

Guidelines for Measuring IPM Adoption in Massachusetts

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In a general sense, integrated pest management (IPM) can be defined as a systematic approach to pest management that considers all factors affecting crop health, including plant nutrition, horticultural practices, and all suitable means of pest suppression. Pest management tactics may include biological, chemical, mechanical, and cultural methods, but different tactics are often required for different crops, pests and climatic situations. Given these broadly defined and variable characteristics, growers and extension specialists have been heard to state that the practice of IPM cannot be defined or measured. The Massachusetts IPM guidelines provides a means to measure the relative adoption of IPM.

The Massachusetts IPM Guidelines: Crop Specific Definitions are a series of research-based best management practices encompassing soil and nutrient management, cultural practices, pesticide application techniques, record-keeping, tactics for insect, disease and weed management and grower education. Specific practices are assigned points on the based on their importance to an IPM system. Bonus points are given for experimental techniques. Some advantages of the point system are: it allows flexibility to design site-specific systems; it encourages use of most desirable practices by weighting; and it allows partial credit for trying a practice on a portion of the farm.

The publication includes guidelines for apple, cole crops, cranberry, field and greenhouse tomato, blueberry, peppers, poinsettia, potato, pumpkin and winter squash, raspberry, strawberry, sweet corn and wine grape.

To assure practicality and relevance, the guidelines were developed with the cooperation of growers, university faculty and extension specialists, private IPM consultants, and commodity associations. Most crop guidelines were used, tested and adjusted through the USDA Farm Service Agency Integrated Crop Management cost-share program (SP-53) and through Massachusetts' IPM certification program, *Partners with Nature*.

IPM guidelines can be used in a number of ways: 1) as an educational tool which describes the scope and complexity of IPM to farmers, government officials, community groups and the general public; 2) as a checklist for farmers to evaluate their on-farm pest management programs and identify areas where management can be improved; and 3) to verify and document that IPM is practiced on the farm.

The guidelines received extensive use as an objective tool to document IPM compliance in the *Partners with Nature* program, which certified over 600 crops on over 100 farms. A discussion of the PWN program is available at: <http://www.umass.edu/umext/programs/agro/ipm/educert/pwn.htm>

Another application of the Massachusetts IPM guidelines was the assessment of adoption of IPM by sweet corn growers in six northeastern states. The report for this study can be viewed at: <http://www.umass.edu/umext/programs/agro/ipm/Reports/craig.html>

Massachusetts IPM Guidelines: Crop Specific Definitions, UMass Extension publication IP-IPMA (66 pp.) can be ordered for \$ 6.00 through the UMass Extension Bookstore, Draper Hall, UMass, Amherst MA 01003 and can be also be viewed at the UMass Extension website at: http://www.umass.edu/umext/programs/agro/ipm/ipm_guidelines/.

Acknowledgements

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IPM Assessment Tool Survey: Summary and Results

May 22, 2000

Summary and Results compiled by :

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IATP, Minneapolis, MN

Stephanie Lundeen, Environment and Agriculture Program
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Thanks to all of you that replied to our survey.
Below is some background information and a summary of the results.

Cordially,

Stephanie Lundeen and John Vickery
IATP

IPM Survey Results

PURPOSE

To identify the Integrated Pest Management assessment instruments or tools available in each state. These include: survey instruments, farmer self-assessment tools, and criteria for environmental marketing. Sometimes the terms IPM "guidelines," "protocol," "elements," are used.

Whenever any of us needs an IPM self-assessment tool or survey instrument, we will want to customize them to meet specific needs, but it is a great help to be able to start with a tool or survey instrument that has already been developed. For example, with Tom Green (IPM Works and IPM Institute), IATP is developing an IPM assessment tool for field corn. We previously knew about efforts in Ohio and New York, but now know that we need to contact folks in Illinois, Oregon, and Wyoming so that we can learn from their efforts.

METHODOLOGY

The IPM assessment tool survey instrument was sent via email from IATP to every state IPM coordinator (or similar individual) on April 28, 2000. John Vickery, Tom Green, and Mike Fitzner (IPM Program, USDA-CSREES) were identified as the senders—or

surveyors! A deadline was given and a reminder email was sent prior to the deadline. The results of this first attempt resulted in 20 completed surveys. In an attempt to gather surveys from the states that did not respond, the IPM survey was sent a second time to a different contact person in each of those states. As a result, another 14 states responded. The total number of states that responded to the survey was 34. Below is a brief summary of the results

RESPONDING STATES WITH EXTENSION ASSESSMENT TOOLS

state: respondent 23 total

AK: Fred Sorensen **
CT: Richard A. Ashley
GA: Paul Guillebeau
HI: Ronald F.L. Mau
FL: Russ Mizell
IA: Jerald DeWitt
ID: Edward John Bechinski
IL: Michael Gray
KY: Doug Johnson
LA: Clayton A. Hollier
MA: Bill Coli ***
ME: Jim Dill
NJ: George Hamilton
NM: Carol A. Sutherland **
NY: Curt Petzoldt ***
OH: Joe Kovach
OK: Gerrit W. Cuperus
OR: Leonard Coop
TN: Karen M. Vail
UT: Diane G. Alston
VT: Lorraine P. Berkett
WI: Bryan Jensen
WY: Tom Whitson

**Based on available information, the materials from these states do not appear to be assessment tools, per se.

***More information for MA & NY is provided in the conference proceedings "Adding Value Through Environmental Marketing". NY - presentation summary and MA - appendix IV. A.

RESPONDING STATES LACKING ASSESSMENT TOOLS

state: respondent 14 total

AS: Fred Brooks (American Samoa)
AZ: John C. Palumbo
CA: Peter Goodell
CO: Bill Brown
CNMI: A. Lee Eavy (Commonwealth of the Northern Marianas Islands)
DE: Joanne Whalen
KS: Douglas J. Jardine
MN: Kenneth Ostlie
ND: Marcia McMullen
NE: Robert J. Wright
RI: Richard Casagrande
SD: Darrell Deneke
VA: Ames Herbert
VI: Jozef Keularts (Virgin Islands)

NONRESPONDING STATES AND TERRITORIES

18 total

AL, AR, DC, GU, IN, MD, MI, MS, MO, MT, NV, NH, NC, PA, SC, TX, WA, WV

STATES THAT HAVE IPM ASSESSMENT TOOLS: a listing by crop (Agricultural Crops & Other):

Agricultural Crops:
agronomic crops: CT
alfalfa: IA, OH, OK, NY, WY
apples: ME, MA, NJ, OR, VT
asparagus: NY

banana: HI
beans: NY, OR
beets: NY
blueberries: MA, NJ, NY
broccoli: OR
cabbage: OH, NY
carrot: OH, NY
cauliflower: NY, OR
chile: NM
cole crops: MA
field corn: IA, IL, OH, OR, NY, WY
cotton: GA, LA, NM, OK
cranberry: MA
cucumber: OH, NY
fruit: KY
lettuce: OH, NY
macadamia: HI
melons: NY
onions: ID
peaches: NJ
peanuts: OK
pear: OR
peas: NY, WI
pecans: NM, OK
peppermint: OR
peppers: FL, MA, NY, OH
pineapple: HI
potato: AK, ID, ME, MA, OH
radish: OH
raspberry: MA, NY
rice: LA
small grains: WY
snap beans: OH, WI
soybean: IA, IL, LA, OH
squash/pumpkin: MA, OH, NY
stored grain: OK

strawberries: ME, MA
 sugarbeets: ID, WY
 sugarcane: LA
 sweet corn: ME, MA, OH, WI, NY
 tomato: FL, MA, OH, NY
 vegetables: CT
 wheat: ID, KY, OH, OK
 wine grapes: CA, MA

Other:

beekeeping: TN
 greenhouse: CT, OK
 landscape: TN
 livestock: FL
 ornamentals: FL, GA
 poinsettia: MA
 poultry houses: CA

schools: GA, TN
 urban: OK

Summary of question #6. Purpose: those who ranked "incentives" as an important purpose and identified the type/s of incentive.

CT and OK: EQIP (USDA Environmental Quality Incentives Program)

MA: - not identified [environmental marketing; formerly, federal cost sharing, state public recognition program--editors]

NY: IPM Labeling

BLANK SURVEY RESPONSE FORM

<p>Contact info. for respondent</p> <p>SAMPLE—for format</p> <p>Primary responsibility:</p> <p>1. Crop(s) with assessment tools</p> <p>A. B. C. etc.</p> <p>2. Status</p>	<p>3. Format</p> <p>A. multiple choice OR dichotomous/yes vs. no/checklist</p> <p>B. point system/quantitative OR qualitative ratings</p> <p>Includes sections or criteria on:</p> <p>(Assumed: sections or criteria on management of insects, weeds, diseases and/or nematodes)</p> <p>4. Organizations involved, other than Extension</p>	<p>5. Who is the audience-the intended user-for the tool?</p> <p>("*" denotes the primary audience)</p> <p>6. Purpose</p> <p>(Rank order, starting with "1" for the most important purpose)</p> <ul style="list-style-type: none"> - educational and/or motivational tool for farmers - identify crop production system weaknesses - characterize adoption of IPM practices - evaluate Extension programs - determine eligibility for incentive * - identify research needs - federal or state reporting requirements - other, specify 	<p>7. Primarily a survey instrument?</p> <p>8. Primary contact person for the assessment tool_ (if different from respondent):</p> <p>9. Website URL for info</p> <p>Assessment tools available on line?</p>	<p>10. Publications, reports</p> <p>11. Project description—narrative or other explanation</p>
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SURVEY RESULTS

<p>ALASKA</p> <p>Fred Sorensen IPM Coordinator University of Alaska— Fairbanks 2221 E. Northern Lights Blvd #118 Anchorage, AK 99508 907 786-6300 Fax 786-6312 dffes@uaa.alaska.edu</p> <p>1. Crops A. potato</p>	<p>2. Status A. final version completed</p> <p>3. Format A. B.</p> <p>Includes sections or criteria on: - education</p>	<p>4. Other organizations involved</p> <p>5. Audience - farmers - public sector ag. professionals - other specify: general public</p> <p>6. Purpose (rank order) -1 educational and/or motivational tool for farmers -2 characterize adoption of IPM practices -3 identify crop production system weaknesses</p>	<p>7. Primarily a survey instrument? No The guide deals with Potato Late Blight and prevention. It is a guide and information pamphlet directed to producers and the general public about the disease and information on how to identify, prevent, and eradicate.</p> <p>8. Primary contact person for the assessment tool_(if different from respondent):</p> <p>9. Website URL for info None</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports</p> <p>11. Project description-- narrative Alaska has a disease-free seed potato market internationally and the threat of Potato Late Blight has the potential of causing major damage to that market. We have had a seasonal scouting program in the potato fields and have published a pamphlet on IPM for the disease for use by the producers and homeowners. The latter, we feel, need the information as well, since the introduction of the disease may be from seed potatoes brought in by the general public. Knowledge of the potential problems may prevent it occurring in the future.</p>
<p>CALIFORNIA</p> <p>Peter B. Goodell, PhD IPM Extension Coordinator UC Statewide IPM Project Kearney Ag Center, 9240 So Riverbend, Parlier Ca 93648 559/646-6515 Fax: 559/646-6593</p> <p>1. Crops A. Grapes Lodi Woodbrodge Central Coast Sun Maid Raisin (?) B. IPM in Poultry Houses</p>	<p>2. Status Unanswered</p> <p>3. Format Unanswered</p> <p>Includes sections or criteria on:</p>	<p>4. Other organizations involved Woodbridge/Lodi - Cliff Omart</p> <p>Central Coast Vineyard Alliance - Mary Bianchi</p> <p>Sun Maid Raisins - Joe Kretsch</p> <p>Poultry House IPM - Lesley Hinkle</p> <p>See notes for contact info on the above organizations.</p>	<p>5. Audience Unanswered</p> <p>6. Purpose (rank order) Unanswered</p> <p>7. Primarily a survey instrument? Unanswered</p> <p>8. Primary contact person for the assessment tool_(if different from respondent):</p> <p>9. Website URL for info Unanswered</p> <p>Assessment tools available on line? Unanswered</p>	<p>10. Publications, reports Unanswered</p> <p>11. Project description-- narrative See notes/clarification/comments section.</p>

<p>CONNECTICUT</p> <p>Richard A. Ashley IPM Coordinator University of Connecticut Dept. of Plant Science, U-67 Storrs, CT 06269-4067 860-486-3438, FAX 486-0682</p> <p>1. Crops A. vegetables B. agronomic crops C. greenhouse</p>	<p>2. Status C draft version available A,B final version completed</p> <p>3. Format A. B,C dichotomous/yes vs. no/checklist B. A point system</p> <p>Includes sections or criteria on: A,B,C soil conservation or management A,B,C nutrient and/or soil quality management C water conservation or irrigation management</p>	<p>4. Other organizations involved None</p> <p>5. Audience - farmers - *** other specify: IPM Coordinator</p> <p>6. Purpose - 1 evaluate Extension programs - 2 federal or state reporting requirements - 3 characterize adoption of IPM practices - 4 educational and/or motivational tool for farmers - 5 identify crop production system weaknesses - 6 identify research needs - 7 determine eligibility for incentive * *EQIP</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports None</p> <p>11. Project description-- narrative Program leaders use pre- and post-training surveys to determine impacts on participating growers. IPM coordinator uses evaluation forms developed by program leaders to assess the level of adoption and use of IPM practices by a random sample of growers.</p>
<p>FLORIDA</p> <p>Russ Mizell Professor and IPM coordinator U of Florida Rt. 4, Box 4092 Monticello, FL 32344 850-342-0990 rfm@gnv.ifas.ufl.edu</p> <p>50% research/extension, 50% administration- IPM coordinator</p> <p>1. Crops A. Tomato B. Ornamentals C. Livestock D. Peppers and other vegetables</p>	<p>2. Status A-D Final version completed</p> <p>3. Format unanswered</p> <p>Includes sections or criteria on:</p>	<p>4. Other organizations involved</p> <p>5. Audience - regulators</p> <p>6. Purpose (rank order) - 1 characterize adoption of IPM practices - 2 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): O. Norman Nesheim, Pesticide Information Coordinator</p> <p>9. Website URL for info Unanswered</p> <p>Assessment tools available on line?</p>	<p>10. Publications, reports Contact N. Nesheim</p> <p>11. Project description-- narrative PIAP assessment and impact surveys with IPM questions; no other IPM tools</p>

<p>GEORGIA</p> <p>Paul Guillebeau IPM/Pesticide Coordinator University of Georgia. Department of Entomology Athens GA 30602 706-542-9031 FAX 542-3872 pguillebeau@bugs.ent.uga.edu</p> <p>Coordinate/facilitate IPM and pesticide programs</p> <p>1. Crops A. cotton B. ornamentals C. schools</p>	<p>2. Status A final version completed B, C draft version available</p> <p>3. Format A. A-C, multiple choice B. A-C point system</p> <p>Includes sections or criteria on: A - soil conservation or management A - nutrient and/or soil quality management A-C - education</p>	<p>4. Other organizations involved</p> <p>5. Audience - farmers -other, specify: school personnel, PCOs, and school administration</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers - 2 identify research needs - 2 characterize adoption of IPM practices - 2 evaluate Extension programs - 3 identify crop production system weaknesses - 3 federal or state reporting requirements - 4 determine eligibility for incentive * *Not identified</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports</p> <p>Guillebeau, Paul, Gretchen Van De Mark. 1999. Cotton IPM. Georgia Farm*A*Syst/ Cotton*A*Syst. University of Georgia Cooperative Extension Service, Bulletin 1152-19</p> <p>11. Project description--narrative</p>
<p>HAWAII</p> <p>Ronald F.L. Mau Assoc. Dean/ Assoc. Director for Cooperative Extension Univ of Hawaii College of Tropical Agriculture and Human Resources 3050 Maile Way, Room 203B Honolulu, Hawaii 96822-2271 808-956-8397 Fax: 956-9105 Mobile 808-265-4554</p> <p>Former Extension IPM Coordinator.</p> <p>1. Crops A. Pineapple B. Banana C. Macadamia</p>	<p>2. Status A,B,C final version completed</p> <p>3. Format A. unanswered B. point system</p> <p>Includes sections or criteria on: - nutrient and/or soil quality management</p>	<p>4. Other organizations involved All protocols were developed by Univ of Hawaii and industry field men. The pineapple protocol involved the Maui Pineapple Company. The banana and macadamia protocols were approved by state industry organizations and recommended for use by the organizations.</p> <p>5. Audience - farmers* - regulators</p> <p>6. Purpose (rank order) - 1 educational and/or - - motivational tool for farmers - 1 characterize adoption of IPM practices - 1 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? Yes. The instrument is used to verify level of adoption of IPM Practices</p> <p>8. Primary contact person for the assessment tool (if different from respondent): Dr. Arnold Hara, Extension IPM Coordinator arnold@hawaii.edu</p> <p>9. Website URL for info http://www.extento.hawaii.edu/IPM/</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports</p> <p>11. Project description--narrative</p> <p>The pineapple IPM protocol were patterned after the New York and Mass. elements/guidelines. The macadamia and banana guidelines were modeled after the national potato IPM program.</p> <p>If further information is needed it might be available in our plan of work at the USDA IPM Website.</p>

<p>IDAHO</p> <p>Edward John Bechinski Extension IPM Coordinator University of Idaho 236 Ag. Sci. Bldg Moscow, ID 83844 208.885.5972 FAX .885.7760 ed_bechinski@uidaho</p> <p>1. Crops A. potatoes B. sugarbeets C. wheat D. onions</p>	<p>2. Status A -D final version completed</p> <p>3. Format A. A-D_multiple choice B. Unanswered</p> <p>Includes sections or criteria on:</p>	<p>4. Other organizations involved Financially co-sponsored by state commodity commissions</p> <p>5. Audience - farmers - private sector ag. professionals - public sector ag. professionals</p> <p>6. Purpose - 1 characterize adoption of IPM practices - 2 evaluate Extension programs - 3 identify research needs - 4 educational and/or motivational tool for farmers</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://agweb.ag.uidaho.edu/ipm</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports</p> <p>11. Project description--narrative</p>
<p>ILLINOIS</p> <p>Michael E. Gray Professor & Extension IPM Coordinator Institution University of Illinois Department of Crop Sciences Address 2 S-320 Turner Hall, 1102 S. Goodwin Avenue Urbana, IL 61801 217-333-6652; FAX 333-5245 m-gray4@uiuc.edu</p> <p>1. Crops A. corn B. soybean</p>	<p>2. Status A -D final version completed</p> <p>3. Format A. A-D multiple choice B. Unanswered</p> <p>Includes sections or criteria on: -education (attends training, receives newsletters, etc.)</p>	<p>4. Other organizations involved Not aware of any others.</p> <p>5. Audience - farmers - private sector ag. professionals (summaries in preparation)</p> <p>6. Purpose (rank order) -1 characterize adoption of IPM practices -2 educational and/or motivational tool for farmers -3 identify research needs -4 identify crop production system weaknesses -5 evaluate Extension programs -6 determine eligibility for incentive * -7 federal or state reporting requirements</p> <p>* No incentive programs have been created.</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://www.aces.uiuc.edu/ipm/field/com/imr/wcrscout/wcrscout.html</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports In 1995 the following paper concerning the adoption of IPM practices on central Illinois farms was published.</p> <p>Czapar, G.F., M.P. Curry, and M.E. Gray. 1995. Survey of integrated pest management practices in central Illinois. Journal of Production Agriculture, Volume 8, no. 4: 483-486.</p> <p>11. Project description—narrative See notes/clarification/comments section for more information.</p>

<p>IOWA</p> <p>Jerald DeWitt, Professor Pest Management and the Environment Program Coordinator Iowa State University Department of Entomology Room 8 Insectary Ames, IA 50011-3140 515-294-1101 FAX 515-294-8027 jdewitt@iastate.edu</p> <p>Your primary responsibility: Coordinator of the Pest Management and the Environment Program. This program includes Integrated Pest Management for field crops and urban settings; also pesticide applicator training and educational programs for private and commercial pesticide applicators.</p> <p>1. Crops A. corn B. soybean C. alfalfa</p>	<p>2. Status A,B draft version available A-C final version completed</p> <p>We have just mailed the final version of the IPM survey to growers in Iowa for corn and soybean. The alfalfa survey is as separate survey instrument for alfalfa growers that was used earlier this year. In addition, we ask questions of producers for our pesticide applicator training programs.</p> <p>3. Format A. A-C multiple choice and A,B dichotomous/yes vs. no/checklist</p> <p>Includes sections or criteria on: - nutrient and/or soil quality management - education</p>	<p>4. Other organizations involved Iowa Department of Agriculture and Land Stewardship, Natural Resources and Conservation Service, Certified Crop Advisors, Agribusiness Association of Iowa, National Foundation for IPM Education, Texas A&M University, Texas Pest Management Association</p> <p>5. Audience - farmers - private sector ag. professionals - public sector ag. professionals</p> <p>6. Purpose - 3 educational and/or motivational tool for farmers (and/or other audience) - 1 identify crop production system weaknesses - 1 characterize adoption of IPM practices - 4 evaluate Extension programs - 7 determine eligibility for incentive * - 6 identify research needs - 5 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): Carol Pilcher 325 N Union St Good Hope, IL 61438 phone 309-456-3513 email csimmons@iastate.edu</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports Contact Carol Pilcher Reports will be generated when IPM survey is completed.</p> <p>11. Project description-- narrative The primary objective of the IPM survey was to take an important step towards developing a standardized measurement tool for the adoption of IPM that can be utilized by multiple agencies across different commodities. This research evaluated existing measurement devices to develop an appropriate tool with field level applicability. We are currently in the process of demonstrating the use of this tool across state lines with corn, cotton, and soybean production.</p> <p>The alfalfa survey was designed to reveal specific management techniques that are used in alfalfa production in Iowa. From these data, we can better estimate client needs and develop educational materials that answer producer needs.</p>
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<p>KENTUCKY</p> <p>Doug Johnson Extension Entomologist University of Kentucky Research and Education Center P.O. Box 469 (1205 Hopkinsville St.) Princeton, KY 42445-0469 270.365.7541 x214; FAX 365.2667 djohnson@ca.uky.edu</p> <p>IPM: http://www.uky.edu/Agriculture/IPM/ipm.htm</p> <p>ENTOMOLOGY: http://www.uky.edu/Agriculture/Entomology/enthp.htm</p> <p>Extension Entomologist</p> <p>1. Crops A. Wheat B. Fruit</p>	<p>2. Status A, B revised/updated version will be available (date/year?)</p> <p>3. Format A. Unanswered B. A, B Point system</p> <p>Include(s) sections or criteria on: A, B soil conservation or management A, B nutrient and/or soil quality management B organic amendments A, B education</p>	<p>4. Other organizations involved See 11.</p> <p>5. Audience farmers private sector ag. professionals publics sector ag. professionals</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers -2 identify crop production system weaknesses - 2 characterize adoption of IPM practices - 2 evaluate Extension programs - 2 identify research needs - 3 federal or state reporting requirements - NA determine eligibility for incentive *</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info Not yet available.</p> <p>Assessment tools available on line? No, but will be as time and support permits</p>	<p>10. Publications, reports Annual reports available on USDA IPM site.</p> <p>11. Project description-- narrative IPM programs utilize expertise and participation from: Entomology, Plant Pathology, Agronomy, Horticulture, Agricultural Engineering, Agricultural Weather, and Agricultural Communications. Additionally, IPM will share personnel teaching materials, programs, and ideas with efforts in Pesticide Applicator Training (KY PAT), Pesticide Impact Assessment, and Food Safety, Water Quality, and Sustainable Agriculture Working Groups.</p> <p>See notes/clarification/comments section for more information.</p>
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<p>LOUISIANA</p> <p>Clayton A. Hollier Division Leader (Plant Science) & Specialist (Plant Pathology) Louisiana Cooperative Extension Service P. O. Box 25100 Baton Rouge, LA 70894-5100 225-388-2186 FAX 388-2478 chollier@agctr.lsu.edu</p> <p>1. Crops A. Sugarcane B. Rice C. Cotton D. Soybeans</p>	<p>2. Status A – D final version completed</p> <p>3. Format A. A –D dichotomous/yes vs. no/checklist B. Quantitative/Population Density/Unit Area</p> <p>Include(s) sections or criteria on: A soil conservation or management A nutrient and/or soil quality management A organic amendments A – D water conservation or irrigation management A – D education</p>	<p>4. Other organizations involved Consultants associations Commodity associations NRCS Farm Bureau</p> <p>5. Audience farmers private sector ag. professionals publics sector ag. professionals regulators other, specify: Agricultural Extension Agents</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers - 1 evaluate Extension programs - 1 identify research needs - 2 identify crop production system weaknesses - 2 characterize adoption of IPM practices - 3 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info Yes http://www.agctr.lsu.edu/wwwac (then go to Commodity Pages)</p> <p>Assessment tools available on line? (No, not yet, still in planning stage)</p>	<p>10. Publications, reports LCES Publication no. 1083, 1118, 1261, 1565, 1606, 1802, 1838, 1982, 2211, 2241, 2284, 2067, 2147, 2307, 2321, 2341, 2377, 2314, 2496, 2513, 2521, 2554, 2620, 2746</p> <p>Annual reports available on USDA IPM site.</p> <p>11. Project description-- narrative</p>
<p>MAINE</p> <p>Jim Dill Pest Management Specialist University of Maine UMCE PMO 491 College Ave. Orono, ME 04473-1295 207-581-3870 FAX 581-3881 jdill@umext.maine.edu</p> <p>1. Crops A. Potatoes B. Sweet corn C. Apples D. Strawberries</p>	<p>2. Status A,B,C,D: final version completed (for program evaluation only)*</p> <p>3. Format unanswered</p> <p>Includes sections or criteria on:</p>	<p>4. Other organizations involved</p> <p>5. Audience farmers</p> <p>6. Purpose (rank order) - 1 characterize adoption of IPM practices - 1 evaluate Extension programs - 2 educational and/or motivational tool for farmers - 3 identify crop production system weaknesses - 3 identify research needs - 4 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports</p> <p>11. Project description-- narrative *These are strictly program evaluation surveys— not a point system like National Potato Council's IPM Protocol</p>

<p>MASSACHUSETTS</p> <p>William M. Coli Extension Educator Department of Entomology Agricultural Engineering Bldg. University of Massachusetts Amherst MA 01003 413-545-1051 Fax 545-5858 wcoli@umext.umass.edu</p> <p>1. Crops A. Apple B. Cranberry C. Cole crops D. Field tomato E. Greenhouse tomato F. Highbush blueberry G. Peppers H. Poinsettia I. Potato J. Pumpkin and winter squash K. Raspberry L. Strawberry M. Sweet Corn N. Wine grapes</p>	<p>2. Status ALL CROPS final version completed</p> <p>3. Format A. Unanswered B. ALL point system</p> <p>Include(s) sections or criteria on: ALL soil conservation or management ALL nutrient and/or soil quality management B water conservation or irrigation management ALL education</p>	<p>4. Other organizations involved Various grower associations Private IPM Consultants Dept. of Food and Agriculture</p> <p>5. Audience -farmers -private sector ag. professionals -publics sector ag. professionals -auditors, certifiers -regulators -other, specify: environmental advocacy groups & consumers</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers - 1 characterize adoption of IPM practices - 2 identify research needs - 2 federal or state reporting requirements - 3 evaluate Extension programs - 4 determine eligibility for incentive * *not identified [environmental marketing; formerly, federal cost sharing--editor]</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://www.umass.edu/umext/programs/agro/ipm/IPM_guidelines/</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports ~ Hollingsworth, Craig and the University of Massachusetts Extension IPM Program. Amherst, MA, USA for Integrated Pest Management, Massachusetts Guidelines: Commodity Specific Definitions for sweet corn and potatoes ~ Hollingsworth, C.S. 1994. Integrated Pest Management certification: a sign by the road. American Entomologist. 40(Summer): 74–75.) ~ Coli, W.M., and C.S. Hollingsworth. 1996. IPM: defining the ambiguous. The Grower. (April):48,49,58</p> <p>11. Project description--narrative See notes/clarification/comments section for more information.</p>
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<p>NEW JERSEY</p> <p>Dr. George Hamilton Associate Specialist in Pest Management Dept. of Entomology Rutgers University 93 Lipman Drive New Brunswick, NJ 08901-8525 732-932-9801 FAX 932-hamilton@aesop.rutgers.edu</p> <p>IPM, PAT, PIA</p> <p>1. Crops</p>	<p>2. Status Many more veggies: in planning ALL: final version completed - Apples, peaches and blueberries: revised/updated version will be available: 7/00</p> <p>3. Format A. Unanswered B. point system AND qualitative ratings</p> <p>Includes sections or criteria on: - soil conservation or management nutrient and/or soil quality management - organic amendments - water conservation or irrigation management - education</p>	<p>4. Other organizations involved Wegman's New Jersey Department of Agriculture</p> <p>5. Audience - farmers</p> <p>6. Purpose (rank order) - 1 determine eligibility for incentive * - 2 characterize adoption of IPM practices - 3 educational and/or motivational tool for farmers - 4 identify crop production system weaknesses - 5 evaluate Extension programs - 6 identify research needs - 7 federal or state reporting requirements * New marketing opportunity</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool_(if different from respondent):</p> <p>9. Website URL for info http://aesop.rutgers.edu/~hamilton/IPM.htm</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports See website</p> <p>11. Project description--narrative</p>
<p>NEW MEXICO</p> <p>Carol A. Sutherland Extension Entomologist, State Entomologist New Mexico State University Extension Plant Sciences Dept. Box 30003, MSC 3AE Las Cruces, NM 88003-8003 505-646-1132 FAX 646-8085 csutherl@nmda-bubba.nmsu.edu</p> <p>1. Crops A. chile (in binder) B. pecans (in binder) C. cotton (components are not assembled into a 3-ring binder, however)</p>	<p>2. Status A,B,C final version completed</p> <p>3. Format A. Unanswered B. Unanswered</p> <p>Comment: compendia of available publications on a crop</p> <p>Include(s) sections or criteria on: - soil conservation or management - nutrient and/or soil quality management - organic amendments (manures only) - water conservation or irrigation management - education</p>	<p>4. Other organizations involved None</p> <p>5. Audience - farmers* - private sector ag. professionals* - publics sector ag. professionals</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers (and/or other audience) - 2 identify crop production system weaknesses - 3 characterize adoption of IPM practices</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool_(if different from respondent): Chile: Dr. Natalie Goldberg, same address as above Pecans: Dr. Esteban Herrera, ditto Cotton: no real spokesman for that since the collection of publications is not assembled into one unit</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line? No</p>	<p>10. Publications, reports</p> <p>11. Project description--narrative See notes/clarification/comments section for more information.</p>

<p>NEW YORK</p> <p>Curt Petzoldt, Director IPM Cornell University, NYSAES Geneva, NY 14456 Phone,Fax 315787-2206 cp13@cornell.edu</p> <p>Your primary responsibility: IPM Programs</p> <p>1. Crops A. Market Sweet corn B. Cabbage C. Beets D. Carrots E. Asparagus F. Blueberries G. Cauliflower H. Cucumbers, melons, squash I. Wintersquash, pumpkin J. Dry beans K. Lettuce L. Peas M. Raspberries N. Snap beans O. Strawberries P. Processing sweet corn Q. Market tomatoes R. Greenhouse tomatoe S. Alfalfa & field corn T. peppers</p>	<p>2. Status S,T draft version available A - R final version completed</p> <p>3. Format A. Unanswered B. A - T point system</p> <p>Include(s) sections or criteria on: -all soil conservation or management -all nutrient and/or soil quality management -organic amendments -water conservation or irrigation management</p> <p>*education is required if the elements are used for IPM labeling. Not required as an element</p>	<p>4. Other organizations involved -growers -Agrilink Foods -Wegmans</p> <p>5. Audience -farmers -private sector ag. professionals -publics sector ag. professionals -auditors, certifiers -other specify: consumers</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers (and/or other audience) - 1 identify crop production system weaknesses - 1 characterize adoption of IPM practices - 1 evaluate Extension programs - 1 determine eligibility for incentive * IPM labeling - 1 identify research needs -2 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? no</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://www.nysaes.cornell.edu/ipm/net/ny/elements/index.html</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports Petzoldt, Curtis, Joseph Kovach, Abby Seaman. 2000. Integrated Pest Managment Elements for New York Crops. New York IPM Publication 124</p> <p>11. Project description-- narrative See notes/clarification/comments section.</p>
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<p>OHIO</p> <p>Joe Kovach IPM Coordinator Ohio State University Selby Hall OARDC/OSU Wooster, OH, 44691 330-263-3846 FAX 263-3841 kovach.49@osu.edu</p> <p>1. Crops A. Alfalfa B. Field Corn C. Soybean D. Wheat E. Cabbage F. Carrot G. Cucumber (Pickles) H. Lettuce I. Pepper J. Potato K. Proc. Tomato L. Radish M. Snap beans N. Squash & Pumpkin O. Sweet corn</p>	<p>2. Status A- D draft version available (need to assign points) E - O final version completed</p> <p>3. Format A. Unanswered B. Point system All will be point system. Veggies already have point totals. For survey work we may go use binomial system</p> <p>Includes sections or criteria on: - soil conservation or management - nutrient and/or soil quality management - water conservation or irrigation management - education</p>	<p>4. Other organizations involved So far, we only have had OSU internal input (by design.)</p> <p>5. Audience - * farmers - * public sector ag. professionals - private sector ag. professionals</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers - 1 characterize adoption of IPM practices - 1 determine eligibility for incentives * public recognition - 2 identify research needs - 2 identify crop production system weaknesses - 3 evaluate Extension programs - 4 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://www.ag.ohio-state.edu/~ipm/element/index.htm</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports</p> <p>11. Project description-- narrative</p>
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<p>OKLAHOMA</p> <p>Gerrit W. Cuperus IPM Coordinator Oklahoma State University 1 127 NRC Stillwater, OK 74078 405-744-9419 bugs1@okstate.edu</p> <p>1. Crops A. alfalfa B. stored grain C. urban D. cotton E. pecans F. wheat G. peanuts H. nursery</p>	<p>2. Status A-G final version completed H ?</p> <p>3. Format A. multiple choice B. qualitative</p> <p>Includes sections or criteria on: A – G soil conservation or management A – G nutrient and/or soil quality management A – G water conservation or irrigation management A - G education</p> <p>4. Other organizations involved Ag Experiment Station, growers, independent groups</p>	<p>5. Audience tool? GENERAL PUBLIC - farmers - private sector ag. professionals -other, specify: public housing authority residents & general public</p> <p>6. Purpose - 1 educational and/or motivational tool for farmers - 1 characterize adoption of IPM practices - 1 evaluate Extension programs - 2 identify crop production system weaknesses - 2 Identify research needs - 3 determine eligibility for incentive *EQIP - 4 federal or state reporting requirements</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): Christine Johnson, Gerrit Cuperus</p> <p>9. Website URL for info Assessment tools available on line? Some are</p>	<p>10. Publications, reports - stored grain mangment, E-912 - cotton evaluaton (see evaluation stuff), E-930</p> <p>11. Project description-- narrative</p>
<p>OREGON</p> <p>Leonard Coop Research Associate Oregon State Univ. Dept. IPPC Cordley 2040 Corvallis, OR 97331 541-737-5523, FAX 737-3080 coopl@bcc.orst.edu</p> <p>1. Crops A. Pear and Apple - 1996 survey B. Vegetables: Beans, Corn, Broccoli, and Cauliflower - 1996 survey C. Peppermint - 1994 survey</p>	<p>2. Status A, B draft version available C final version completed</p> <p>3. Format Unanswered</p> <p>Includes sections or criteria on: B - soil conservation or management B - nutrient and/or soil quality management A, B - water conservation or irrigation management A, B - education</p>	<p>4. Other organizations involved A,B - IPPC, OSU Stats Survey Center C - Mint Industry Research Council, OSU Stats Survey Center</p> <p>5. Audience * other specify: general use is to indicate IPM status, especially for research prioritization</p> <p>6. Purpose (rank order) - 1characterize adoption of IPM practices - 2 identify crop production system weaknesses - 3 identify research needs - 4 federal or state reporting requirements</p>	<p>- 4 federal or state reporting requirements</p> <p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): A - Len Coop, coopl@bcc.orst.edu B - Dan McGrath, Daniel.McGrath@orst.edu C - ? Ralph Berry, berryr@bcc.orst.edu</p> <p>9. Website URL for info http://ippc.orst.edu/IPMsurvey/cfg/ph/pearsurvey.cfm Assessment tools available on line? Unanswered</p>	<p>10. Publications, reports A - none other than website B,C - contact persons listed above</p> <p>11. Project description-- narrative</p>

<p>TENNESSEE</p> <p>Karen M. Vail Assistant Professor Entomology and Plant Pathology P.O. Box 1071 University of Tennessee Knoxville, TN 37901-1071 865 974-7135 FAX 974-8868 kvail@utk.edu</p> <p>1. Crops A. Beekeeping B. School IPM C. Landscape IPM</p>	<p>2. Status A – C final version completed</p> <p>3. Format A. A - C multiple choice B. A - C qualitative ratings</p> <p>Includes sections or criteria on: C - nutrient and/or soil quality management C - organic amendments C - water conservation or irrigation management A - C education</p>	<p>4. Other organizations involved</p> <p>5. Audience other, specify: A Beekeepers B School Personnel C Homeowners</p> <p>6. Purpose (rank order) A1, B1, C1 characterize adoption of IPM practices A4, B2, C2 educational and/or motivational tool for farmers A3 evaluate Extension programs A2, B3, C3 identify research needs</p>	<p>7. Primarily a survey instrument? A – C Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): A. John Skinner/Pat Parkman B&C. Karen Vail</p> <p>9. Website URL for info No, but soon will be for B</p> <p>Assessment tools available on line? No, but B will be soon</p>	<p>10. Publications, reprints</p> <p>11. Project description--narrative See notes section for more info. on B and C.</p>
<p>VERMONT</p> <p>Lorraine P. Berkett, Ph.D. Plant Pathologist & IPM Specialist Department of Plant & Soil Science Hills Building University of Vermont Burlington, VT 05405 802-656-0972 FAX: 656-4656 lorraine.berkett@uvm.edu http://orchard.uvm.edu/</p> <p>1. Crops A. Apple</p>	<p>2. Status</p> <p>3. Format A. B.</p> <p>Include(s) sections or criteria on:</p>	<p>4. Other organizations involved</p> <p>5. Audience</p> <p>6. Purpose</p>	<p>7. Primarily a survey instrument?</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info http://orchard.uvm.edu/uvmapple/pest/</p> <p>Assessment tools available on line? Yes http://orchard.uvm.edu/uvmapple/pest/2000IPMChecklist.html</p>	<p>10. Publications, reports</p> <p>11. Project description--narrative</p>

<p>WISCONSIN</p> <p>Bryan Jensen Outreach Program Manager Univ of Wisconsin Dept. of Entomology 1630 Linden Dr. Madison, WI 53706 608-263-4073 FAX: 262-3322 bmjense1@facstaff.wisc.edu</p> <p>1. Crops A. Sweet corn B. Peas C. Snap beans</p>	<p>2. Status A – C in development/on hold</p> <p>3. Format A. Unanswered B. Unanswered</p> <p>Includes sections or criteria on: - soil conservation or management - nutrient and/or soil quality management - water conservation or irrigation management - education</p>	<p>4. Other organizations involved</p> <p>5. Audience -farmers -private sector ag. professionals</p> <p>6. Purpose (rank order) 1 other, specify: labeling program</p>	<p>7. Primarily a survey instrument? No</p> <p>8. Primary contact person for the assessment tool (if different from respondent):</p> <p>9. Website URL for info No</p> <p>Assessment tools available on line?</p>	<p>10. Publications, reports None</p> <p>11. Project description--narrative We began development of IPM Elements for Sweet Corn, Peas and Snap Beans. However, industry wanted to put it's development and their involvement on hold until there was more demand. It may not take a lot of work to finish this project.</p>
<p>WYOMING</p> <p>Tom Whitson State IPM Coordinator and Extension Weed Specialist University of Wyoming PO Box 3354 Laramie, WY 82071 307-766-3113 twhitson@uwyo.edu</p> <p>1. Crops A. Corn B. Sugarbeets C. Alfalfa D. small grains</p>	<p>2. Status A - D in planning A - D in development A - D final version completed</p> <p>3. Format A. Unanswered B. Point system</p> <p>Include(s) sections or criteria on: A, B, C, D -education -Ours was a pesticide use survey</p>	<p>4. Other organizations involved - Commercial applicators - Farmers</p> <p>5. Audience - farmers - private sector ag. professionals - publics sector ag. professionals - auditors, certifiers - regulators</p> <p>6. Purpose (rank order) - 1 educational and/or motivational tool for farmers - 2 identify crop production system weaknesses - 3 characterize adoption of IPM practices - 4 identify research needs - 5 evaluate Extension programs</p>	<p>7. Primarily a survey instrument? Yes</p> <p>8. Primary contact person for the assessment tool (if different from respondent): Mark Ferrell</p> <p>9. Website URL for info Yes</p> <p>Assessment tools available on line? Yes</p>	<p>10. Publications, reports ~ Wyoming Agriculture Extension Service: Pesticide Use in Wyoming, RJ 126, 1986 updated in 1993 ~ CAST IPM Report: IPM on Rangeland in the Western US, 2000 (in progress) ~ CAST IPM Report: Applications of Pesticides, 2000 (in progress)</p> <p>11. Project description--narrative We began development of IPM Elements for Sweet Corn, Peas and Snap Beans. However, industry wanted to put it's development and their involvement on hold until there was more demand. It may not take a lot of work to finish this project.</p> <p>See notes/clarification/comments section for more information.</p>

NOTES/CLARIFICATION/COMMENTS NOT INCLUDED IN SUMMARY TABLES

From states and territories with assessment tools

ILLINOIS

Over the last several years, Dr. Susan Ratcliffe, Department of Crop Sciences, University of Illinois, has created and coordinated the collection of data via a website that producers can directly report the results of their scouting efforts for western corn rootworms in soybeans. Since 1995, western corn rootworms have adapted to crop rotation across east-central Illinois and northern Indiana and now routinely lay eggs in the soil of soybean fields. By monitoring western corn rootworm adult densities in soybeans with yellow sticky traps (Pherocon AM traps) producers can make more informed management decisions regarding the need for a soil insecticide when planting corn the following spring. Since Dr. Ratcliffe established this web site, hundreds of producers directly report the results of guidelines to help them determine if their operations have adopted enough core practices to qualify them as IPM practitioners.

NEW MEXICO

NOTE: These tools don't rank one IPM practice over another and they don't promote "environmental marketing." They present information or give directions on how to do something. They are not associated with additional surveys and they don't administer any surveys or keys to direct a grower's reading to a particular chapter. They were assembled because of grower interest.

There is no "environmental marketing" angle to our publications. There is a New Mexico Organic Commodities Commission, separate from the University and the NM Dept of Agriculture that has set some standards and limits and specifies needed documentation (for growers anticipating an organic marketing label)

TENNESSEE

B. School IPM

Pest management programs in schools need to balance the risk of unnecessary exposure to pest control products with the health risk associated with the pests. Integrated Pest Management (IPM) can help accomplish this goal. IPM emphasizes regular inspecting and monitoring of

their scouting efforts. The information is summarized and reported back to all producers in Illinois via the Pest Management and Crop Development Bulletin.

OHIO

In 1999, the Ohio State Integrated Pest Management Program initiated an effort to define and consolidate current crop specific Ohio information on integrated approaches to pest management. Working with Ohio State faculty and Extension personnel, the IPM elements for 15 commodities (4 field crops and 11 vegetables) have been defined and placed on the Ohio State IPM Program web site. Apple and strawberry elements are near completion. These IPM elements were modeled after similar efforts done in New York and Massachusetts and included insect, disease, and weed management techniques, and soil, nutrient and water management methods. Intended outcomes of this effort are: 1) to form crop specific working definitions (practices) of IPM in Ohio; 2) to develop a system of assessing how far along the IPM continuum growers are; and 3) and to provide pests in order to detect them at low population levels which is a better alternative than the scheduled spraying of pesticides. Information about the life cycle of the pest and its interactions with the environment are used to make a control decision. Most pests need access to food, water and shelter. By removing the basic survival elements or by blocking access into a structure, pest populations can be lowered or prevented from establishing. Pesticides may be necessary in an IPM program, but they should be used in a manner to minimize the risk of exposure to the occupants.

In 1997, a mail survey was distributed to the 149 public school systems to determine the baseline adoption of IPM. Surveys were returned from 74% of the school systems. Sixty-five percent of the school systems surveyed indicated they were concerned about pesticide exposure, yet only 30% of the school systems indicated they used IPM. Many of the school systems indicated on the survey that they had adopted IPM. Our estimates of IPM adoption were lower. If, according to the survey, schools indicated they used IPM, but also sprayed pesticides on a monthly basis, then they were classified as NOT using IPM. This lowered the percentage of schools using IPM to 11.7%. Based on the Department of Education's 1995/1996 annual statistical report on enrollment, schools using IPM account for about 34% of the children in Tennessee's school system. We can assume a reduced risk of pesticide exposure to these.

C. Landscape IPM

The public is concerned about exposure to pesticides. Integrated pest management (IPM) can reduce reliance on pesticides and protect the balance that exists between the pest, its natural enemies and the environment. An urban IPM program was developed to address this need. In urban landscapes, the IPM program promotes preventing pests problems by choosing proper plant and site selection, and optimizing growing conditions. Pests are identified before intervention by regular monitoring and inspecting for pests, pest damage, indicator species and other problems. Action thresholds are used where feasible. Intervention, when necessary, is based on a combination of feasible techniques such as cultural, mechanical, biological and chemical control. If pesticides are deemed necessary, those that reduce the risk of unnecessary exposure to people, property and the environment are chosen.

Results from the Homeowner Landscape Management Survey conducted at the state fair by Davidson County Master Gardeners in 1996 established a benchmark to measure future impacts. Twelve questions were selected to represent the use of IPM in the landscape. These 12 questions referred to using cultural practices to prevent a pest outbreak; planting flowers for beneficials; planting resistant varieties; inspecting for pest problems; identifying pests before control practices are used; inspecting for beneficials; purchasing beneficials; changing cultural practices that affect the problem; tolerating slight damage; choosing a product with least impact on ground water; using biorationals (soaps, oils, microbials, etc.); and spot-treating infested areas. To be classified as using IPM a respondent would have used 8 out of 12 (67%) of these practices. Only 11.8% of the respondents could be classified as using IPM. Although the audience was biased and may not represent the average homeowner in the state, results of the survey indicate that more education is needed to increase the adoption of landscape IPM.

WYOMING

The project was an assessment of pesticides use in Wyoming conducted in cooperation with the Applicator Training Program. Ten percent of the farm and ranch population of Wyoming were surveyed with a 60 percent response rate. The survey was conducted on various crops to determine the pounds of pesticide that are used. Use rate declined from 1986 to 1993 indicating that pesticides are being used more judiciously. The purpose of

the IPM portion of the survey was to determine if pesticide use was changing. It was determined that the decline in pesticides was due to crop rotations, pesticide rotations, and changes in pesticide formulations that resulted in lower amounts of chemical needed per acre.

From states and territories lacking assessment tools

AMERICAN SAMOA

To my limited knowledge, the only survey mechanism we have is the field visit. Though we had a big agricultural census last year, the scope of the questioning was limited and only superficially address crop management strategies.

Traditionally a verbal society, growers in American Samoa do not, as a rule, keep records. If you ask if they use anything against a particular pest, they may show you a container, the label of which they cannot or do not read. If you ask how much they apply, they may answer, "One tuna can per plant." or "One corned beef can (for all plants)." Produce is not weighed at harvest or before sale. Baseline measurements and projected outcomes are a challenge, as are effects of (IPM) interventions.

Fred Brooks, Plant Pathologist, IPM Coordinator, American Samoa

CALIFORNIA

Before I fill in the survey, your real question isn't about IPM programs but about activities in which the growers assess their progress or seek additional value to their produce. As such, the Statewide IPM Project does not have any specific activities in this area but does maintain a large library of IPM information from which such self-assessment tools could be developed. Such information is available in written, video, and web-based formats.

The Statewide IPM is engaged in an extensive IPM assessment program whose goals are to:

- * develop generalized characteristics of IPM systems capable of contrasting different cropping systems
- * formalize the IPM continuum concept
- * establish benchmarks to measure IPM adoption and progress.

Again, these activities are not designed to measure individual growers but to establish the current state of IPM in some commodity, identify constraints in preventing implementation of increasingly biological reliant practices, and measure changes in practices.

We want to make the assessments 'grower-driven' e.g., if the growers want such assessments we can help them to formulate the guidelines. If they do not see a value in this for them, we are not going to force the issue. I am providing contacts for several organizations that have developed the assessment tools who might be contacted directed if this suits your needs. I cannot speak for them, thus I have not answered any of the survey questions.

Respondent contact info:
Peter B. Goodell, PhD
IPM Extension Coordinator
University of California Statewide IPM Project
Kearney Ag Center,
9240 So Riverbend
Parlier, CA 93648
559 646-6515; FAX 559/646-6593

Some IPM assessment tools have been produced in my state but not by Statewide IPM Project

Crop/s - with assessment tools (organizations involved)

- A. Grapes
 - (Lodi Woodbrodge)
 - (Central Coast)
 - (Sun Maid Raisin) (?)
- B. IPM in Poultry Houses (?)

Organizations involved, contact info.

Woodbridge/Lodi - Cliff Omart

Central Coast Vineyard
Mary Bianchi, Farm Advisor
Cooperative Extension San Luis Obispo County, 2156 Sierra Way, Suite C
San Luis Obispo, CA 93401

mlbianchi@ucdavis.edu

805 781-5949; FAX: 805 781-4316

Specialty: Viticulture, pomology, nutrition, irrigation.

Grapes in Santa Barbara County

Sun Maid Raisins - Joe Kretsch
13525 S Bethel Ave
Selma, CA
559 896-8000

Poultry House IPM - Lesley Hinkle

COLORADO

I was on the original GPRA Task Force for impact assessment as an IPM rep from Colorado. Unless we can actually quantify things like improved profit margin (IPM), pesticide use down, or % low risk to traditional, I do not know what to do. All our assessments are qualitative and not very good.

We just completed an external 5-year review of Colorado IPM last summer and the major criticism was lack of effective impact assessment tools.

Sorry, I do not have anything to add that is really attainable.

Bill Brown, Colorado

COMMONWEALTH OF THE NORTHERN MARIANAS ISLANDS

I am not aware of any IPM tools in my state. Since there is no IPM program here yet, it is hard to imagine an impact assessment tool existing. I have only recently taken this job, and am faced with creating this whole program from the ground up. I would much appreciate receiving copies of any pre-existing protocols which would help us design our IPM implementation program with an eye to being able to assess our successes in the future. We are assuming that we can document improved water quality through reduced use of insecticides and we plan to document residue levels on fresh produce arriving at the markets.

We have conducted a wide-ranging set of interviews with farmers on our three islands, to ascertain their Knowledge, Attitudes, and Practices (KAP). These results will set the stage for technician training programs, which will then transfer information and IPM skills out to our client farmers. That is our IPM program in a nutshell. I will also attempt to answer subsequent questions, but this is the caveat under which I am working.

Dr. A. Lee Eavy
IPM and Crop Protection Team Leader
CNMI/CREES
Northern Marianas College
P.O. Box 501250
Saipan, MP 96950
Ph.: 670 234 5498 Fax: 670 234 0054

Design, develop, and deliver an IPM program for vegetable producers in the CNMI (Commonwealth of the Northern Mariana Islands)

NORTH DAKOTA

We have explored the possibility for wheat but have not gone beyond the planning stage. We use NASS survey instruments to assess adoption of IPM practices, but we don't have guidelines with points or quantitative values.

Marcia McMullen
Extension Plant Pathologist/IPM Coordinator
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primary responsibility: Plant Pathologist for cereals, IPM Coordinator

VIRGINIA

I can make this very simple. In Virginia, the only way we can assess the IPM effort is via the VCE IPM Educational Program annual report. All Extension agents and faculty that 'buy-in' to the IPM Educational Program must report activities, annually. That pool of information is summarized and

used to complete both state and federal (3d) reports. We have no other assessment process EXCEPT: a pilot project that is being tested in one Extension District that is a adoption/satisfaction/impact survey that can be conducted by individual agents and passed to a central location for summary, etc. It is only a pilot at this time, but if successful, could become standard throughout the system.

Ames Herbert
Extension Entomologist
Tidewater AREC
6321 Holland Road
Suffolk, VA 23437
757-657-6450 ext 122
FAX: 757-657-9333

**ACTUAL LETTER AND SURVEY THAT WAS SENT OUT TO
STATE IPM COORDINATORS VIA EMAIL**

To: State Extension IPM Coordinators and other Extension IPM leaders
Fr: Mike Fitzner, IPM Program, USDA-CSREES, Wash., DC,
John Vickery, Institute for Agriculture and Trade Policy, Minneapolis,
MN, and Tom Green, IPM Institute, Madison, WI

Re: crop specific IPM assessment instruments--surveys, guidelines
Enclosure: survey

Greetings

We request your assistance in helping us to identify the Integrated Pest Management assessment instruments or tools available in your state. These include: survey instruments, farmer self-assessment tools, and criteria for environmental marketing. Sometimes the terms IPM "guidelines," "protocol, "elements," are used.

Perhaps the best known are the Cornell University IPM "Elements," the UMass Extension IPM Guidelines, and the National Potato Council's IPM Protocol. Both Cornell and UMass have assessments for a number of crops.

After reading this cover letter, kindly hit the "reply" button, fill out the survey below and send it to us in the body of the email message. We will compile the information and make it available at a website. The survey summary will appear in the appendix of a conference proceedings. The conference,

Adding Value through Environmental Marketing:
Opportunities for Food Producers, Processors and Retailers

took place in Madison, Wisconsin last December. Some of you were there with us. Tom and John were co-organizers. The conference website is <http://www.iatp.org/labels/envcommodities/index.htm>

We hope to have the proceedings finished in May and the hard copy version the following month.

Please send your completed surveys to Stephanie Lundeen at slundeen@iatp.org. If you have questions contact Stephanie at 612-870-3471 or John at 612-870-3430.

We would appreciate a response even if you are not aware of any IPM assessment tools--or plans for them--in your state.

Note: you are welcome to submit a narrative description of your IPM assessment program or tool for the proceedings. We will, for example, include information on the Massachusetts "IPM Guidelines" in the appendix. The Cornell University/Wegmans Food Markets "Elements" will be in the main body of the proceedings under presentations.

Finally, the survey is primarily designed for you to provide info. on Extension products/activities. If you are aware of any industry/grower efforts, kindly let us know!

Thank you

Cordially,

Mike John Tom

Dr. Michael Fitzner - IPM Program, USDA-CSREES
Ag Box 2220
1400 Independence Ave., SW
Washington DC 20250-2220
202-401-4939; FAX -401-5077 (pause) 0021 Email mfitzner@reeusda.gov

Thomas A. Green - IPM Institute of North America
1914 Rowley Ave
Madison WI 53705
608-232-1528; FAX -232-1530 Email tagreen@compuserve.com

John Vickery - Environment and Agriculture Program
Institute for Agriculture and Trade Policy
2105 First Avenue South
Minneapolis, MN 55404-2505
612-870-3430; FAX -870-4846 Email jvickery@iatp.org

SURVEY

State Extension IPM guidelines/assessment tools

Respondent contact info

(fill in or paste your email signature file below)

name

title

institution

address 1

address 2

city, state, zip

phone, fax

email

Your primary responsibility:

Place an "X" in one of the following blanks:

_____ I am not aware of any IPM tools in my state.

>>>STOP HERE and return survey

_____ Some IPM assessment tools have been produced in my state

>>>PROCEED and complete questionnaire

1. Crops and Status

crop/s with assessment tools (Insert additional letters if needed)

A.

B.

C.

D.

2. Status If you have an IPM assessment tool for more than one crop, then just use a letter code from above (A, B, C, D) and insert that letter in the appropriate blank. >> approx. date or year it is expected to be available (again, use code, e.g., A-fall, 2000):

_____ in planning _____ in development

_____ draft version available _____ final version completed

_____ revised/updated version will be available date/year _____

3. Format place "X" in the blank for all that apply

_____ multiple choice OR _____ dichotomous/yes vs. no/checklist

_____ point system OR _____ qualitative ratings

Comment or clarification re. format:

Includes sections or criteria on: (place an "X" in blanks for all that apply*)

_____ soil conservation or management

_____ nutrient and/or soil quality management

_____ organic amendments

_____ water conservation or irrigation management

_____ education (attends training, receives newsletters, etc.)

* We assume that there sections or criteria on management of insects, weeds, diseases and/or nematodes.

Comments or clarification (con't from question 3.):

4. Organizations involved, other than Extension:

5. Who is the audience—the intended user—for the tool?

(Check all that apply, but circle the group or groups that are the primary audience)

- ☐ farmers
☐ private sector ag. professionals
☐ public sector ag. professionals
☐ auditors, certifiers, or regulators
☐ other specify:

6. Purpose

Rank order the following, starting with "1" for the most important purpose. Give the same rank order number for two or more that are of equal importance.

- ☐ educational and/or motivational tool for farmers (and/or other audience)
☐ identify crop production system weaknesses
☐ characterize adoption of IPM practices
☐ evaluate Extension programs
☐ determine eligibility for incentive *
☐ identify research needs
☐ federal or state reporting requirements
☐ other 1 specify:
☐ other 2 specify:

*Please identify type of incentive (e.g., public recognition program, EQIP or other incentive program, state or federal cost-sharing program, environmental marketing, etc.)

7. Is this primarily a survey instrument? ☐ yes ☐ no

8. Primary contact person for the assessment tool (if different from respondent):

9. Website

Is information about the IPM assessment tool available at a website?

☐ yes ☐ no

If yes, URL:

Are the assessment tools themselves available on line?

☐ yes ☐ no

10. Publications, reports (kindly provide citations below)

11. Project description - narrative—

We would appreciate it if you could provide a short overview, description, etc., of the project or program and IPM assessment instrument (one paragraph, half-page--perhaps longer if this is of interest or you already have something suitable). You can send this separately or attach the description with your reply. Kindly contact Stephanie Lundeen at slundeen@iatp.org for more details and deadline for longer contributions. The project description is optional and you are welcome to write a brief description here if time does not permit you to submit a short summary:

THANKS - appreciate your help!

☐ Place an "X" in this blank if you would like to receive the results to this survey.