

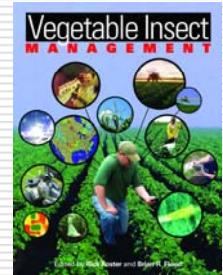
Vegetable Insect Management

How Teamwork Helped Move Vegetable IPM Forward

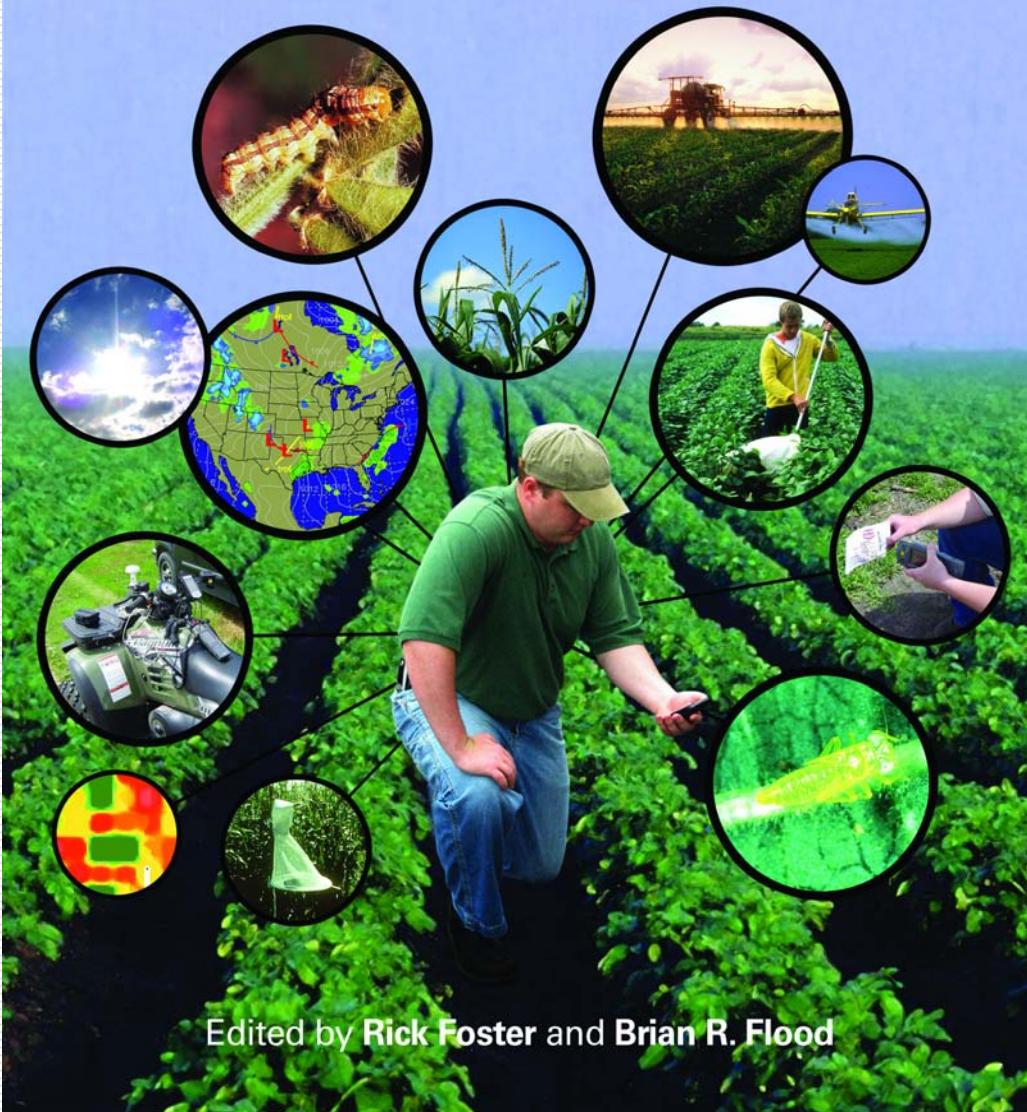
Rick Foster – Purdue University

and

Brian Flood – DelMonte Foods



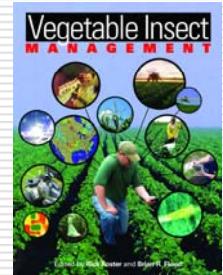
Vegetable Insect MANAGEMENT™



Edited by **Rick Foster** and **Brian R. Flood**

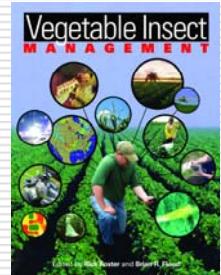
Vegetable Insect Management

- First Edition published in 1995
- Focused on Midwest
- 15 chapter, 23 authors
- Second Edition published in 2005
- National focus
- 14 chapters, 32 authors



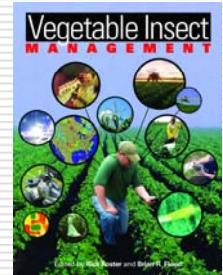
Guiding Principles

- Must be practical
- Provide only enough insect biology for pest manager to make decisions
- Recognize that pest managers must make decisions, whether researchers have all the answers or not
- Must be easy to read



How the IPM World Changed From 1995 to 2005

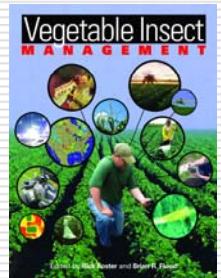
- Internet
- Cell phones
- CDs
- GPS readily available
- Downsizing of Extension programs
- GMO crops
- FQPA
- Seed treatments
- Reduced risk insecticides



Vegetable Insect Management

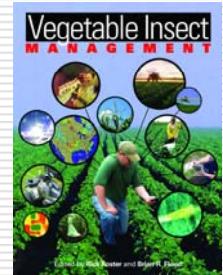
Features

- Combined effort of academia, industry, and regulatory personnel
- Focuses on total management system
- “Act local, think global” mindset
- Handy Dandy Chart/Treatment Window



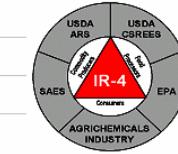
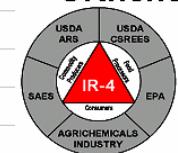
Chapter Format

- Highlights key insect pests per region in 13 specific vegetable crop groups
- Geographic balance in authorship
- Designs the management around the key pests
- 250 color photos with charts, illustrations, pictures and summary boxes to allow quick reference and resources
- Web links for additional information



New Foliar Insecticide Options:

Primary Bloom to Harvest Insecticide	Years of Use Applications	Average COST PER AP	PEST	Pest On plant BEFORE treatment KNOCKDOWN CONTROL							Ap Date	Pest On plant AFTER treatment RESIDUAL CONTROL						
				7	6	5	4	3	2	1		0	1	2	3	4	5	6
Parathion & Sevin 80S	1960 - 1980	ECB - adults																
		4X - 8X	ECB - larvae															
	ACTUAL:	\$5.25	CEW - adults															
	2002 \$:	\$11.50	CEW - larvae															
Orthene / Penncap Programs:				1st Edition														
Orthene 75S	1980 - 2000	ECB - adults																
		2X - 4X	ECB - larvae															
	ACTUAL:	\$6.25	CEW - adults															
	2002 \$:	\$8.62	CEW - larvae															
Penncap M				1st Edition														
	1985 - 1998	ECB - adults																
		2X - 4X	ECB - larvae															
	ACTUAL:	\$4.75	CEW - adults															
	2002 \$:	\$6.55	CEW - larvae															
Capture 2EC				2nd Edition														
	1999 - 2003	ECB - adults																
		1X - 2X	ECB - larvae															
	ACTUAL:	\$5.75	CEW - adults															
	2003 \$:	\$5.75	CEW - larvae															



New Control Tool:

thiamethoxam (Cruiser®) Seed Treatment

April May June July August Sept



Seed Corn
Maggot



Potato Leaf
Hopper



Bean Leaf
Beetle



Soybean
Aphid



- Totally eliminated the need of organophosphate (OP) seed treatments and significantly
- reduced (+90%) foliar OP insecticides prior to bloom. Net result increased yields, resulted in less cost, and, most importantly good business.



Weather & Insect Migration

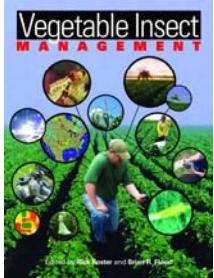
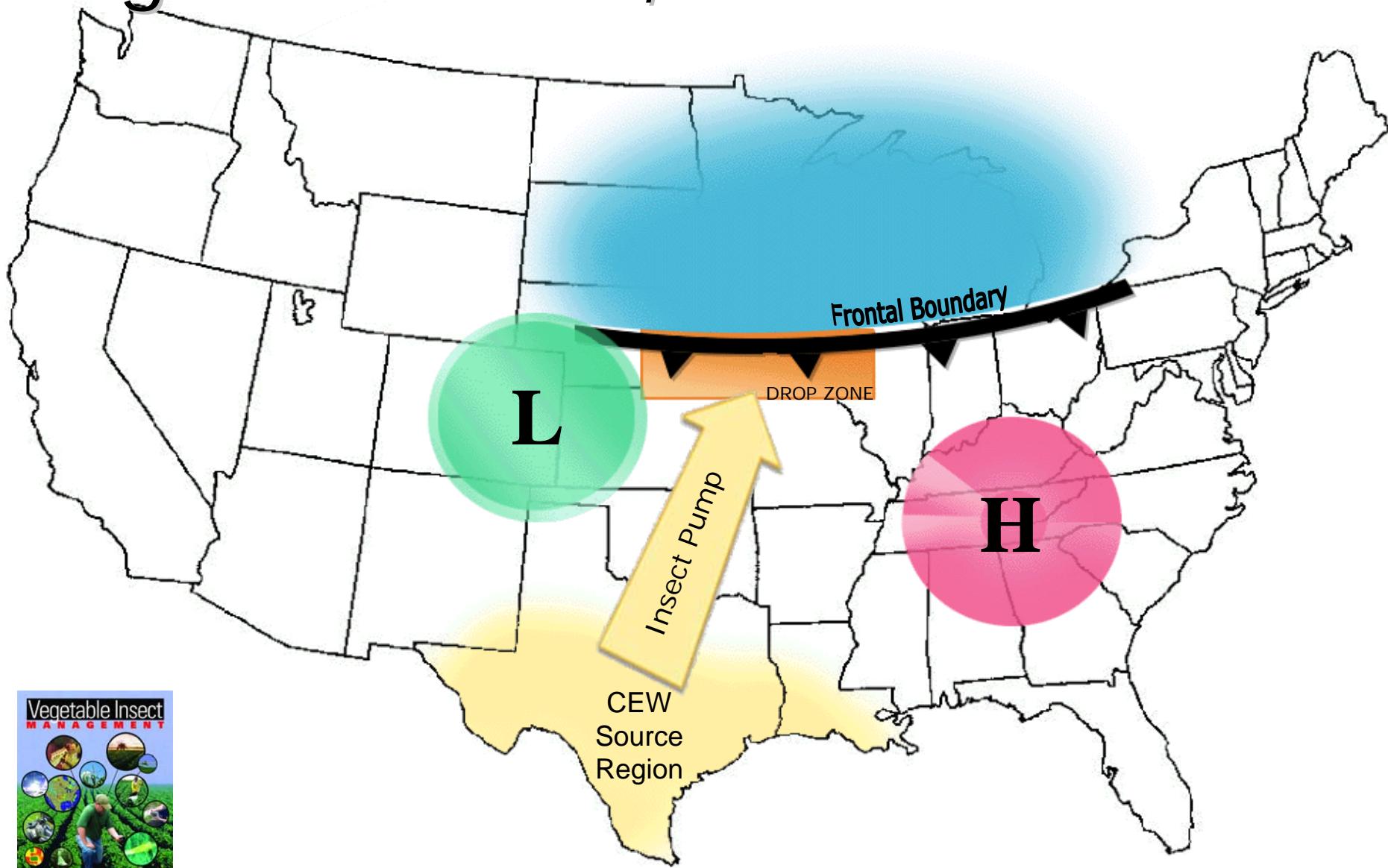
Applied to North America, east of the Rocky Mountains

A Tutorial

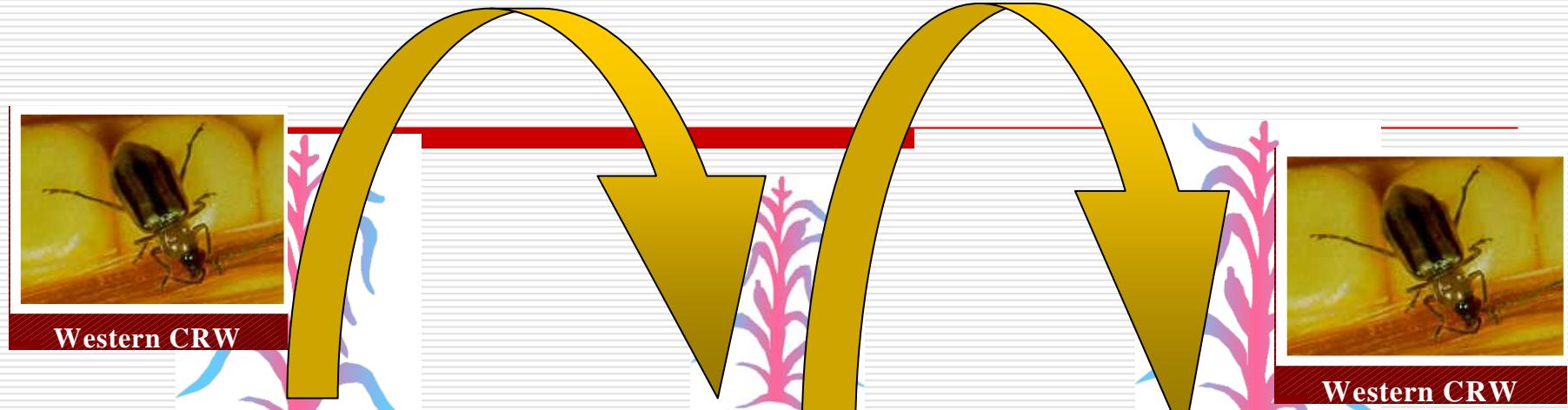
by Michael Sandstrom and Tracy Flood Bramall

click to begin

August 4th to 5th, 2002



GMO Field Crop Impact



**Round Up Ready volunteer corn defeats
the purpose of crop rotation**

Year one



Year two



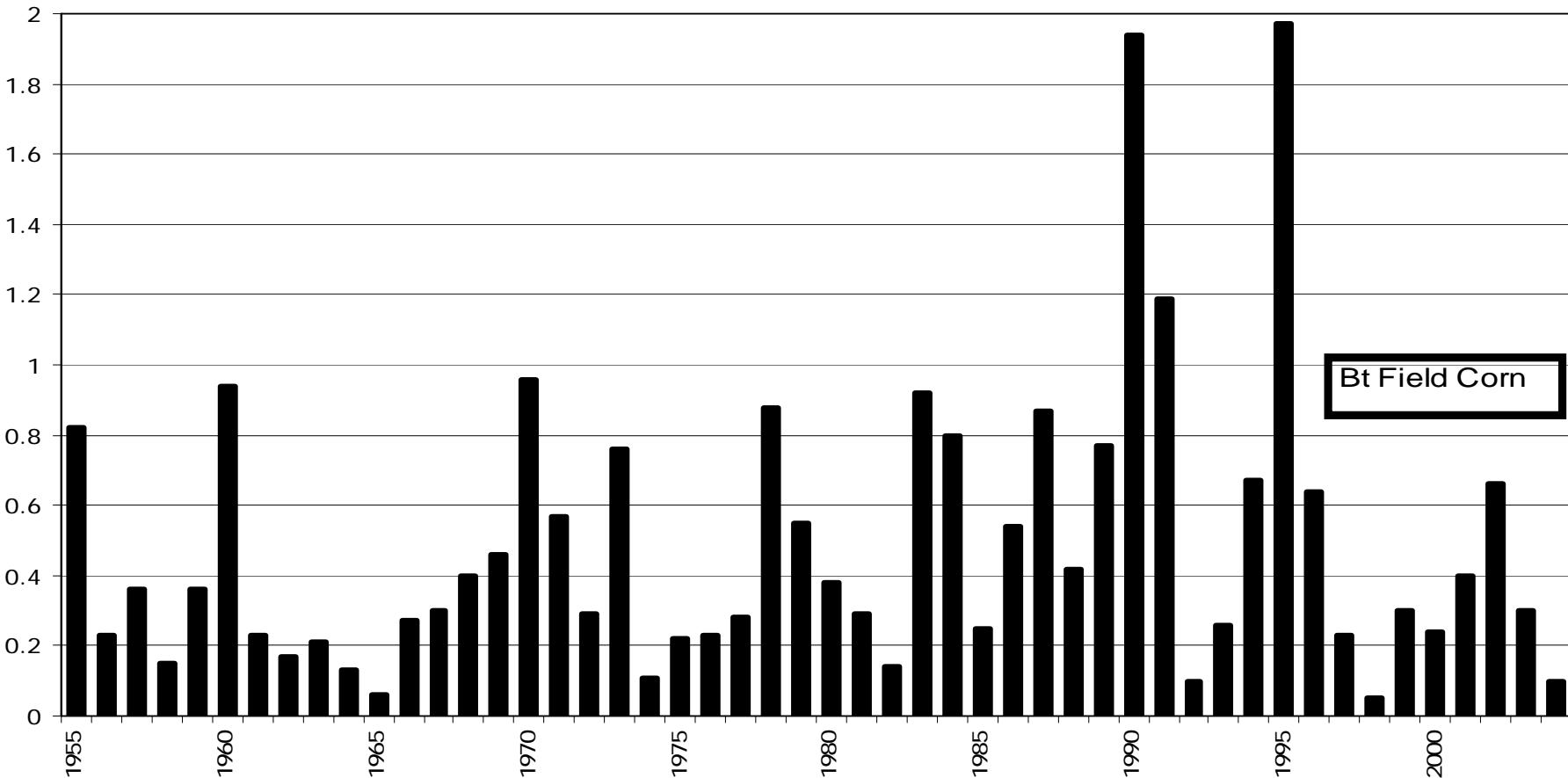
Year three



GMO Field Crop Impact

Wisconsin European Corn Borer Fall Survey Results 1954-2004

Statewide Average Number of Borers per Plant



Vegetable Insect Management

Handy Dandy Chart implementation

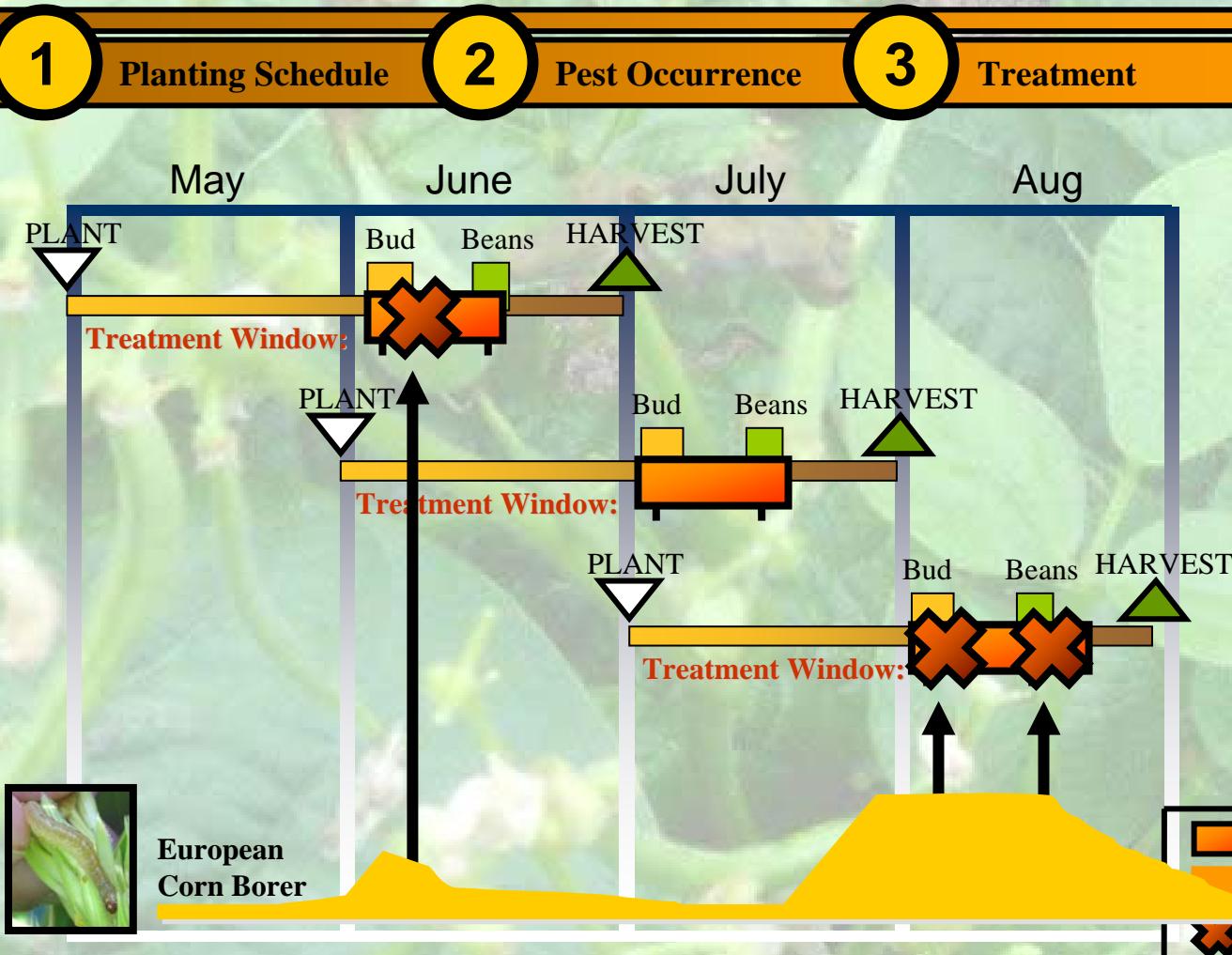
- Tutorial on CD
- Chapter provides a step-by-step process in Treatment Window and Handy Dandy Chart development



How to Build a Handy Dandy Chart

How to Build a Handy Dandy Chart

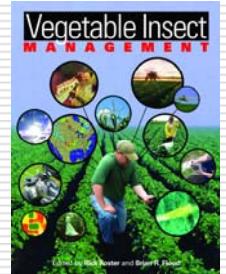
Green Beans



Vegetable Insect Management

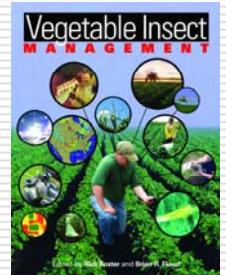
Using a total management system

- Tutorials on CD
- Encouraging people to look beyond the field

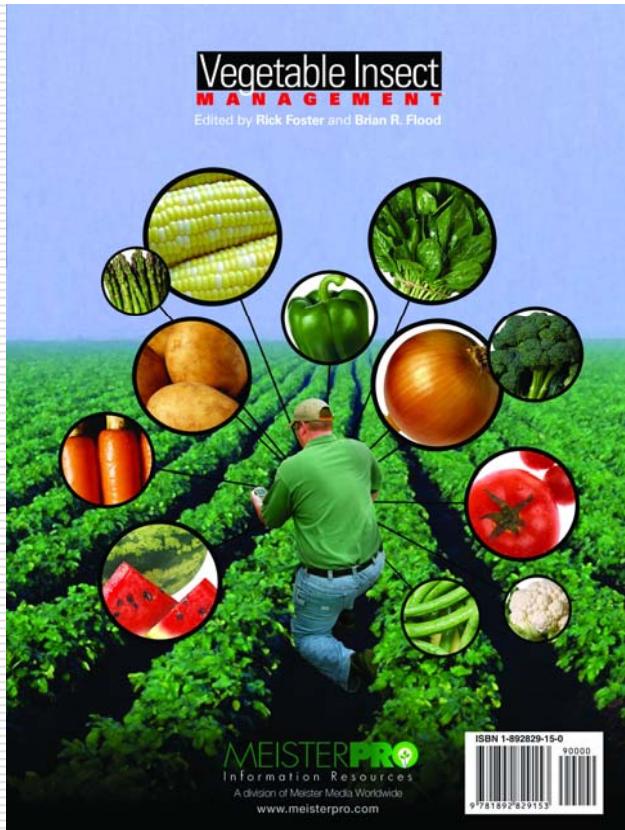


Vegetable Insect Management

- CD Contents:
 - Tutorials
 - Reference Materials
 - Regulations
 - Application



Vegetable Insect Management



Although the 1st Edition had emphasis on the Midwest United States, it was used around the world. It is our hope that this 2nd edition will be a new tool that will help reinvent the thought process in Vegetable Insect Pest Management.

Rick Foster & Brian R. Flood-editors

Thanks

- Meister Media Worldwide
- Authors
- Photographers who let us use their images
- DelMonte Foods
- Purdue University

