

CONTENT

	Page
Preface	iii
Contributors	xiii
PART I : Principles of Research and Development	
1. Practical Use of Pheromones and Other Behavior- Modifying Compounds : Overview	1
2. Principles of Monitoring	9
3. Principles of Attraction – Annihilation : Mass Trapping and Other Means	25
4. Principles of Mating Disruption	47
5. Chemical Analysis and Identification of Pheromones	73
6. Principles of Design of Controlled-Release Formulation	93
7. Dispenser Design and Performance Criteria for Insect Attractants	113
8. Olefin Metathesis as an Economical Route to Insect Pheromones	131
9. Commercial Synthesis of Pheromones and Other Attractants	141
10. The Research, Development, and Application Continuum	149
PART II : Pests of Horticultural Crops	
11. Mating Disruption Technique to Control Codling Moth in Western Switzerland	165
12. Oriental Fruit Moth in Australia and Canada	193
13. Mating Disruption of Oriental Fruit moth in the United States	193
14. Grape Berry Moth and Grape Vine Moth in Europe	213
15. Mating Disruption for Control of Grape Berry Moth in New York Vineyards	223
16. Peachtree Borer and Lesser Peachtree Borer Control in the United States	241
17. The Male Lures of Tephritid Fruit Flies	255
18. Development and Commercial Application of Sex Pheromone for Control of the Tomato Pinworm	269
PART III : Forest Insect Pests	
19. Use of Semiochemicals to manage Coniferous Tree Pests in Western Canada	281
20. Pheromones for managing Coniferous Tree Pests in the united States, with Special Reference to the Western Pine Shoot Borer	317
21. Practical use of Insect Pheromones to Manage Coniferous Tree Pests in Eastern Canada	345
22. Use of Disparlure in the Management of the Gypsy Moth	363
PART IV : Pests of Field Crops	
23. Application of the Sex Pheromone of the Rice Stem Borer Moth, <i>Chilo suppressalis</i>	387
24. The Use of Pheromones for the Control of Cotton bollworms and <i>Spodoptera</i> spp. In Africa and Asia	407
25. Use of Pink Bollworm Pheromone in the Southwestern United States	417
26. Role of the Boll Weevil Pheromone in Pest Management	437
27. Population Monitoring of <i>Heliothis</i> spp. Using Pheromones	473
Part V : Stored – Product Insect pests and Insects Affecting Animals	
28. Practical use of pheromones and Other Attractants for Stored-Product Insects	497
29. Use of Host Odor Attractants for Monitoring and Control of Tsetse Flies	517
30. The Use of Pheromones and Other Attractants in House Fly Control	531
PART VI : Development, Registration, and use	
31. Commercial Development : Mating Disruption of the European Grape Berry moth	539
32. Commercial Development : Mating Disruption of Tea Tortrix Moths	547
33. Pheromones : A Marketing Opportunity?	553
34. Registration Requirements and Status for Pheromones in Europe and Other Countries	557
35. Regulation of Pheromones and Other Semiochemicals in the United States	569
36. Registration of Pheromones in Practice	605

37.	Use of Pheromones and Attractants by Government Agencies in the United States	619
38.	Commercial Availability of Insect Pheromones and Other Attractants	631
PART VII : Prospects		
39.	Pheromones : Prophecies, Economics, and the Ground Swell	717
Appendix : List of Commercial Suppliers		723
Index		733