

DATE: January 3, 2007

TO: All Diploma Students enrolled in Course 38.061 (Beekeeping)

FR: R.W. Currie

RE: **Diploma Course 38.061 Beekeeping Course Outline and Written Assignment**

This course includes instruction in the beekeeping industry in Manitoba and a written paper on alfalfa leafcutter bee industry.

I. Beekeeping:

Lectures in this course begin on **Wednesday, 31 January, 2007** (Room 220, Animal Science/Entomology Building) from 7:00-9:30 p.m., and continue on Wednesday evenings until 28 March, 2007. No classes will be held on the 14th of February (Mid Term Break). Two optional classes (A tour of the Manitoba Honey Co-op and a “hands-on” session in the apiary will occur in April for interested students). A text, entitled “The Prairie Beekeeping Manual” (or an equivalent), will can be obtained through the bookstore and/or will be available for purchase on the first night of classes for \$25. The book is important resource material to supplement the lecture portion of the course.

II. Alfalfa Leafcutter Bee Industry Assignment[†]:

You are asked to write a paper summarizing the alfalfa leafcutter bee industry which should be 5 pages and cover the following areas: 1) reasons for using this bee to pollinate alfalfa; 2) the bees’ life cycle; 3) equipment used in all phases of a typical operation; 4) the importance of proper bee stocking rates to bee production and crop pollination; 5) the annual cycle of management and 6) major parasite and disease problems. This assignment should not be done in collaboration with other students in the course.

Please submit one typed copy (double spaced, 1 inch margins, standard type) of your paper to R.W. Currie (218 Animal Science/Entomology Building) on or before **7:00 p.m., Wednesday, 31 January, 2007**. Papers should be typed, using a standard double spaced font, on 8.5 x 11 inch paper with 1 inch margins. One letter grade will be taken off for papers that are submitted after the deadline.

Copies of “Alfalfa Leafcutter Bee Management in Western Canada”, “Controlling Chalkbrood Disease in Alfalfa Leafcutter Bees”, “Alfalfa Seed and Leafcutting Bee Production in Saskatchewan” and CheckPoints, Dec. 3, 1993: “Paraformaldehyde Approved for Decontaminating Leafcutting Bee Cells” will be placed on reserve in the Agriculture Library. Other resource material can be used if properly referenced. If you are using internet sources you should ensure that the information you are citing is from a reliable source and relevant to managing leafcutter bees in Manitoba.

Other contacts are:

1. David Ostermann*, Extension Apiarist, Manitoba Agriculture, Food and Rural Initiatives. Phone: 945-3861.
2. Rhéal Lafrèniere*, Provincial Apiarist, Manitoba Agriculture, Food and Rural Initiatives. Phone: 945-4825.

*Agricultural Services Complex, U. of M. Campus, Winnipeg, MB R3T 5S6.

Grading:	(1) Leafcutter bee paper due, January 31, 2007*	40%
	(2) Final Exam (Beekeeping) TBA	<u>60%</u>
	TOTAL	100%

* Assignments will be graded and returned before the voluntary withdrawal date.

† Students should consult the section on plagiarism and cheating found in the University Calendar.

Beekeeping - 2007Lecture Outline

Room 220, Animal Science/Entomology Building

Primary Lecturers

1. R.W. Currie, Assistant Professor, Department of Entomology, University of Manitoba, 218 Animal Science/Entomology, University of Manitoba, Winnipeg, MB R3T 2N2. Phone: 474-6022.
2. Rhéal Lafrenière, Provincial Apiarist, Manitoba Agriculture, Food and Rural Initiatives, Room 204, 545 University Crescent, Agricultural Services Complex, University of Manitoba, Winnipeg, MB R3T 5S6. Phone: 945-4825.
3. David Ostermann, Pollination Apiarist, Manitoba Agriculture, Food and Rural Initiatives, Room 204, 545 University Crescent, Agricultural Services Complex, University of Manitoba, Winnipeg, MB R3T 5S6. Phone: 945-3861.

Text

The Prairie Beekeeping Manual (available for \$25)

Lectures:

One per week during regularly slotted time.

Course Theme

This series of lectures and demonstrations will deal with the nature of beekeeping and its literature; the life history, anatomy, and social behaviour of commercially important bees; economics; how to manage colonies of bees; equipment and site selection; pollen and nectar producing plants, pests and nectar flows; seasonal management; pests, diseases and regulations; honey houses; extracting equipment; grading and marketing honey and beeswax.

Topics Covered

1. Introduction: What is beekeeping?: Honey bees
2. What is beekeeping?: Leafcutter bees!
3. Economics, beekeeping equipment and its construction
4. Life history and anatomy (3 castes)
5. Choosing an apiary site and arranging hives
6. Diseases, pests and regulations
7. Hive and field behaviour of bees
8. Spring management I - Care and hiving of packages and care of wintered colonies
9. Spring management II - Plants, feeding, queen checks, etc.
10. Queen rearing techniques
11. Summer management - Plants, nectar flows, supering, etc.
12. Fall management - Killing bees vs. wintering procedures
13. Honey handling - honey house, equipment, etc.
14. Review of course
15. Tour of Manitoba Co-operative Honey Producers Ltd. (optional)

38.061 Beekeeping - 2007
Room 220, Animal Science/Entomology Building
January 31, 2007 - 4 April , 2007

Date	Hour	Topic	Speakers
January 31	1	What is Beekeeping?: Leafcutter bees! Introduction:	David
	2	What is Beekeeping?: Honey bees!	Rob
February 7	1	Economics Beekeeping Equipment and Its Construction Personal Equipment	David
	2	Life History and Anatomy (3 castes)	Rob
February 14	1	<i>Mid Term Break - No Classes</i>	
February 21	1	Diseases, Pests and Regulations I	Rheal
	2	Hive and Field Behaviour of Bees (Film)	Rob
February 28	1	Spring Management I - Choosing an Apiary Site, Arranging Hives, Care and Hiving of Packages and Care of Wintered Colonies (Film)	Rob
	2	Diseases, Pests and Regulations II	Rheal
March 7	1	Spring Management II - Plants, Feeding, Queen Checks, etc.	Rob
	2	Queen Rearing Techniques (Film)	David
March 14	1	Summer Management - Plants, Nectar Flows, Supering, etc.	Rob
	2	Honey Handling - Honey House, Equipment, etc.	David
March 28	1	Fall Management - Killing Bees vs. Wintering Procedures	Rheal
	2	Slide Review of Course	Rob, David, Rheal
April 4	1	Tour of Manitoba Co-operative Honey Producers Ltd., 625 Roseberry Street, St. James	All
April (TBA)		Demonstrations at University of Manitoba Apiary (6:30 p.m.)	All