

SPEAKER CONTACT SHEET – Ornamental & Turfgrass CIC 2020

1. **MAKING PESTICIDE STORAGE, HANDLING, AND APPLICATION ROUTINE.** Evan Alderman (alderman@iastate.edu; 515-294-0150) and Mark Shour (mshour@iastate.edu, 515-294-5963) – Iowa State University PSEP
 - a. <http://npic.orst.edu/health/storage.html>
 - b. <https://pesticidestewardship.org/storage/>
 - c. <http://extension.psu.edu/pests/pesticide-education/applicators/fact-sheets/pesticide-safety/pesticide-storage-and-security>
 - d. <http://extensionpublications.unl.edu/assets/pdf/ec2507.pdf>
 - e. <http://counties.agrilife.org/smith/files/2018/05/Pesticide-Storage-and-Handling.pdf>

2. **LAWS AND REGULATIONS.** Jeni Lara (Jenifer.Lara@iowaagriculture.gov, 515-281-8506)

 IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP		IDALS Pesticide Bureau 502 E. 9 th Street, Des Moines IA 50319 https://iowaagriculture.gov/pesticide-bureau Email: pesticides@iowaagriculture.gov Main Line: 515-281-8591
2020 Applicator Continuing Instruction Course Rules and Regulations		
Federal Pesticide Authority	FIFRA Federal Insecticide, Fungicide, and Rodenticide Act	<ul style="list-style-type: none"> The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale and use FIFRA Section 12(a)(2)(G) and section 2(ee) says: <i>It shall be unlawful for any person to use any registered pesticide in a manner inconsistent with its labeling</i>
	EPA regulates for pesticides: 1. Manufacture 2. Registration 3. Transportation 4. Use	<ul style="list-style-type: none"> All pesticides distributed or sold in the United States must be registered (licensed) by EPA, unless exempt Before EPA may register a pesticide under FIFRA, the applicant must show, among other things, that using the pesticide according to specifications "will not generally cause unreasonable adverse effects on the environment or human health"
State Pesticide Authority	Pesticide Act of Iowa Iowa Code Chapter 206 Pesticides	<ul style="list-style-type: none"> Iowa Code Chapter 206.11(3)(b) <i>It shall be unlawful for any person to use or cause to be used any pesticide contrary to its labeling or to rules of the state of Iowa if those rules differ from or further restrict the usage</i>
	IDALS Pesticide Bureau Under FIFRA a State shall have primary enforcement responsibilities for pesticide use violations.	<ul style="list-style-type: none"> Regulates pesticide registration and sales Monitors sales of Restricted Use Pesticides and recordkeeping compliance Inspects commercial applicator records Monitors compliance with commercial applicator license and certification Investigates pesticide use/misuse Inspects producer establishments

License and Certification of Pesticide Applicators Testing and Training	License and Certification	<p>Requirements to maintain a company license:</p> <ul style="list-style-type: none"> • Have one or more certified pesticide applicator • Comply with insurance requirement * % • Pay for annual license fee * <p>* Public official licensees do not have an insurance requirement or pay a license fee. % Non-commercial licensees do not have an insurance requirement.</p>	
	<p>Companies are <i>licensed</i>. Individual applicators and handlers are <i>certified</i>.</p> <p><i>Restricted Use Pesticides</i> - Must be a certified applicator. <i>General Use Pesticides</i> - Anyone can purchase and apply.</p>	<ul style="list-style-type: none"> • Initial Certification of Pesticide Applicator – Pass the exams for each category • Recertification of Pesticide Applicator – Retake exams once every 3 years, or attend a 2-hour approved CIC each year, including the first year of certification <i>and</i> each category held by the applicator must be covered 	
	Summary of Applicator and Employer Duties	<ul style="list-style-type: none"> • Keep a copy of pesticide applicator exam verification and/or all yearly pesticide training certificates • If a year of training is missed, re-testing is required - No exceptions • When changing employers, testing and training verification will be requested by IDALS • Fees to vendors for testing or training do not cover payment of the certification fee to IDALS • Keep timely and accurate pesticide application records (save 3 years), make them available to IDALS when requested 	
	<i>Applicators:</i>	<ul style="list-style-type: none"> • Keep training records for six years and keep records of pesticide applications for three years • Make sure employees have access to - and study - the manuals prior to testing • Provide applicators with a copy of their testing and training records, even after ending employment relationship • Notify IDALS when applicators start or leave employment, or when working out of two or more locations 	
Recordkeeping	Commercial Applicator Records	<ul style="list-style-type: none"> • Company name and license number • Name and address of landowner or customer • Location of the application (for RUPs) • Date of the application • Full trade name of the pesticide(s) used • Concentration, rate, quantity of pesticide product • Temperature, wind direction and speed • Specific use of any restricted use pesticide • Start and end time of application 	<p><u>EPA Region 7 24 HR Emergencies</u> 913-281-0991 epa.gov/aboutepa/epa-region-7-midwest</p> <p><u>Des Moines FSDO – FAA Flights Standards</u> 515-289-3840 faa.gov/about/office_org/field_offices/fsdo/dsm/contact/</p> <p><u>Poison Control Center</u> 800-222-1222 iowapoison.org/</p>
	<p>Maintain records of pesticide application of pesticides for 3 years.</p>		
Production and Storage	Pesticide Production and Storage	<p>Unlawful activities at production establishments:</p> <ul style="list-style-type: none"> • Repackaging a pesticide from one container to another • Labeling or relabeling a pesticide • Changing the container of a pesticide <p>Storage and disposal issues:</p> <ul style="list-style-type: none"> • Problems with heat, cold or direct sunlight • Follow storage restrictions • Incorrect disposal of unused pesticide/containers 	<p><u>National Pesticide Information Center (toxicity questions)</u> 800-858-7378 npic.orst.edu/</p> <p><u>IDNR Emergency Response for Chemical Spills</u> 515-725-8694 iowadnr.gov/Environmental-Protection/Land-Quality/Emergency-Planning-EPCRA/Spill-Reporting</p> <p><u>Pet Poison Hotline 24/7 - Animal Poison Control</u> 855-764-7661 aspca.org/pet-care/animal-poison-control</p>
	<p>It is unlawful to distribute any pesticide not registered with EPA.</p>		

Mixing	Mixing and Transferring Pesticides	<ul style="list-style-type: none"> Iowa Administrative Code 21 Chapter 44.10(6) <i>No mixing and transferring of pesticides and rinsing of equipment shall be conducted on public highways, roads and streets</i>
Discharge	Natural Lakes	<ul style="list-style-type: none"> Iowa Code Chapter 206.7A Discharge of pesticides into natural lakes - civil penalty authority: <i>A person shall not intentionally spray, place, discharge, or otherwise put a pesticide off label into a natural lake, or an artificial lake connected to a natural lake, that is used as a source of water for public or private water supplies.</i>
Containment	Containment Issues: Rainwater or spills, cracks in concrete, lock valves while facility unattended.	<ul style="list-style-type: none"> All non-mobile bulk pesticide storage containers shall be located within a watertight secondary containment facility. Permanent mixing/loading site are where pesticides are stored for more than 30 days and where more than 300 gallons/300 pounds of pesticides are mixed or loaded within a 30 day period - This may apply to some airports Washing of equipment at permanent mixing/loading sites is <u>required to be done on the containment pad</u>
Sensitive Crops	Field Watch Annual Registration Required fieldwatch.com/	<ul style="list-style-type: none"> Registered producers and beekeepers may update their information at any time during the year Registration expires December 31st of each year, producers and beekeepers that wish to remain actively registered must confirm, and edit if necessary, their registration information beginning in January of the following year FieldWatch will send out up to three notices to renewing producers reminding them to renew
	Iowa Bee Rule Iowa Code Chapter 206.11 (3) <i>It shall be unlawful for any person to use or cause to be used any pesticide contrary to its labeling or to rules of the state of Iowa if those rules differ from or further restrict the usage</i>	Iowa Administrative Code 21 Chapter 45.31(206) Application of pesticides toxic to bees <ul style="list-style-type: none"> 45.31(1) <i>Owners of apiaries, in order to protect their bees from pesticide applications, shall register the location of their apiaries with the state apiarist. Registration shall be on forms provided by the department. The registration expires December 31 each year and may be renewed the following year</i> 45.31(2) <i>Between 8 a.m. and 6 p.m., a commercial applicator shall not apply to blooming crops pesticides labeled as toxic to bees when the commercial applicator is located within one mile of a registered apiary. A commercial applicator shall be responsible for maintaining the one-mile distance from apiaries that are registered and listed on the sensitive crop registry on the first day of each month</i>

3. **PERSONAL PROTECTIVE EQUIPMENT.** Adam Thoms (athoms@iastate.edu, 515-294-1957) – ISU Horticulture-Turfgrass

- a. <http://edis.ifas.ufl.edu/pi061>
- b. <https://www.ag.ndsu.edu/publications/crops/laundrying-pesticide-contaminated-work-clothes>
- c. <https://edis.ifas.ufl.edu/pi199>
- d. <https://pesticidestewardship.org/personal-protective-equipment/>
- e. <https://www.epa.gov/pesticide-worker-safety/personal-protective-equipment-pesticide-handlers>
- f. <https://extension2.missouri.edu/q1917>

4. **DOLLAR SPOT MANAGEMENT FOR COMPETITION TURFGRASS.** Adam Thoms (athoms@iastate.edu, 515-294-1957) – ISU Horticulture-Turfgrass
- a. Low nitrogen disease occurring with night time temperatures 50F or higher
 - b. Prolonged periods of leaf wetness (8-12 hours) – early spring to early summer, and in early fall (August, September)
 - c. Symptoms: 1) brown spot about size of a silver dollar with spots coalescing to larger patches; 2) straw-colored hour-glass shaped lesion on leaf blades, with darker band at top and bottom of the lesion
 - d. Cultural management practices: 1) increase fertilization (½ pound nitrogen per growing month); 2) decrease irrigation; 3) re-seed with resistant cultivars (www.ntep.org)
 - e. Plant growth regulators can slow down recovery of turf from dollar spot
 - f. Chemical control strategies: 1) rotate fungicide classes to prevent resistance; 2) systemic fungicides have a higher risk of developing resistance; 3) good mixture of contact fungicides with systemic fungicide classes; 4) apply fungicide with at least 2 gallons of water per 1000 square feet; 5) follow a systemic fungicide application with a contact fungicide as per label directions
 - g. Specific fungicides:
 - i. Chlorothalonil – ex. Daconil. Contact fungicide with only 7 to 21 day activity
 - ii. Systemic fungicides include Xzemplar, Traction, Tourney, Torque, Mirage, Interface and Emerald. 14 to 28 day activity
5. **CONTROL OF YELLOW NUTSEDGE.** AJ Lindsey (alexlind@iastate.edu) – ISU Horticulture, graduate student
- a. Identification: leaves coming out in 3 directions; roll stem in your fingers to detect the triangular stem; yellow in appearance
 - b. Management: 1) dense stand of turfgrass; 2) good fertility program; 3) proper irrigation; 4) proper mowing height
 - c. Problems in trying to control: 1) waxy leaves that repel pesticide solution; 2) spreads by rhizomes and nutlets – no mechanical control measures work
 - d. Life cycle: summer perennial weed (mid-May through summer); dies back at first frost
 - e. Best time to control is early spring or early summer. Use halosulfuron (ex. SedgeHammer), sulfentrazone (ex. Dismiss), and mesotrione (Tenacity) (at time of seeding)
 - f. Turfgrass Weed Control for Professionals: <https://mdc.itap.purdue.edu/item.asp?itemID=23233>
6. **ALLEVIATING DRY SPOT ON GOLF COURSES.** Ben Pease (bwpease@iastate.edu) – ISU Horticulture, graduate student
- a. Mainly a problem on highly managed turf areas (golf courses greens, tees, and fairways)
 - b. Can show up on home lawns with poor soil depth and new construction
 - c. Soil hydrophobicity = waxy layers on soil particles that do not permit soil particles to be re-wetted once they are overly dry
 - d. Pushing the turf beyond its physiological limits – results in non-uniform turf, complete bare soil areas, and weed encroachment
 - e. Golfers demanding firmer, drier surfaces with lower mowing heights for faster/better play
 - f. Occurs in the top few inches of soil
 - g. Localized dry spot causes less efficient pesticide applications – inhibits movement of pesticides through soil profile

- h. Ways to mitigate:
 - i. Proper cultural / organic matter management
 - 1. Aerification – deep tining, solid tining, air-inject systems, water-inject systems
 - 2. Verticutting
 - 3. Topdressing
 - ii. Avoid excessive nitrogen fertilization
 - iii. Avoid excessive watering
 - iv. Use of wetting agents – put on a calendar based program
 - 1. Penetrants
 - 2. Holders
 - 3. Pushers
 - i. Tools used to diagnose localized dry spot
 - i. Soil core sampler – remove core and see if soil falls apart easily
 - ii. Soil profiler
 - iii. Field scout TDR (time domain reflectometer)

7. **OVERVIEW OF THE NORTH CENTRAL REGION IPM CENTER.** Laura Iles (ljesse@iastate.edu, 515-294-3494) – ISU Plant & Insect Diagnostic Clinic

- a. <https://www.ncipmc.org/>
- b. <https://www.ncipmc.org/projects/pest-alerts1/> - Pest Alerts
- c. Email for Pest Alert packets of 50 – ncipmmedia@gmail.com
- d. <https://www.ncipmc.org/projects/publications/> - Other publications
- e. <https://www.ncipmc.org/connection/> - blog
- f. <http://midwestgrowsgreen.org/>
- g. <https://ipminstitute.org/>

8. **EMERALD ASH BORER UPDATE 2020.** Mike Kintner (Mike.Kintner@iowaagriculture.gov, 515-745-2877) – Iowa Department of Agriculture and Land Stewardship, State Entomologist's Office

- a. http://iowatreepests.com/eab_home.html
- b. <https://www.extension.iastate.edu/psep/emerald-ash-borer-eab>
- c. <https://store.extension.iastate.edu/product/Emerald-Ash-Borer-Management-Options>
- d. <http://www.emeraldashborer.info/>