

**MSU**  
**Pesticide Safety Education Program**  
**(PSEP)**

**Michigan State University**  
**East Lansing, MI**

**OUR WEB SITE: <http://www.pested.msu.edu>**

**Final Report (October 2007 to September 2008)**

**to the**

**Michigan Department of Agriculture, PPPM Division**

**and the MDA Pesticide Advisory Committee**

**and Bruce Wilkinson of EPA Region 5**

*Submitted by the MSU Pesticide Safety Education Program, October 2007*

Dr. Carolyn Randall – Coordinator

Temporary Labor Employees: John Stone, Susan Risley, Sheryl Goodreau, Luis Donado, Raquel Marin-Nalazco

**Our Objective:**

The MSU Pesticide Safety Education Program (MSU PSEP) works with the Michigan Department of Agriculture Pesticide and Plant Pest Management Division (MDA PPPMD) to carry out applicator certification and training. As its part of a grant agreement between the MDA PPPMD and MSU PSEP, the Program produces educational materials and conducts training. Each quarter, the Pesticide Safety Education Program reports its activities to the Pesticide

Advisory Committee (PAC), and provides a final report to MDA at the end of the fiscal year. This report includes a summary of program accomplishments for the 2007-2008 fiscal year.

During the 2007-2008 Fiscal Year, MSU Pesticide Safety Education Program accomplished the following:

**Objective 1: Research, prepare and distribute pesticide training manuals, revising when necessary.**

Manuals Completed:

- The *Michigan Private Applicator Core Manual* (Extension Bulletin 3007) was completed and 4,000 copies were delivered to the MSU Bulletin Distribution Center. This manual consists of the *National Pesticide Applicator Certification Core manual* shrink-wrapped with the *Michigan Private Applicator Core Manual Addendum*. The cost is \$30, \$10 of which is returned to the MSU PSEP program.
- The *Michigan Commercial Applicator Core Manual* (Extension Bulletin 3008) was completed and 6,000 copies were delivered to the MSU Bulletin Distribution Center. This manual consists of the *National Pesticide Applicator Certification Core manual* shrink-wrapped with the *Michigan Commercial Applicator Core Manual Addendum*. The cost is \$30, \$10 of which is returned to the MSU PSEP program.

Manuals in progress:

- Spanish translations of the core manual addendums (private and commercial) were completed by Luis Donado from the MSU Department of Spanish and Portuguese. The work was supported by a grant from Project GREEN. A new request for Spanish translation of the *National Pesticide Applicator Certification Core* manual was submitted in January, 2008 and awarded \$10,000. Luis Donado and Raquel Marin-Nalazco were hired as translators. Antonio Escobar of MDA will review the translations. The translations will eventually be sent for layout and design and published as the Spanish versions of the Michigan commercial and private core manuals. Carolyn Randall is overseeing this work and posting updates on a hidden website.
- *Microbial Pest Management*, E2435. Carolyn Randall and Sue Risley completed a laid-out designed draft of this manual. It was decided, however, that information on indoor mold-remediation needs to be added to the manual. Carolyn will work with Dean Herzfeld of the University of Minnesota Pesticide Safety Education Program to add this information and assist Minnesota PSEP with the cooling tower information.

- The Category 3A *Turfgrass Pest Management* and Category 3B, *Ornamental Pest Management* manuals are still in progress. The 3A ornamental draft was prepared by Diane Brown-Rytlewski. The 3B turfgrass manual draft was prepared by Erica Jenkins. Erica provided some updates to this manual. Carolyn Randall will be completing the manuals adding learning objectives and review questions and overseeing the layout and design through the ANR Communications office.

## Reprints

In FY 2007-2008, the following bulletins were reprinted with minor or no revision:

- Category 3A, *Turfgrass Pest management*: 1,500 copies reprinted due to low inventory.
- Category 4, *Chemical Treatment of Agronomic Seeds*: 150 copies reprinted due to low inventory.
- Category 7F, *Mosquito Control*: 300 copies reprinted due to low inventory.
- Category 5B, *Microbial Pest Management*: 150 copies reprinted due to low inventory.

## **Objective 2: Deliver information on new laws and regulations, and prepare and distribute extension materials related to new or evolving regulations.**

The following seminars were offered which included information on state and/or federal pesticide laws:

- The Michigan Agricultural Aviators Association Conference was held October 17 and 18 at the University Club, East Lansing, Michigan. MSU PSEP helped plan and organize the conference and Carolyn Randall was the moderator. The special guest speaker on October 17 was Dr. Greg Pinnell, medical aviation specialist, who presented “Aviation Medical Certification.” MDA staff persons, Brian Rowe, Gary King, and Polly Kapala were also presenters at the meeting. On Thursday, October 18, the 4-hour PAASS (Professional Aerial Applicators Support System) Program was presented. PAASS is organized by the National Agricultural Aviation Association (NAAA). Participants were pleased by the program as indicated by the evaluation forms.
- MSU PSEP and MDA sponsored 10 Comprehensive Core Training Seminars in November and December of 2007. The courses were organized with a third party participating in setting up, promoting, and teaching the training session. The third party involved, the location, and the dates of the training sessions were: Oakland County Extension, Waterford, Michigan, November 6; MSU Extension, Traverse City, Michigan, November 28; MSU Extension, Adrian, Michigan, December 3; Michigan Green Industry

Association (MGIA), Bingham Farms, Michigan, December 5; Isabella County Extension, Shepherd, Michigan, December 6; Arboriculture Society of Michigan (ASM), Frankenmuth Michigan, December 7; Macomb County Extension, Clinton Township, Michigan, December 10; MGIA, Grand Rapids, Michigan, December 11; Kalamazoo County Extension, Kalamazoo, Michigan, December 12; and MGIA, Ann Arbor, Michigan, December 13. In all cases, the third party agreed to pay two-thirds of the registration fees after expenses to Michigan State University to help support the PSEP program and Sheryl Goodreau's work with MDA. John Stone of MSU PSEP was an instructor at most of the training sessions along with Larry Swain of MDA and other invited speakers and county Extension agents. Sheryl Goodreau developed a pesticide jeopardy game that was presented at the trainings. Sheryl Goodreau and Carolyn Randall worked on program promotion through mailings, press releases, and posting the trainings on the PSEP website. The PSEP program received \$9,634 from the November-December 2007 trainings. The revenue was used primarily to support the salary of Sheryl Goodreau. A core training was presented in Spanish in Paw Paw, Michigan on December 15. Antonio Escobar of MDA was the instructor.

**Budget totals – Core classes Taught November - December, 2007**

<b>DATE</b>	<b>Location</b>	<b>Third Party</b>	<b>No. of attend-ees</b>	<b>Fee Charged per Person</b>	<b>Net Profit</b>	<b>Revenue Received by third party</b>	<b>Revenue received by MSU</b>
6-Nov-07	Oakland	Oakland Co. Extension MSU Extension,	31	\$75.00	\$2,007.43	\$669.14	\$1,388.28
28-Nov-07	Traverse City	Grand Traverse	19	\$75.00	\$1,344.44	\$489.52	\$854.92
3-Dec-07	Adrian, MI Bingham	PSEP	28	\$75.00	\$1,981.15	\$0.00	\$1,981.15
5-Dec-07	Farms	MGIA Isabella Co.	18	\$85.00	\$668.12	\$222.71	\$445.41
6-Dec-07	Shepherd, MI	Extension Arboriculture Society of	12	\$85.00	\$798.41	\$266.14	\$532.27
7-Dec-07	Frankenmuth	Michigan Macomb County	13	\$75.00	\$622.53	\$207.51	\$415.02
10-Dec-07	Macomb	Extension	18	\$85.00	\$1,615.00	\$867.00	\$748.00
11-Dec-07	Grand Rapids	MGIA Kalamazoo Co.	27	\$85.00	\$1,605.26	\$535.09	\$1,070.17
12-Dec-07	Kalamazoo	Extension	10	\$85.00	\$269.09	\$89.70	\$179.39
13-Dec-07	Ann Arbor	MGIA	48	\$85.00	\$2,435.49	\$811.83	\$1,623.66
15-Dec-07	Paw Paw	Spanish Core Training	14	\$30.00	\$396.23	\$0.00	\$396.23
			238		<b>TOTALS</b>	<b>\$4,158.63</b>	<b>\$9,634.51</b>

- Carolyn Randall presented “Changes in the Michigan Pesticide Applicator Core Manuals and Testing Programs” at the 2007 Agronomy Update at the MSU Pavilion on December 19.
- John Stone of MSU PSEP taught a Core Manual Review class at the Great Lakes Expo in Grand Rapids on January 9. About 45 people were in attendance.
- Carolyn Randall presented “Federal Pesticide Laws Past and Present” on January 14 at the Michigan Agri-Business Association (MABA) Winter Conference and Trade Show in Lansing, Michigan. There was a large audience (maybe 200-300) in attendance.
- John Stone taught the 8-credit “Comprehensive Core Class” on February 8 for the Association of Grand Rapids Landscape Professional (AGRLP). There were 30 people attending.
- John Stone taught “3A/3B Turfgrass and Ornamental Review” for MSU Extension Agent Hannah Stevens on February 11 in Macomb County. About 70 people attended.
- John Stone taught a 4-hour “Core Manual Review” on February 12 in Genesee County. About 38 people attended.
- John Stone gave a presentation at the Association of Grand Rapids Landscape Professionals Winter Learning Series on February 15. The topic was “Sustainability, Environmental Input Issues, and Pesticide Use” and the role turfgrass managers have regarding these issues. Thirty-eight people attended the presentation.
- John Stone taught a 4-hour “Category 3A, Turfgrass Manual Review” on February 19 in Genesee County. There were 38 people in attendance.
- John Stone presented an overview of Categories 2, 3A, 3B, 5 and 6 for MDA Groundwater Stewardship Americorps Volunteers on February 20 as part of a Pesticide certification training program requested by Groundwater Stewardship. There were twelve participants.
- John Stone taught a 4-hour “Category 3B, Ornamental Manual Review” on February 26 in Genesee County. About 35 attendees.
- John Stone taught the day-long, 8-credit “Comprehensive Core Class” in Monroe County on February 27. There were 15 people in attendance.
- John Stone gave a presentation at the West Michigan Home and Garden Show on “Choice and Safety when Using Pesticides in the Home Lawn and Garden” on February 29. About 20 people in attendance.
- Three events sponsored by MSU PSEP were held during MSU’s Agriculture and Natural Resources Week (ANR Week). The first was the “Comprehensive Core Class” held on

March 4 held at the Kellogg Center, MSU campus (43 people in attendance). John Stone and Sheryl Goodreau (MSU PSEP) and Larry Swain (MDA) taught the class. The second event was a newly developed “Commercial Applicator Calibration Course” held on March 5 at the Crop and Soil Science Research Lab, MSU campus. John Stone taught the class with about 27 people in attendance. The third class was another newly developed “Private Applicator Calibration Course” at the Crop and Soil Science Research Lab on campus. Tom Galecka (MSU Crop and Soil Science Dept) and John Stone were the instructors (10 people in attendance). All classes covered state pesticide laws and record keeping requirements. An agenda and budget analysis is attached.

- The first IPM Academy Class, “IPM Technician Training for Indoor Pests,” was held March 12 at the MSU Pavilion for Agriculture and Livestock Education with 14 people in attendance. State laws regarding IPM training requirements were included in the curriculum. The program was a success judging from the returned evaluation forms (agenda and budget analysis attached).
- Larry Swain (MDA) and John Stone (MSU) taught a 3-day certified applicator core and category class on March 18, 19, 20 for the City of Detroit grounds crew and forestry staff. There were 70 people in attendance.
- John Stone and Larry Swain taught Core and Category 3a/3b/6 to 69 Michigan Department of Transportation employees on April 15 and 16. There were 69 people in attendance.
- John Stone and Larry Swain taught core information to 20 University of Michigan grounds crew on May 14.
- John Stone and Larry Swain taught core and category 7D to 34 City of Detroit grounds crew on June 2 and 3.
- John Stone presented a 6-hour review of the new National Core Manual for Kent County/MSU Master Gardener Diagnostic Hotline volunteers on April 30. There were 15 in attendance. The purpose of the program was to advance pesticide knowledge so volunteers can better inform homeowners on the safe use and choice of pesticides, and improve their IPM skills.
- John Stone presented “A Revealing Look at Garden Weeds” on May 1 for Frederik Meijer Gardens, Grand Rapids, Michigan. The program was part of their Successful Gardener Series. Weed management using IPM strategies as well as pesticides were a significant part of the 90-minute program. 14 people attended.
- A 4-hour “Private and Commercial Sprayer Calibration” course was held on July 16 as part of Ag. Expo on the campus of Michigan State University. Carolyn Randall made the arrangements and John Stone and Tom Galecka of MSU were the instructors. Ten people were in attendance. The seminar offered a review of recording keeping requirements and other pesticide laws.

- A “Comprehensive Core” class was held in Frankenmuth on September 19. The class was held in cooperation with the Arboriculture Society of Michigan. John Stone and Larry Swain were the instructors. There was also a groundwater demonstration by an Americorp volunteer. Carolyn Randall and Sue Risley assisted with promotion, mailing out 300 postcards. Carolyn handles the billing for all of the core classes. Fifteen people were in attendance
- A “Comprehensive Core” class was held at the Michigan Nursery and Landscape Association office in Okemos on September 30. John Stone, Larry Swain, and Carolyn Randall were the instructors. An Americorp volunteer was present to do the groundwater demonstration. Six people were in attendance.

Other progress made towards pesticide regulation education include:

- A grant was submitted to MDA Food Division in December, 2007 to produce the “Michigan Food Safety Inspector’s Pocket Guide for Pest Identification” and awarded \$6,100. Because the project expanded beyond what was originally described, another \$3,130 was requested and awarded in August, 2008. The Guide will be used by Michigan food safety inspectors to identify pests in food establishments. The Guide also recommends various IPM methods for controlling pests and will be in print at the end of November, 2008.
- Carolyn Randall was interviewed on Michigan Farm Radio Network on February 12 about the pesticide applicator certification courses being offered during ANR week (March 4, 5, and 6).
- Carolyn Randall developed short 20-question exams for both the Comprehensive Core Training Seminars and the IPM Academy seminars to determine whether participants understand the information presented. The exams include questions on pesticide laws/regulations.
- Carolyn Randall and Sue Risley (MSU PSEP) met with the Michigan Agricultural Aviators Association (MAAA) planning board on March 20 to discuss the agenda for their annual 2-day educational conference to be October 15-16 at the Western Michigan University College of Aviation, in Battle Creek, Michigan. The annual Fly-In was held Wednesday, April 23 at the Lakeview Airport, Lakeview, Michigan. MDA regulators were invited to update the Association members on pesticide laws.
- Carolyn Randall wrote 174 questions for the new commercial and private core exams. These questions are based on the new core manuals (E3007 and E3008). The pool of questions was reviewed by MDA inspectors/staff and MSU Extension agents on March 21. Changes were made and the questions uploaded to MS Access. The new private and commercial core exams became available in May, 2008. Applicants have the option of

taking the old core exam or the new core exam depending on which manual they studied. After October 1, 2008 only the new core exam will be available.

- Carolyn Randall and Sheryl Goodreau of MSU PSEP attended meetings as Board Members of the IPM Academy on October 10 and November 14 of 2007 and on January 30 and February 26 and May 6 of 2008. Carolyn Randall, Sheryl Goodreau and John Stone attended the Board meeting on March 28. The goal of the committee is to encourage compliance with Regulation 637, Rule 14. The committee is developing the curriculum for the “IPM Technician Training for Indoor Pests” seminar.
- John Stone and Carolyn Randall prepared a new curriculum to be taught at the Comprehensive Core classes. The CD with the curriculum was provided to MDA staff.
- A Memorandum of Understanding was drafted between MDA, MSU PSEP, and third parties (hosts) involved in offering the Comprehensive Core Training. The MOU defines the roles of parties involved in offering the class and sets the registration fee at \$99. The host or third party is responsible for taking in registrations, subtracting expenses from the total amount in registrations, and dividing the remaining amount into two-thirds and one-third. One-third after expenses is kept by the host and two-thirds is paid to MSU PSEP. PSEP will use this revenue to support its operations and to assist with MDA’s certification program.

**Objective 3: Maintain a web site to make training materials available to extension agents, state/federal employees, pesticide applicators and the general public.**

- Seminars sponsored by MSU PSEP are continuously posted on the website, including location, registration information, fees, agenda topics and other pertinent information. A “Pesticide Education Seminars” link was created on the MSU PSEP home page so that information on the training sessions could be found directly without having to go through any layers. Users obtain information on PSEP-sponsored seminars and information about all other pesticide applicator seminars offered throughout the state.
- The information on the new core manuals were posted on the MSU PSEP web site which required updating about 20 of the web pages and creating 2 new web pages.
- A hidden web site was created in which updates on the Spanish translations of the National core and the Michigan core addendums are posted allowing interested parties to view the progress of this work.
- A hidden web site was created for members of the IPM Academy to post meeting minutes, power points, and other relevant information for committee members.
- A new Comprehensive Core training schedule consisting of 14 classes being offered from September 2008 through March 2009 was posted.

- Twelve Power Point slide sets covering the information for the new National Core and the Michigan-specific addendums were added to the website for Extension agents and other trainers to download.

## Comprehensive Core Training Agenda

Michigan State University

East Lansing, MI

March 4, 2008

- |             |  |
|-------------|--|
| 8:30        | Welcome and Introduction   |
| 8:45-9:45   | Concepts of IPM – John Stone, Michigan State University  |
| 9:45        | BREAK  |
| 10:00-11:15 | Environmental Influences –John Stone MSU   |
| 11:15-12:00 | Groundwater demonstration w/ model –MESA.  |
| 12:00-1:00  | LUNCH  |
| 1:00-2:15   | Personal Protection Equipment & Safety- Larry Swain and John Stone<br>PPE Fashion Show                           |
| 2:15        | BREAK  |
| 2:30-3:30   | Laws- Larry Swain, Michigan Department of Agriculture<br>Act 451, Part 83.<br>Regulation 636.<br>Regulation 637. |
| 3:30-4:00   | Pesticide Peril Game-Sheryl Goodreau MSU   |
| 4:00-4:30   | Take Exam fill out bubble sheets fill out evaluation.  |
| 4:30        | Adjourn Meeting  |

# COMMERCIAL SPRAYER CALIBRATION

March 5, 2008

Crop and Soil Science Research Lab

10:00 – 3:00

Instructor: John Stone

MSU Pesticide Safety Education Program

10:00 a.m. to 12:00 Noon - Classroom portion

- q Necessity for Calibration
- q Insuring correct rate of application
- q Environmental benefits
- q Economic benefits
- q Regulatory compliance
- q Area measurement
- q Worksheet and discussion
- q Calibrating Granular Spreaders
- q Method
- q Ground speed
- q Worksheet and discussion solutions
- q Calibrating Sprayers
- q Hand held/backpack

- q Powered hydraulic sprayers
- q Ground speed
- q Pressure
- q Shower nozzle calibration
- q Boom sprayer calibration
- q Nozzle performance and maintenance
- q Ounce method
- q 1/128th of an acre method
- q Worksheet and discussion

LUNCH 12:00 – 1:00

1:00 – 3:00 Hands-on activities

- q Setting up a calibration course - granular and liquid
- q Calibration of a granular spreader
- q Determining effective spreader width
- q Worksheet problem and discussion
- q Calibration of a dry hand held shaker (ACME) type spreader
- q Calibration of a hydraulic boom sprayer
- q Determining ground speed
- q Determining effective spray width
- q Worksheet problem and discussion

# PRIVATE APPLICATOR SPRAYER CALIBRATION

March 6, 2008

Crop and Soil Science Research Lab

10:00 – 3:00

Instructors:

Tom Galecka, MSU Crop & Soil Science

John Stone, MSU Pesticide Safety Education Program

## TOPICS

### Introduction

- q Why do we calibrate?
- q When should we calibrate?
- q How do we calibrate?
- q Tools to use when calibrating and how to use them properly
- q Sprayer maintenance
- q Selection of sprayer components

q Labels and record keeping

## 2008 ANR Week Training -- East Lansing, March 4, 5, & 6 Budget Sheet

<b>Deposits</b>		
Comprehensive Core Training, March 4		
*15 attendees at \$70.75; 28 attendees at \$75.00	\$3,161.25	
Commercial Applicator Sprayer Calibration Course, March 5		
*2 attendees at \$56.60; 22 at \$60.00	1,433.20	
Private Applicator Sprayer Calibration Course, March 6		
*5 attendees at \$56.60	283.00	
	<hr/>	
<b>TOTAL DEPOSITS</b>	4,877.45	\$4,877.45
*Six percent sales tax was deducted from the registration fee except if the registrant was from a school or university.		

### Expenditures

#### Catering

MSU Kellog Ctr. (3/4)	\$1,216.80
MSU Concessions (3/5)	347.62
MSU Concessions (3/6)	91.45
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**Total Meals**    \$1,655.87    -1,655.87

#### Room Charges

Kellog Ctr (3/5)	0.00
Crop and Soil Science Research Lab	0.00
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**Total Room Charges**    \$0.00    0.00

#### Promotional

Postcards (600)	\$25.00
Postage	156.00
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**Total Promotional**    \$181.00    -181.00

#### Travel

No travel	0
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**Total Travel**    0

#### Personnel

John Stone (~40 hours, teaching, developing curriculum)	\$820.29
Sherry Goodreau (~30 hours assist at meeting, postcards)	419.84
Carolyn Randall (~30 hours, web site, promoting)	1,096.20
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**Total Personnel**    \$2,336.33    -2,336.33

PCR (minus 10% of gross)	\$487.75	<u>-487.75</u>	
	<b>TOTAL EXPENDITURES</b>	-4,660.95	<u>-4,660.95</u>
		<b>NET PROFIT</b>	\$216.50

## **INTEGRATED PEST MANAGEMENT TRAINING ACADEMY**

### **MICHIGAN STATE UNIVERSITY PAVILION**

**MARCH 12, 2008**

### **AGENDA**

#### IPM TECHNICIAN TRAINING FOR INDOOR PESTS

**8:30 INTRODUCTION-** Carolyn Randall, MSU Pesticide Education Coordinator

**8:45-10:00 IPM LAWS-** Larry Swain, Michigan Department of Agriculture

**10:00-10:15 BREAK**

**10:15-11:00 PEST IDENTIFICATION-** Ellen Barron, Michigan Department of Corrections

**11:00-12:00 SITE INSPECTIONS-** Chuck Baker, Tri-County Pests

**12:00-1:00 LUNCH**

**1:00-2:00 MANAGEMENT STRATEGIES-** Bruce Donald, University of Michigan/Chuck Baker, Tri-County Pests

**2:00-3:00 PESTICIDES-** Marvin Petway, University of Michigan

**3:00-3:15 BREAK**

**3:15-3:45 RECORDKEEPING-** Bruce Donald, University of Michigan

**3:45-4:30 EXAM/EVALUATION**

**IPM ACADEMY – TECHNICIAN TRAINING FOR INDOOR PESTS, March 12, 2008**

**Budget Sheet**

IPM Training for Indoor Pest			
*12 attendees at \$75.47; 2 attendees at \$80.00	\$1,065.64		
	<b>TOTAL DEPOSITS</b>	1,065.64	\$1,065.64
*Six percent sales tax was deducted from the registration fee except if the registrant was from a school or university.			
<b>Catering</b>			
MSU Concessions	\$361.28		
	<b>Total Meals</b>	\$361.28	-361.28
<b>Room Charges</b>			
MSU Pavilion for Agriculture and Livestock Education	0.00		
	<b>Total Room Charges</b>	\$0.00	0.00
<b>Promotional</b>			
Postcards (200)	\$10.00		
Postage	52.00		
	<b>Total Promotional</b>	\$62.00	-62.00
<b>Travel</b>			
No travel	0		
	<b>Total Travel</b>	0	
<b>Personnel</b>			
Sherry Goodreau (~50 hours set up, postcards, Power Points)	699.73		
Carolyn Randall (~40 hours, web site, promoting, PPs)	1,461.60		
	<b>Total Personnel</b>	\$2,161.33	-2,161.33
<b>PCR (minus 10% of gross)</b>	\$106.56	-106.56	
	<b>TOTAL EXPENDITURES</b>	-2,691.17	-2,691.17
	<b>NET LOSS</b>		<b>-\$1,625.53</b>

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