



Eco Apples for the Teacher: Northeast Eco Apples and IPM STAR for School Systems and Childcare Facilities

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*US EPA Pesticide Environmental Stewardship Program, National Champion, 2004, 2005
US EPA Office of Children's Health, Recognition Award, 2005*

Northeast “Eco Apples” 2005

- Funders: US EPA Region I SAI, others
- RED TOMATO distributes, IPM Institute certifies, independent third parties inspect
- UMass, Cornell, growers, crop consultants kibbutz on “hybrid” standards (UMass Partners with Nature, CORE Values Northeast, Cornell IPM Elements inspired)

Minimum requirements:
You must (for example) sample mites and mite predators before applying miticide, use insecticide for tarnished plant bug only if trap captures over threshold

Point-based practices:
E.g., use trap out to control apple maggot fly

Red (do not use), Yellow (use with restrictions) and Green (use with justification) pesticide list:
E.g., do not use azinphos methyl, endosulfan, paraquat, permethrin, ziram,

Pesticide ranking criteria and references

- Acute aquatic toxicity: Variety of published sources
- Acute Toxicity: Caution, Warning or Danger Label/US EPA
- Neurotoxin: Cholinesterase inhibitor or listed on Toxics Reduction Inventory maintained by US EPA
- Possible, likely, probable carcinogen: US EPA, State of California, International Agency for Research on Cancer
- Reproductive/developmental toxin: US EPA, State of California
- Toxic to key natural enemies/Secondary Pests: Extension recommendations
- Suspected endocrine disruptor: Illinois EPA, Keith, Colburn or Benbrook lists
- Broad spectrum pesticide: Extension recommendations
- Resistance risk: Extension recommendations
- Potential or known groundwater contaminant: State of California, variety of published sources

eco applesTM

BORN AND RAISED HERETM

- Red Tomato apple sales more than double from '04 to '05
- Whole Foods Market, Trader Joe's can't get enough!
- Six growers, 450 acres
- \$400,000 in 2005 crop sales = 18,000 cases

Number of Acres Treated Over All Spray Applications

Pesticide Type	2004	2005	% Difference
Fungicide	6594	6918	5
Herbicide	115	123	7
Insecticide	3398	1743	-49
Miticide	425	466	10
Other	790	507	-36
Rodenticide	360	339	-6

Cost of Pesticides Applied

Pesticide Type	2004	2005	% Difference
Fungicide	\$108,024.20	\$84,936.52	-21
Herbicide	\$1,015.41	2,160.03	113
Insecticide	\$37,925.18	\$21,857.39	-42
Miticide	\$11,332.04	\$10,538.08	-7
Other	\$4,634.78	\$4,890.14	6
Rodenticide	\$2,570.88	\$2,167.58	-16
Total	\$165,502.49	\$126,549.74	-24

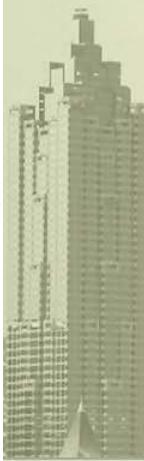
Cost of Pesticides Applied by Pesticide Toxicity

Pesticide Type	2004	2005	% Difference
Green	\$24,755	\$21,352	-13.7
Yellow	\$124,598	\$105,186	-15.6
Red	\$12,714	\$11	-99.9

Eco Apple Goals 2006 - 2009

- **Develop a direct farm retail program**
- **Refine conservation practice list and outcome measures related to soil, water and air quality, add NRCS CSP criteria not yet included**
- **Expand to additional growers in Northeast, then new geographic regions**
- **Eco Peaches?**

IPM STAR for Schools and Childcare Facilities



- Born from *IPM Standards for Schools*, an on-line compendium of >250 IPM practices for schools, developed with more than 40 IPM professionals nationwide
- On-site, professional 48-element evaluation, e.g., IPM policy, training, exclusion, sanitation, pesticides as last resort, choose least-toxic options
- Detailed, prioritized recommendations in “interim reports”

Least-toxic?

- No cholinesterase inhibitors
- No carcinogens
- No developmental, reproductive toxins
- No danger, warning labels
- *Unless proven need, i.e., effective, lesser risk option is not available*



The IPM Institute of North America, in partnership with the
U.S. Environmental Protection Agency
Pesticide Environmental Stewardship Program,
certifies that the

YOUR SCHOOL HERE
is an

**IPM STAR CERTIFIED
SCHOOL SYSTEM**

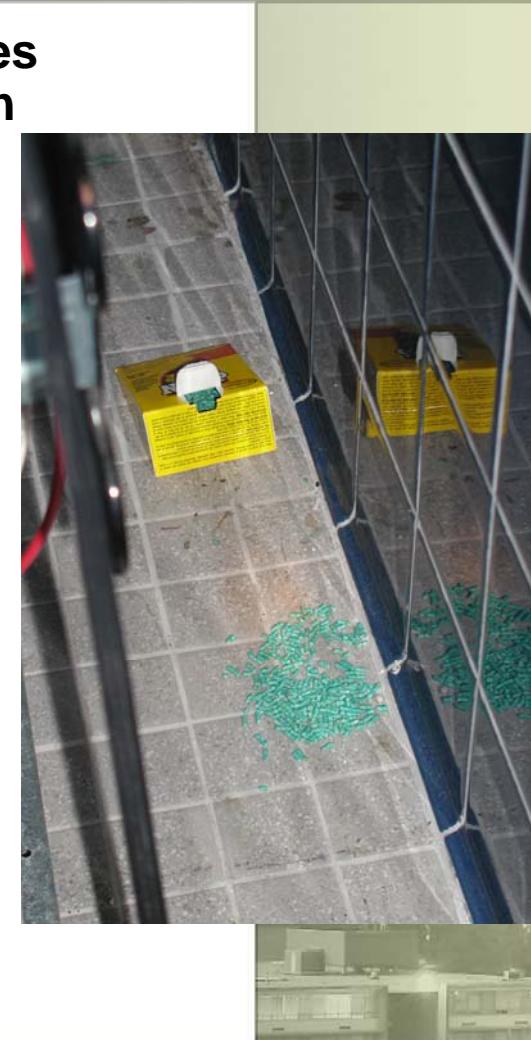
exceeding a
Rigorous Standard
for
Integrated Pest Management
YOUR SCHOOL'S
exemplary performance in
reducing pest and pesticide risks
to health and the environment
has been verified by an
independent, third-party audit.

2004-2006



OUTCOMES?

- **23 school systems or childcare facilities evaluated to date, impacting > 2 million kids! Pittsburgh, Milwaukee...**
- **16 certified to date, 7 in progress**
- **Four ended use of pesticides with “Danger” or “Warning” signal words,**
- **Nine discontinued use of pesticides containing neurotoxins**
- **13 eliminated pesticides containing possible, probable, likely, or known carcinogens and/or reproductive or developmental toxins**



OUTCOMES (continued)

- Three school systems had discontinued or unregistered pesticides – including DDT!
- Only three spray-applied pesticides to exposed interior or exterior surfaces. Nearly all spray-applied or broadcast herbicides on athletic fields or other exterior sites.
- Seven stored pesticides in unsecured locations.
- Five had unchecked pest problems in at least one of the facilities inspected, three involving mice, one cockroaches, one termites.
- IPM STAR for PMPs, Landscape services



Thank you!

