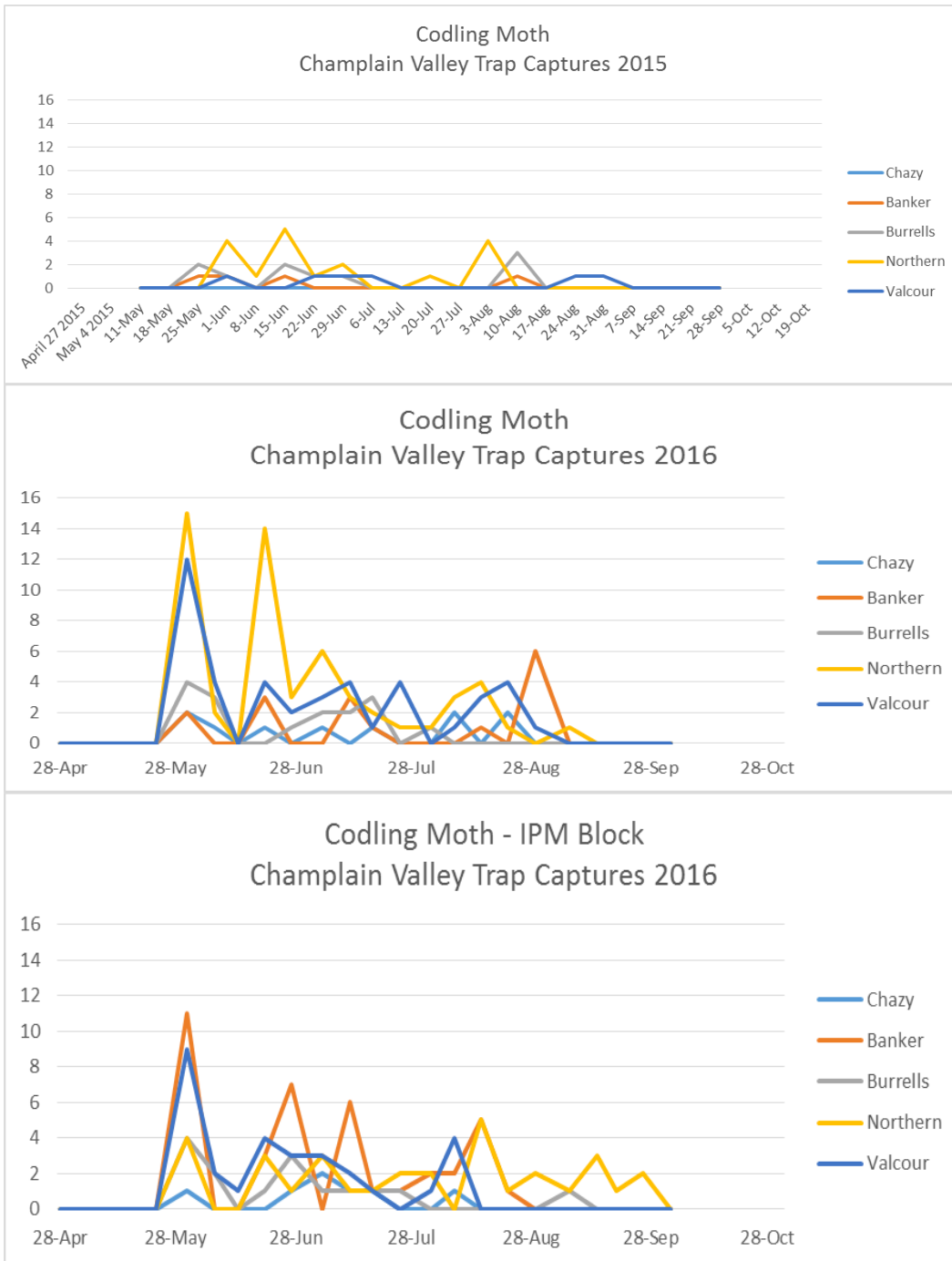


Figure 2. Codling Moth Trap Captures at 5 Sites in NNY, 2015 and 2016. In 2016, control blocks (middle) exhibited similar insect patterns to IPM blocks (bottom). In 2015, pattern of insect activity was similar, but trap counts were much lower.