

“I want to know whether they’re reference materials or test prep manuals.”

– *Fred Whitford, 2008*





Manuals: How They're Written

vs.

How They're Used

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CTAG Manual Development Workshop

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Intended Uses of Manual

✍ Certification training



Intended Uses of Manual

- ✍ Certification training
- ✍ Reference material



Intended Users of Manual



Intended Users of Manual

 Applicator

 Trainer

 SLA



Certification Training: User Expectations of Manual



Certification Training: User Expectations of Manual

✍️ Applicator: Test prep



Certification Training: User Expectations of Manual

- ✍️ Applicator: Test prep
 - ✍️ Readable study guide
 - ✍️ Manual covers test content



Certification Training: User Expectations of Manual

- ✍️ Applicator: Test prep
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 - ✍️ Manual covers test content

Study manual = Pass test



Certification Training: User Expectations of Manual

✍ Trainer: Instructional aid



Certification Training: User Expectations of Manual

- ✎ Trainer: Instructional aid
 - ✎ Trainees can follow along in manual
 - ✎ Manual is training blueprint



Certification Training: User Expectations of Manual

- ✍ Trainer: Instructional aid
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Hit highlights = Trainees pass test






Certification Training: User Expectations of Manual

✍ SLA: Test Development



Certification Training: User Expectations of Manual




SLA: Test Development

-  Manual covers necessary job knowledge and skills/test item bank
-  Manual conveys potential test content to applicators for SLA
-  Manual makes it easier to write quality test items



Certification Training: User Expectations of Manual

SLA: Test Development

-  Manual covers necessary job knowledge and skills/test item bank
-  Manual conveys potential test content to applicators for SLA
-  Manual makes it easier to write quality test items



Pass test = Demonstrate minimal competency

Certification Training: Meeting Expectations of Manual



Certification Training: Meeting Expectations of Manual

For the SLA: Pass Test = Competency



Certification Training: Meeting Expectations of Manual

For the SLA: Pass Test = Competency

- ✎ Work with PSEP and SMEs to identify necessary knowledge and skills
- ✎ Base test on learning objectives that relate to the knowledge and skills
- ✎ Review manual drafts



Certification Training: Meeting Expectations of Manual

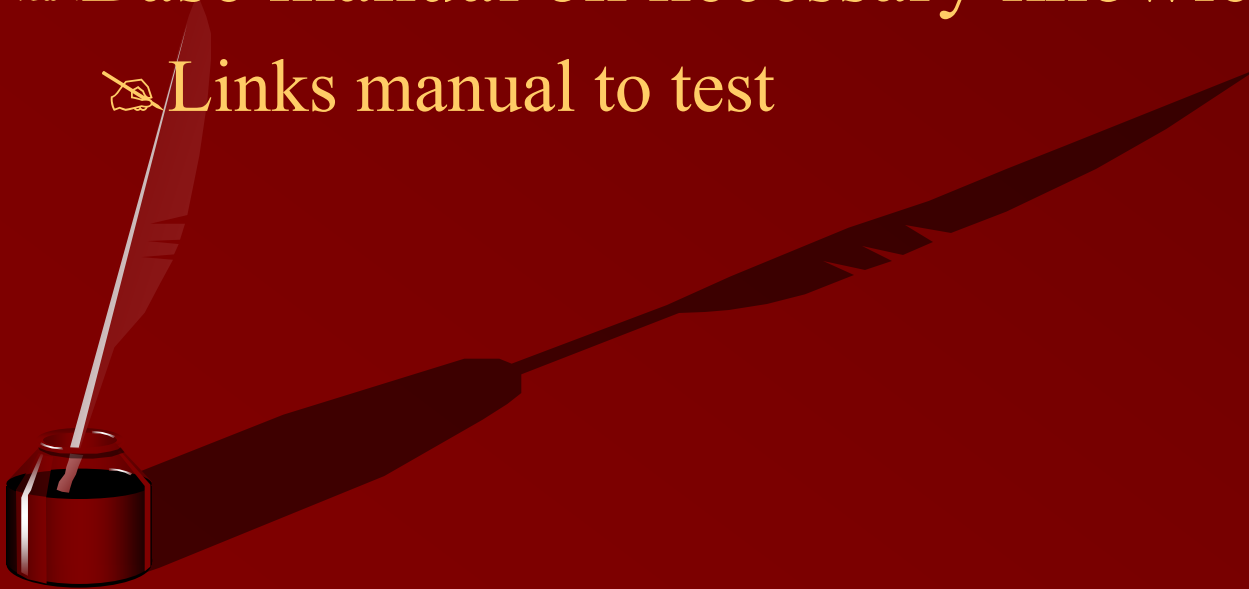
For the Applicator: Study manual = Pass test



Certification Training: Meeting Expectations of Manual

For the Applicator: Study manual = Pass test

- ✗ Base manual on necessary knowledge and skills
- ✗ Links manual to test



Certification Training: Meeting Expectations of Manual

For the Applicator: Study manual = Pass test

- ✎ Base manual on necessary knowledge and skills
 - ✎ Links manual to test
- ✎ Relate this to applicator via learning objectives



Certification Training: Meeting Expectations of Manual

The problems with review questions:



Certification Training: Meeting Expectations of Manual

The problems with review questions:

- ✎ They cover a subset of material, whereas learning objectives cover all testable material



Certification Training: Meeting Expectations of Manual

The problems with review questions:

- ✍ They cover a subset of material, whereas learning objectives cover all testable material
- ✍ Applicators might study them instead of content



Certification Training: Meeting Expectations of Manual

The problems with review questions:

- ✍ They cover a subset of material, whereas learning objectives cover all testable material
- ✍ Applicators might study them instead of content
- ✍ They deplete the pool of potential test items for the SLA



How to Prepare for the Test

Each chapter in this manual begins with a set of learning objectives. These objectives describe what you should be able to do after reading each chapter. To help you pass the certification exam, follow these steps:

1. Read and understand the learning objectives at the beginning of a chapter.
2. Read the chapter in detail, keeping in mind the learning objectives as you read.
3. After reading the chapter, return to the learning objectives and see if you can satisfy them.



Wood Preservation



*A Pesticide Applicator Certification Training Manual
for Wood Treaters*



Wood Preservation



☞ The guidelines listed above will help anyone learn the material in this manual. However, testing requirements vary from state to state; check with the appropriate agency in your state for additional tips on how to best prepare for their certification test.



*A Pesticide Applicator Certification Training Manual
for Wood Treaters*



Certification Training: Meeting Expectations of Manual

For the Trainer: Hit highlights = Trainees pass test



Certification Training: Meeting Expectations of Manual

For the Trainer: Hit highlights = Trainees pass test

- ✍ Have trainees follow along in manual
 - ✍ Well organized, easy to read
- ✍ Develop training modules based on manual
 - ✍ Short, topic-specific chapters



Pest Problems: Structures



- Detract from appearance
- Weaken structural timbers
- Ruin insulation
- Contribute to electrical fires

Reference Material: Expectations of Manual



Reference Material: Expectations of Manual

✍ WHOSE expectations?



Reference Material: Expectations of Manual

✎ WHOSE expectations?

✎ SLA: probably not



Reference Material: Expectations of Manual

✍ WHOSE expectations?

✍ SLA: probably not

✍ Trainers: maybe



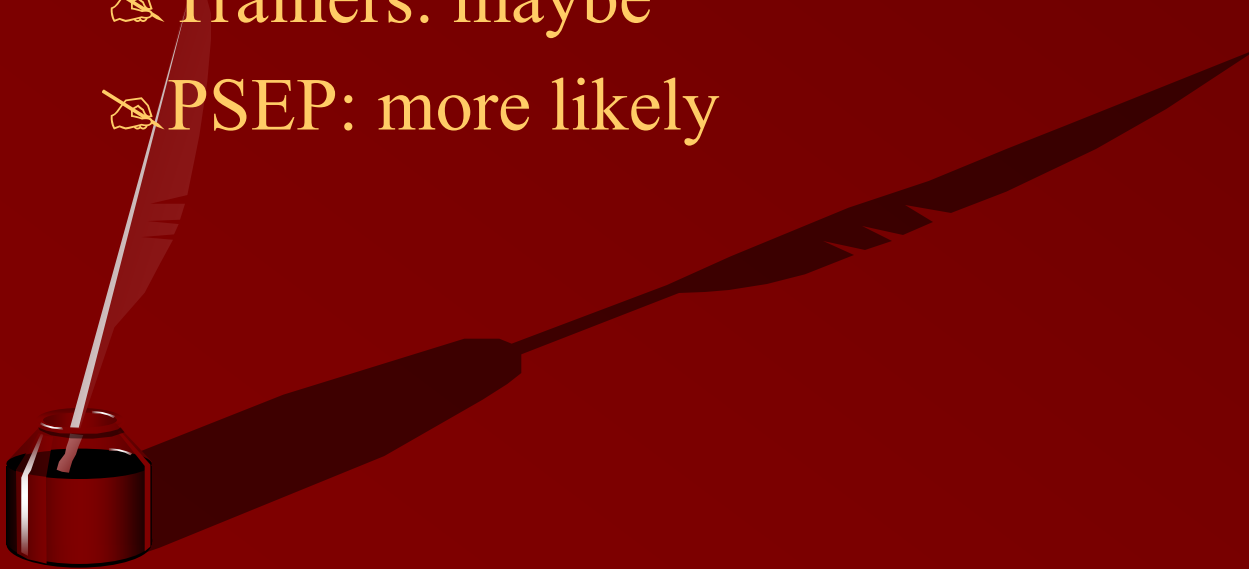
Reference Material: Expectations of Manual

✍ WHOSE expectations?

✍ SLA: probably not

✍ Trainers: maybe

✍ PSEP: more likely



Reference Material: Expectations of Manual

✍ WHOSE expectations?

✍ Applicator: ?



Reference Material: Expectations of Manual

✎ WHOSE expectations?

✎ Applicator: ?

✎ NY: SMEs often suggest adding info



Reference Material: Expectations of Manual

✎ WHOSE expectations?

✎ Applicator: ?

✎ NY: SMEs often suggest adding info

✎ WI: 76% of private applicators use as reference



Reference Material: Expectations of Manual

✍ WHOSE expectations?

✍ Applicator: ?

✍ NY: SMEs often suggest adding info

✍ WI: 76% of private applicators use as reference

✍ WI: Focus groups differ



Reference Material: Expectations of Manual

✍️ WHAT is reference?



Reference Material: Expectations of Manual

✍️ WHAT is reference?

✍️ Testable material for frequent review?



Reference Material: Expectations of Manual

✍️ WHAT is reference?

✍️ Testable material for frequent review?

$$\text{GPA} = \frac{\text{GPM} \times 495}{\text{MPH} \times \text{SW}}$$

GPA = spray application rate in gallons per acre

GPM = nozzle flow rate in gallons per minute

MPH = sprayer travel speed in miles per hour

SW = swath width in feet

495 = a constant used to convert units



Reference Material: Expectations of Manual

✍️ WHAT is reference?

✍️ Testable material for frequent review?

✍️ Nontestable material for practical use?



Reference Material: Expectations of Manual

- ✎ Users expect reference material to:
 - ✎ Be present in the manual BUT . . .
 - ✎ . . .not interfere with training



Reference Material: Meeting Expectations of Manual



Reference Material: Meeting Expectations of Manual

- ✍ Identify reference material
- ✍ Package it



Reference Material: Meeting Expectations of Manual

SIGNAL WORDS

A pesticide's signal word(s) required on its label are assigned on the basis of the highest measured toxicity, be it oral, dermal, or inhalation; effects on the eyes and external injury to the skin also are considered. Thus, the signal words indicate the relative toxicity of the pesticide.

The toxicity category and, therefore, the signal word(s) are based on the total formulation. Thus, different formulations of the same active ingredient may bear different signal words.

Description of Toxicity Categories				
	Category I High Toxicity	Category II Moderate Toxicity	Category III Slight Toxicity	Category IV Low Toxicity
Signal Word	DANGER ^a	WARNING	CAUTION	CAUTION
Oral LD₅₀ (mg/kg)	0 - 50	50 - 500	500 - 5,000	> 5,000
Approximate Oral Lethal Dose for a 150-lb. person	A few drops to 1 teaspoon	1 teaspoon to 1 ounce	1 ounce to 1 pint or pound	> 1 pint or pound
Dermal LD₅₀ (mg/kg)	0 - 200	200 - 2,000	2,000 - 20,000	> 20,000
Inhalation LC₅₀				
— Gas or Vapor (ppm)	< 200	200 - 2,000	2,000 - 20,000	> 20,000
— Dust or Mist (mg/L)	0 - 0.2	0.2 - 2	2 - 20	> 20
Effects on Eyes	Corrosive	Irritation persists for 7 days	Irritation reversible within 7 days	No irritation
Effects on Skin	Corrosive	Severe irritation	Moderate irritation	Mild irritation

^a Products assigned to Category I due to oral, inhalation, or dermal toxicity (as distinct from skin and eye local effects) also must have the word "poison" and the "skull and crossbones" symbol on the label.



Reference Material: Meeting Expectations of Manual

- ✍ Gray box alternative: *If* test items are based on learning objectives
- ✍ Exclude reference material from learning objectives

- Describe how pesticides are assigned to toxicity categories.
- Explain what signal words are.
- Match signal words to a pesticide's toxicity category and relative level of toxicity.

Reference Material: Meeting Expectations of Manual

Keeping Pesticides
on Target

SECTION
VIII

CHAPTER 28

OVERSPRAY AND DRIFT

LEARNING OBJECTIVES

- ☆ Define overspray and drift.
- ☆ Explain Wisconsin's regulations regarding overspray and drift.
- ☆ Compare the difference between particle drift and vapor drift.
- ☆ Describe the relation of each of the following to drift:
 - Weather conditions, including wind, temperature inversion, air stability, temperature and humidity.
 - Spray particle size, including those factors that influence particle size.
 - Method of application and nozzle height.
- ★ Overspray is prohibited under all circumstances.
- ★ Significant drift is considered a negligent, prosecutable action.
- ★ The applicator is responsible for preventing overspray and drift.

KNOW THE LAW

Reference Material: Meeting Expectations of Manual

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