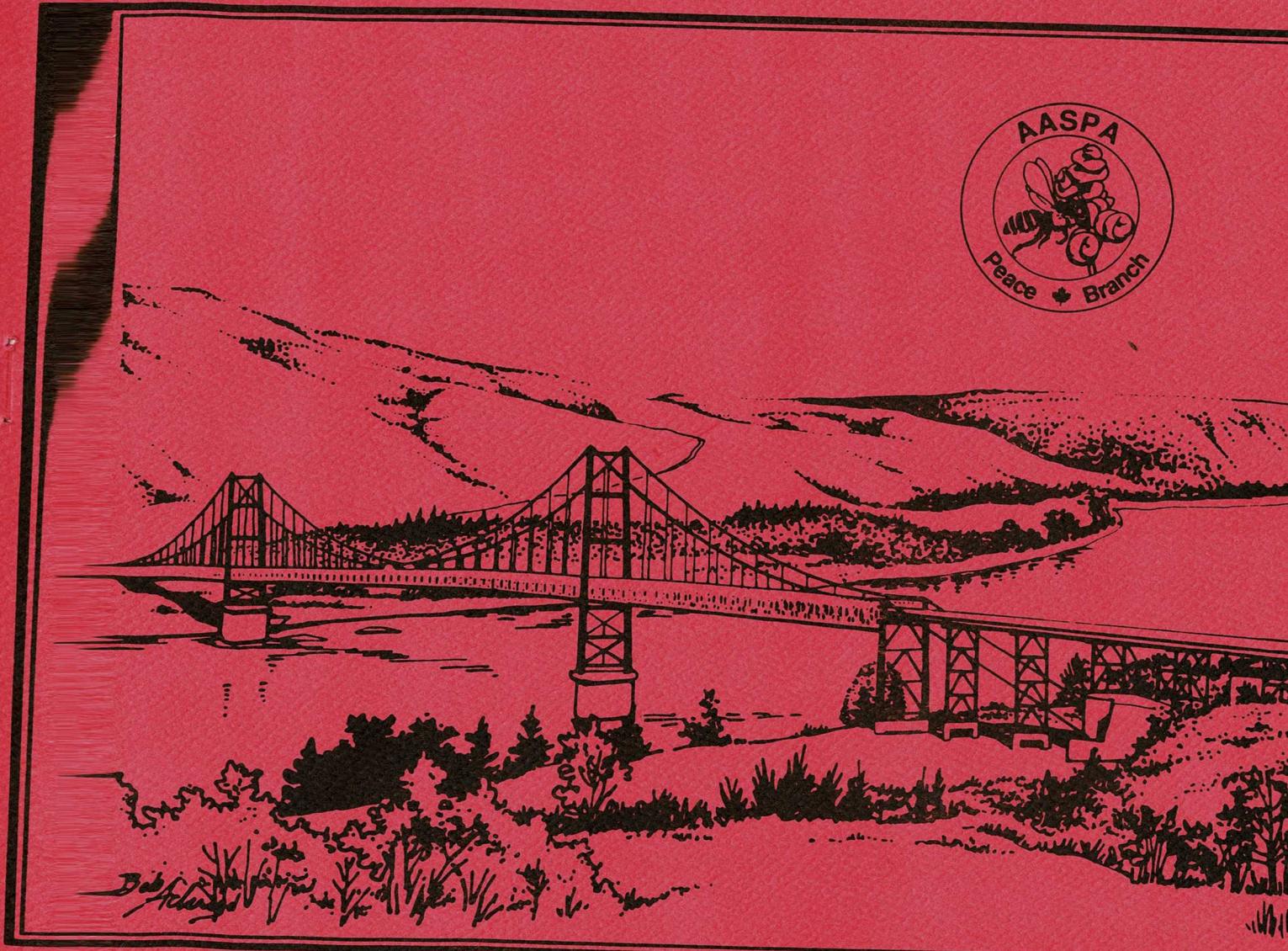


ALBERTA ALFALFA SEED PRODUCERS ASSOCIATION

PEACE BRANCH



NEWSLETTER
Spring 1990

DATES TO REMEMBER

June 10, 1990

AASPA, Peace Branch
Annual Field Day at Agriculture Canada
Research Station, Beaverlodge

January 10-12, 1991

10th Canadian Alfalfa Seed School
Besborough Hotel
Saskatoon, Saskatchewan

January 27-29, 1991

22nd Interstate Alfalfa Seed School
John Ascuaga's Nugget
Reno, Nevada

March 14-15, 1991

11th Annual Seminar
Alfalfa Seed Production in the
Peace River Region
Fairview, Alberta

**ALBERTA ALFALFA SEED PRODUCERS' ASSOCIATION (AASPA)
PEACE BRANCH**

1990 EXECUTIVE

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**RECORDING
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**SCIENTIFIC
ADVISOR[†]:** Daphne Fairey
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Box 29, Beaverlodge
Alberta T0H 0C0
Phone: 403-354-2212

[†] Also, Agriculture Canada Representative, Alberta Forage Seed Council

If you have any comments on this newsletter - suggestions for changes, additions, compliments for a job well done, etc., please direct these to Dave Spencer.

If this newsletter has been sent to you with our compliments, and you would like to receive all our publications and other benefits, why not join the AASPA, Peace Branch today. See page 3 for membership application.

ADVERTISING

Your Peace Branch is encouraging the use of the newsletter for advertising. The next newsletter will be published in the fall of 1990. Rates are as follows:

CLASSIFIED (up to 50 words) and card size \$10.00

HALF PAGE \$25.00

FULL PAGE \$40.00

Send your ad and payment[†] to: Dave Spencer
Alberta Agriculture
Bag 900-20, Peace River
Alberta T8S 1T4

[†] Make your cheque or money order payable to AASPA, Peace Branch

**President's Report to the 1990 Annual General Meeting,
AASPA, Peace Branch**

March 15, 1990

It has been a very busy winter. Since my report that appeared in the Fall 1989 Newsletter we have had two executive meetings in conjunction with Fairview College to organize this, our Tenth Annual Seminar.

Don Pedersen and Bob Gartly have attended AASPA Provincial Executive Meetings to organize the Ninth Annual Canadian Alfalfa Seed School which was held in Calgary in February. Four of your Directors, along with several other members, attended.

Don Pedersen attended the 21st Interstate Alfalfa Seed School in Pasco, Washington.

I attended a Canadian Alfalfa Seed Council meeting in Saskatoon in October and also another meeting which was held prior to the Seed School in Calgary.

The Chalkbrood Survey is being carried out again this year. Since chalkbrood is becoming more widespread in Canada it is very important to do our utmost to keep our area chalkbrood free.

Our booth is now finished and on display here. It has also been on display at the following places:

- The Ninth Annual Canadian Alfalfa Seed School in Calgary on February 8th, 9th and 10th.
- The B.C. 35th Annual Seed Fair and Seminar in Fort St. John on March 1st and 2nd.
- The Peace Country Classic Agri show in Grande Prairie on March 8th, 9th and 10th.
- The North Peace Forage Association's Hay Day which was held here in Fairview yesterday.

A brochure "Alfalfa Seed in the Peace" has been printed. These brochures have been displayed at our booth and have been given to interested persons on request. Brochures are available for sale to the trade.

This year we are trying to highlight marketing, both with our booth and some of the speakers who are present at this seminar.

We also have caps, visors and crests available for sale.

We have applied for Challenge 90 funding for the hiring of Research Assistants to work at Beaverlodge Research Station this summer. We have also applied for Farming for the Future funding to continue our shelter design study.

I would like to thank the following for their help:

- Daphne Fairey and staff from Agriculture Canada, Beaverlodge.
- Alberta Agriculture for all the help we have received with funding and support from their staff members. Special thanks to Dave Spencer and his staff in the Peace River office.
- Bert Reynolds and his staff of Continuing Education, Fairview College.

Without the support of all these people it would be impossible to run our Association.

Many thanks, also, to the Board of Directors and our Treasurer for their work during the past year.

Respectfully submitted,

Raymond Wood, President.

**MEMBERSHIP INFORMATION
YOUR INVITATION TO JOIN THE ALBERTA ALFALFA SEED PRODUCERS' ASSOCIATION
PEACE BRANCH**

OBJECTIVES: The Peace Branch exists to enhance cooperation and coordination among all participants in the alfalfa seed industry in the Peace River region of Alberta and British Columbia; and to provide the opportunity to report, exchange and evaluate information pertinent to the production and marketing of alfalfa seed and leafcutting bees.

MEETINGS: The annual general meeting of the branch is held in conjunction with an alfalfa seed production seminar organized by Fairview College. The 11th annual meeting is scheduled for March 14 & 15, 1991. Also, a summer meeting/picnic will be held for all members and their families, on June 10, 1990 at the Agriculture Canada, Research Station, Beaverlodge.

PROJECTS: The Branch conducts an annual chalkbrood survey on leafcutting bee populations in the region and participates in research and technology transfer activities with Agriculture Canada and Alberta Agriculture.

PUBLICATIONS: The Branch publishes two newsletters - in the spring and fall of each year. In addition, an update publication on alfalfa seed production and the results of the chalkbrood survey and quality of cells in the region are published in conjunction with the annual seminar.

MEMBERSHIP: Regular memberships are available to all residents of Alberta and British Columbia. Associate and patron memberships are available to all interested persons.

**Detach and Mail
AASPA, PEACE BRANCH MEMBERSHIP APPLICATION
(Please print or type)**

Name: _____

Address: _____

Province: _____ Postal Code: _____

Phone Number: () _____

Please enrol me as follows:

- [] Regular Member _____ \$50.00
[] Associate Member _____ \$20.00
[] Patron Member _____ \$30.00

Membership fees apply for the calendar year Jan 1 to Dec 31. Please make your cheque payable to AASPA Peace Branch, and mail to: Noella Poirier, Box 71, Jean Cote, Alberta T0H 2E0.

RESEARCH UPDATE ON HARD SEEDS IN FORAGE LEGUMES

D.T. Fairey, Agriculture Canada, Beaverlodge

In July 1989 a survey on the hard seed content of forage legumes produced in Canada for the five year period 1984-89 commenced. This is a summary of progress to date.

1. Data for the following species grown in western Canada has been obtained - alfalfa, alsike clover, red clover, birdsfoot trefoil and sainfoin.
2. Information pertinent to alfalfa was summarized and presented at the Canadian Alfalfa Seed School held in February 1990 at Calgary.
3. A scientific manuscript on the results pertinent to alfalfa has been prepared.
4. The following, regarding alfalfa seed produced in Canada between 1984 and 1988, might be of particular interest:
 - (i) If a comparison of hard seed content in alfalfa seed produced in Canada and the United States is made, and the data base of the entire Canadian production (54 cultivars and common seed grown in all four western provinces) is used, then the Canadian average of 30 to 35 percent is similar to the hard seed content of the U.S. production from the south west states.
 - (ii) Only five cultivars (Algonquin, Angus, Beaver, Peace and Rambler) were grown in each of the four provinces. If this smaller data base is used for a comparison similar to (i) above, then the hard seed content of alfalfa from the Peace River region was similar to that from the Pacific northwest, i.e., 40 to 50 percent, while hard seed values for alfalfa produced elsewhere in western Canada was similar to the U.S. production from the south west states.
5. Tentative plans for data collection from eastern Canada for the clovers and birdsfoot trefoil have been cancelled because of a lack of resources. Data for these crops for western Canada will be summarized.
6. Studies on hard seeds in legumes are currently underway at the Research Station, Beaverlodge.

SUMMARY FROM THE COCOON TESTING CENTER 1989 TO 1990

Susan Sims

The CTC opened for it's twelfth season November 1, 1989 and closed April 27, 1990. During this time 570 samples were submitted and analyzed, an increase of 15% over the previous season. Samples were sent from six provinces: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario and Quebec.

Due to the high increase of chalkbrood in Manitoba a survey was conducted. The Cocoon Testing Center received an additional 105 samples from producers throughout the province. From the survey we discovered another 3 cases of chalkbrood, which makes 12 samples with chalkbrood in Manitoba.

Please refer to the following tables for a summary of samples analyzed. On average most categories are up compared to last year. We have found drier samples this year and this is cause for the increase in most categories. One category that is down this year is Machine Damage, this is due to the drier condition of the cells. Another category that is down is parasites, but they are still around the 2% level.

Overall, most categories were up slightly this season. Average count per pound was up some, this again is due to the drier bees.

Chalkbrood Summary

Alberta

Tilley, Rolling Hills area	- 54 samples ranging from 0.18% to 15.91%
Duchess, Rosemary and surrounding areas	- 69 samples ranging from 0.16% to 10.41%
Brooks area	- 35 samples ranging from 0.19% to 18.12%
South of Rolling Hills area	- 11 samples ranging from 0.36% to 3.65%
TOTAL	- 169 samples

Total of 169 samples out of 257 samples from Alberta have chalkbrood or 66%.

Saskatchewan

1 sample at 0.33%.

Manitoba

12 samples ranging from 0.17% to 6.38%.

CANADIAN ALFALFA LEAFCUTTER BEE COCOON TESTING CENTER SUMMARY

November 1, 1989 - April 27, 1990

by Susan Sims

Province		Live Prep	#/lb	Imm Larvae	Dead Prep	Dead Larvae	Pollen Balls	2nd Gener	Parasite	Pred. & SPP	Chalk- brood	Machine Damage	% Viable	Female	Total
AB & BC 257 (124)	MAX.	94.48	5215	1.85	9.80	13.19	41.93	9.52	13.71	2.21	18.12	3.97	100.00	65.80	
	MIN.	44.08	1859	0.00	0.16	0.00	3.02	0.00	0.00	0.00	0.00	0.00	97.39	20.60	73
	AVG.	76.05	3860	0.30	2.40	0.74	14.09	0.67	2.28	0.04	2.56	0.87	99.08	39.25	
MB 154** (98)	MAX.	94.07	4880	1.19	12.73	4.88	40.08	12.87	17.33	0.34	6.38	7.76	100.00	53.00	
	MIN.	50.54	2512	0.00	0.00	0.00	3.41	0.00	0.00	0.00	0.00	0.00	93.01	18.00	68
	AVG.	79.44	4022	0.21	2.30	0.96	13.76	0.56	1.90	0.01	0.11	0.75	97.35	39.41	
ON & PQ 12 (7)	MAX.	92.16	5261	1.02	5.23	7.03	25.59	24.70	3.92	0.00	0.00	3.69	99.32	56.20	
	MIN.	52.29	2803	0.00	0.16	0.00	3.84	0.00	0.00	0.00	0.00	0.00	96.68	37.00	7
	AVG.	74.99	3928	0.30	2.01	1.85	13.47	5.75	0.87	0.00	0.00	0.75	98.18	44.76	
SK 147 (97)	MAX.	97.43	5188	1.46	8.53	6.48	37.15	10.54	18.04	0.18	0.33	8.50	100.00	60.50	
	MIN.	58.28	3075	0.00	0.00	0.00	1.37	0.00	0.00	0.00	0.00	0.00	95.29	23.80	71
	AVG.	82.11	4210	0.32	1.70	0.71	11.60	0.71	1.88	0.00	0.00	0.88	99.20	39.57	
Canada 570 (326)	AVG.	78.50	3995	0.28	2.18	0.81	13.34	0.76	2.04	0.02	1.20	0.85	98.56	39.58	219

** There were also 105 samples submitted from Manitoba for chalkbrood diagnosis only.

INFORMATION CORNER

CHLORINE BLEACH

Large quantities of bleach can now be purchased in Grande Prairie from:

Mr. Scott Parker
Wesclean Peace Country Sales
9503 - 111 Street
Grande Prairie, Alberta
T8V 5W1
Phone: 403-538-3380
FAX: 403-539-7277

Prices are as follows:

	<u>4 L</u>	<u>20 L</u>	<u>209 L</u>
6%	\$3.20 (3.54 L)	\$18.71	\$144.47
12%	\$6.43 (4 L)	\$27.27	\$213.73

Discounts will be available on volume purchasing over \$500.00.

Please order one week in advance or required delivery date on 209 L orders.

BLEACH TEST KIT

'Lamott' Bleach Test kits can be obtained from:

Prairie Industrial Chemicals
1919 - 84th Avenue
Edmonton, Alberta
T6P 1K1
Phone: 403-467-4043

Cost \$45.00 (approx.)

POLYSTYRENE NESTING MATERIAL

Doug Anderson
Beaverfoam
Beaver Plastics Ltd.
12150 - 160 Street
Edmonton, Alberta
T5V 1H5
Phone: 403-453-5961

WOOD NESTING MATERIAL

Leo Dutiaume
Canadian Leafcutter Bee Supply (1987) Ltd.
Box 6581 RR #2
Lorette, Manitoba
R0A 0Y0
Phone: 204-878-3589

STYROFOAM SM NEST BLOCKS

Gil Dalziel
Box 119
White Fox, Saskatchewan
S0J 3B0
Phone: 306-276-2569

WHEN YOU USE BLEACH (SODIUM HYPOCHLORITE)

CHLORINE MIXING GUIDE

Industrial Bleach (12% Sodium Hypochlorite)

- to obtain 5-6% solution, industrial bleach should be diluted at one part bleach with one part water.
- to obtain a 3% solution, industrial bleach should be diluted at one part bleach with 3 parts water.

Mixing Table - 12% Industrial Bleach

Desired Bleach Concentration	Tank Volume Gallons (L)	Amount of Bleach Gallons (L)	Amount of Water Gallons (L)
3%	11.0 (50)	3.0 (13)	8.0 (37)
	22.0 (100)	5.5 (25)	16.5 (75)
	44.0 (200)	11.0 (50)	33.0 (150)
	110.0 (500)	27.5 (125)	82.5 (375)
	154.0 (700)	38.5 (175)	115.5 (525)
5 to 6%	11.0 (50)	5.5 (25)	5.5 (25)
	22.0 (100)	11.0 (50)	11.0 (50)
	44.0 (200)	22.0 (100)	22.0 (100)
	110.0 (500)	55.0 (250)	55.0 (250)
	154.0 (700)	77.0 (350)	77.0 (350)

Note: Industrial chlorine bleach loses one-half percent concentration per month, and should not be stored from year to year. Buy only as much as you need, as it cannot be returned.

Household Bleach (5.25% to 6.25% Sodium Hypochlorite)

- when a 5 to 6% solution is required, use full strength.
- to obtain a 3% solution, dilute one part household bleach with one part water.

Mixing Table - 6% Household Bleach

Desired Bleach Concentration	Tank Volume Gallons (L)	Amount of Bleach Gallons (L)	Amount of Water Gallons (L)
3%	11.0 (50)	5.5 (25)	5.5 (25)
	22.0 (100)	11.0 (50)	11.5 (50)
	44.0 (200)	22.0 (100)	22.0 (100)
	110.0 (500)	55.0 (250)	55.0 (250)
	154.0 (700)	77.0 (350)	77.0 (350)

5 to 6%

USE FULL STRENGTH

Calcium Hypochlorite (65% available chlorine) and Dry Stabilized Chlorine (56% available chlorine)

When calcium hypochlorite and dry stabilized chlorine are used to make up sterilizing solutions, use the following formula in order to determine how much powder is required:

$$\frac{\text{Volume dilute solution required (gallons)}}{\frac{\text{x } 10 \text{ x } \% \text{ solution required}}{\% \text{ available chlorine}}} = \text{Weight of calcium hypochlorite or dry stabilized chlorine required (lbs.)}$$

Example 1: Amount of calcium hypochlorite required to make up a 3% solution in a tank holding 150 gallons (68L):

$$\frac{150 \times 10 \times 3}{65} = 70 \text{ lb. calcium hypochlorite}$$

Example 2: Amount of dry stabilized chlorine required to make up a 5% solution in a tank holding 50 gallons (227L):

$$\frac{50 \times 10 \times 5}{56} = 45 \text{ lb. dry stabilized chlorine}$$

NOTE: Calcium hypochlorite solution is milky white and leaves a chalky calcium residue on sterilized nesting material. Handle calcium hypochlorite carefully; avoid breathing dust.

CAUTION: Chlorine is a powerful oxidizer - direct contact may result in serious injury. Wear protective equipment such as rubber gloves, goggles, neoprene apron and an approved escape respirator when handling these chemicals. See Safety Guidelines.

Wetting Agent Mixing Guide

To obtain a 0.1% wetting agent solution, use the following amounts of wetting agent in the disinfecting tank containing the chlorine solution.

Tank Volume Volume		Wetting Agent Agent	
Gallons	(L)	Ounces	(mL)
11	(50)	1.7	(50)
22	(100)	3.4	(100)
44	(200)	6.8	(200)
110	(500)	17.0	(500)
154	(700)	23.7	(700)

SAFETY GUIDELINES

Chlorine compounds such as sodium hypochlorite, calcium hypochlorite and dry stabilized chlorine are effective sporicides, but they need special care in handling. They all produce chlorine gas, a strong eye and lung irritant.

Exposure to low concentrations (15 to 30 parts per million) of chlorine gas causes a burning sensation in the eyes, nose and throat, and sometimes a headache. There may be redness of the face, tearing, sneezing, coughing and huskiness or loss of the voice.

Inhalation of chlorine gas in higher concentrations affects both the upper and lower respiratory tract. The most prominent symptoms are eye and throat irritation, a choking sensation, restlessness, nausea, vomiting, shortness of breath, and chest pain. Fluid on the lungs may occur six to 12 hours after exposure.

Brief exposure to very high concentrations (800 parts per million) of chlorine gas may cause death from suffocation.

Chlorine liquid or powder causes severe irritation and burns when in contact with skin or eyes.

Handling chlorine requires the following precautions:

- Use equipment recommended for handling pesticides. This includes rubber boots, neoprene apron, and neoprene or rubber gloves. Gloves should be long and turned down at the cuff to prevent solution from running down the arm. Apron should be long enough to keep solution from dripping into boots.
- Use a face shield or unventilated goggles designed for working with caustic chemicals.
- Use an approved self-contained respirator. A full-face type is highly recommended, especially when handling chemicals in buildings. However, respirators used for protection against pesticides (organic vapours) are adequate. Cartridges that are specific for protection against chlorine are available. Replace cartridges as instructed on package.
- Read the label carefully. It has information on use, hazards and disposal, and may have an emergency telephone number.
- Have water readily available in case of a spill or splash on skin, in eyes, or on clothes. Rinse immediately and thoroughly if an accident occurs.
- Do not disinfect indoors unless there is adequate ventilation. Keep doors and windows open, and move air in the work area with a large fan.

- In case of a spill, collect liquid in sealable containers and sweep powder up carefully into appropriate containers. Flush area thoroughly with plenty of water. Remember to wear safety equipment.
- Keep disinfecting chemicals away from combustible substances, reducing agents and acids. Store in a cool, dark place.
- In case of fire, cool drums containing chlorine compounds by spraying with water.

Disposal of Used Disinfecting Solution

Disposal of chlorine solutions may pose a problem, particularly when large concentrated quantities are used. Use the following guidelines:

- Do not dispose of chlorine solutions into waste systems that have septic tanks. Chlorine will kill beneficial bacteria essential for its operation.
- Do not dispose of chlorine solutions on lawns or fields where plant cover is desired. Chlorine is an effective non-selective herbicide and soil sterilant.
- Do not dump chlorine or iodine solutions into ponds, lakes or streams.
- Dispose of chlorine solutions by spreading over an area where soil sterilization does not represent a problem - for example, land such as dirt roads or trails on your farm property.
- Follow label instructions and use caution.

FORAGE SEED MARKETS

Al Dooley, Special Commodities Analyst, Alberta Agriculture

Legumes

Legume seed markets remain down from levels of two and three years ago. Alfalfa seed prices, however, have staged an impressive recovery from the lows of December, 1989.

Buyer interest in single cut red clover is limited. Traditionally, the U.S. has been our most important market. High prices in the mid-1980s combined with the U.S. drought of 1988, have resulted in a decline in buying activity. At present, movement is sporadic and not enough to provide any price strength. The 1989 crop was the largest in about five years and is another negative factor in the market. Little improvement in the current price level is anticipated in the foreseeable future.

Alsike clover seed prices are at their lowest levels since 1984-85. As with red clover, there is very little interest in alsike at this time, a situation that has prevailed for many months. Unlike red clover, the supply demand balance for alsike is becoming tighter with exports exceeding production in three of the last four crop years. Of the clovers, alsike appears to be most likely to experience some price strengthening in the new crop year.

Alfalfa seed prices have improved considerably since December, 1989. Despite two extremely large crops in succession, prices are now about \$0.90 per pound for public certified seed. By comparison, in December common seed was closer to \$0.50 per pound. It appears that much of the common and public certified seed moved shortly after harvest at these relatively low values. Prices may improve further depending on levels of domestic rise. I expect any further increases to be modest.

The decade of the 1980s was one of change for the alfalfa seed market. First, between 1981-82 and 1989-90 the pedigreed area in Canada more than doubled to almost 60,000 acres. Second, there has been a shift away from public varieties to private varieties, a trend that is expected to continue.

Grasses

The grass seed market is also relatively depressed. Dryland grasses were in great demand during the 1986 and 1987 crop years as the U.S. Conservation Reserve Program took large volumes of available seed. By 1988, the program had become less of a factor in our market. The 1988 drought in that country reduced seedings leaving companies with stock of high priced seed. As production of these grasses increased, prices fell sharply. This has been particularly true for both bromegrass and crested wheatgrass.

The Permanent Cover Program here in Canada will help to remove some of these excess stocks from the system. Whether this program will be sufficient to improve prices remains to be seen.

Timothy production in both the 1988 and 1989 crop years was large and, as a result, prices have fallen. In 1990, much will depend on growing conditions in Manitoba, Minnesota and here in Alberta. The crop is drought intolerant and moisture conditions in spring and early summer will be critical to output potential.

With normal weather, Canadian production of creeping red fescue could be large again in 1990. Currently, the price for rough seed is about \$0.38 per pound. Some strengthening is possible in the next few weeks but longer term, the sentiment is more negative. The turf crops in Oregon, Idaho and Washington are apparently in good shape coming through the winter. Large crops in these producing areas this year will keep prices under pressure in the 1990-91 crop year.

FORAGE EXPANSION AFFECTS MORE THAN THE ENVIRONMENT

Dave Petritz, Purdue University ag economist
Reprinted from Hay & Forage Grower, April, 1990.

Forages, especially alfalfa and other legumes, are being touted as the environmental and financial protectors of agriculture for the 1990s. It's claimed that legumes will:

- Eliminate the need for fertilizers and farm chemicals and thus contribute to environmental improvement.
- Improve water quality by reducing soil erosion.
- Increase farmers' net incomes by reducing the costs of crop and livestock production.

These sound too good to be true. First, those of you who grow alfalfa know that fertilizers, herbicides and insecticides are required for high yields and quality.

While forages offer many benefits for the environment and possibly for the bottom line of some farmers, their role must be considered in its proper perspective.

Family Preferences

As policymakers develop the 1990 farm bill, they must carefully examine the consequences of the policies being considered. The consequences of increasing forage production must be considered in two settings. The first is their impact on an individual farm - in economists' language, the micro setting.

Every farm is different. Each has a different set of resources - land, labor, capital and management - as well as a farm family with a set of wants, needs and desires.

Therefore, even if two farms have the same resources, they might produce different products in different quantities since the families who make the decisions place different values on the different outcomes. One family might adopt different enterprises in different ways than another, even if the result net incomes are less.

The economic impact of including alfalfa in crop rotations on eastern Corn Belt farms was analyzed in a study by Purdue University ag economists (Foltz, Martin, and Lowenberg-DeBoer). They found that:

- Alfalfa would not enter the enterprise mix of a cash grain farm with highly productive soils unless "forced" into the mix. Given the income advantage of producing corn in the feed-grain program, then soybeans as the other half of the rotation, alfalfa would not enter the mix unless alfalfa yields and/or prices were above their historical averages.
- Alfalfa would enter the crop mix of a farm with low-productivity soils due to lower corn and soybean yields. However, the alfalfa acreage was limited unless forced into the mix.

- Including alfalfa in the crop rotation increased the total amount of fertilizer used. Less nitrogen was needed, but that reduction was offset by an increase in potash required for the alfalfa.
- As alfalfa acreage increased, herbicide use declined, but the amount of insecticides needed for spider mite and leafhopper control increased.
- Net farm income declined as alfalfa acreage increased unless abnormally high alfalfa yields and market prices were assumed.

What would be the impact on the ag economy if acres of alfalfa and other forages were mandated by law?

The harvest of forages from government program acres in recent years has indicated what the impact would be. As more farmers have harvested set-aside and Conservation Reserve Program acres, forage supplies have increased.

The wide fluctuations in alfalfa prices suggest that the demand is inelastic. That is, a small change in the quantity of alfalfa (possibly all forages) results in a large and opposite change in alfalfa prices. Thus, as more acres of alfalfa are encouraged by government regulations, aimed at protecting soil and the environment, the resulting increase in forage supplies will cause economic problems for those who depend on profitable hay prices.

Accountability

As more acres of land are brought into forage production in the 1990s, policymakers must assume the responsibility for their decisions. Those decisions will affect, not only agriculture's impact on the environment, but also the bottom line of forage producers.

If policymakers mandate increased production of forages, they must consider increasing the demand for forages - domestically and internationally. More support is needed for research and producer education on forage market expansion.

It is the responsibility of forage producers and others in agriculture to monitor the development of the many segments of the 1990 farm bill. Express your feelings to the elected officials in Washington.

It's your privilege.

CANADIAN ALFALFA SEED COUNCIL

Summary of Board of Directors' Meeting
Saskatoon Inn, Saskatoon, Saskatchewan
5 May 1990

1. CANADA - U.S. JOINT ALFALFA SEED SCHOOL

The possibility of the 1993 Seed School being organized by both the Canada Alfalfa Seed Council and the North West Alfalfa Seed Growers' Association from the U.S. is being investigated. Banff, Alberta is the suggested meeting place.

2. CANADIAN COCOON TESTING CENTER (CCTC)

Susan Sims will not be returning to the CCTC this fall. A replacement will be hired.

3. NORTH WEST (U.S.) ALFALFA SEED GROWERS' ASSOCIATION.

A representative, Dr. Ron Bitner, attended the meeting. The estimated alfalfa seed acreage is as follows:

Idaho	27,000 acres
Washington	17,000
Oregon	7,500
Montana	5,700
Nevada	6,800

Total PNW	64,000 acres
California	67,000 acres

California is very dry this year and its acreage may be reduced. Idaho has some cutworm outbreaks. Nevada is having an outbreak of mormon crickets. Oregon is similar to Idaho. Washington looks good.

Bitner pointed out that Canada is the main source of leafcutting bees and that we should make every effort to keep them clean of chalkbrood. He also said that within the next few years there will be no chalkbrood research scientists in the U.S., as the existing scientists are all nearing retirement age. He does not see any new scientists on the scene with leafcutting bee interests.

In 1962 leafcutting bees were tried in California, but apparently there was a tremendous second generation and they plugged all the radiators on the farm machinery at the Boswell Ranch. The bee equipment was torched and the experiment abandoned until recently. Now honey bees are increasingly expensive, from three colonies per acre at \$30 to \$90-100, and the growers feel that the colonies are not

as strong as they once were. There is a potential for leafcutting bees in California, but there are a few management problems that need sorting out, i.e. multiple generations, and the heavy use of insecticides on surrounding crops (every 7-10 days).

The issue of Canadian seed moving into the U.S. is apparently not an issue any more, and was a result of a few alfalfa seed growers who were not well informed about the two industries getting in touch with their politicians. Once the facts were set straight the issue died down.

Idaho has had a checkoff on alfalfa seed since the early 1970's. There are about 500 growers and they pay three cents per pound of seed. About 12% ask for their funds back.

The following publication on alfalfa seed production in Idaho has been prepared.

IDAHO ALFALFA SEED PRODUCTION

Idaho rank second in the U.S. behind California in alfalfa seed production.

Idaho ranks first in production of winter-hardy varieties.

In 1989 over 15 million pounds were produced on 30,000 plus acres at a value of nearly \$20 million dollars to the Idaho growers.

Alfalfa hay ranks as a top U.S. commodity, with a value of \$5.6 billion dollars in 1987. Idaho alfalfa seed producers are a key link to this industry.

Increasing problems facing California alfalfa seed production (Africanized honeybees, Proposition 65, water shortages, etc.) is resulting in a shift in plantings to the northwest states including Idaho.

The future of the seed industry in Idaho looks bright, but the industry is faced with several major problems if the production is to remain here.

- 1) We rely entirely on the alfalfa leafcutting bee for pollination of the crop. Chalkbrood disease, along with several other mortality factors cause an average 50% loss to the bee populations each year. Because of this Idaho growers must import new sources each year, with currently a heavy dependence on Canadian sources (chalkbrood incidence is also on the rise in Canada).
- 2) Even though we are the #1 producer of winterhardy varieties of alfalfa seed, the crop is still considered minor use by pesticide manufacturing companies. Re-registration costs have many companies looking at dropping chemicals that are vital to our industry.

The long term key to maintaining our Number One position in alfalfa seed production is increased research on pollinator and pesticide related problems. The Idaho Alfalfa Seed Commission is prepared to bear it's share of the costs but needs help from the University and the State to provide personnel to help conduct this research.

4. PROVINCIAL REPORTS

Manitoba

The Manitoba Alfalfa Seed Producers' and Forage Seed Producers' Associations have set up an umbrella committee consisting of three MASPA and three MFSPA directors to oversee setting up a checkoff. There is no longer a move towards uniting the two associations. Both associations have agreed to pursue a checkoff and the Trade is now looking at it. They hope to have it in place for 1991. The checkoff will be half a percent on total dollar value of sales, to a maximum of \$500. If two thirds of the growers stay in they will raise \$35,000 - 40,000 per year. The checkoff will be at point of first sale. Set up costs will be about \$1500. At present the dollar value of the alfalfa seed and other forage seed industries is similar, so checkoff funds will be divided roughly in half between the two organizations; this will change as the dollar values change.

Manitoba sampled virtually all beekeepers' stocks for chalkbrood and have found 12 cases, in the Interlake and Eastern districts. Most of the bees have been moved to the U.S. and replaced with local bees with negative chalkbrood tests.

Manitoba has research permits for three tests with Capture on plant bugs in alfalfa. Apparently Capture is slated for a 1991 or 1992 registration on potatoes. Bitner cautioned that the test sites be carefully monitored for effects on bees.

Saskatchewan

The Saskatchewan Alfalfa Seed Producers' Association and Saskatchewan Agriculture & Food have several research projects: weed control and soil fertility, foliar mold control, paraformaldehyde fumigation, nesting material comparisons, shelter design comparisons, and parasite control work.

The SASPA board has not received a recent mandate from its membership to pursue a checkoff, but is watching results in Manitoba and Alberta and is examining the legislation in Saskatchewan for the future.

Chalkbrood in Saskatchewan has maintained itself in one operation for the last two years. The beekeeper in question is selling affected lots and sterilizing all equipment. SASPA still has a confidentiality policy on the whereabouts of this disease.

Alberta

The Alberta government grants the Alberta Alfalfa Seed Producers' Association \$10,000 yearly, of which \$4,000 goes to the Peace Branch and \$4,000 goes to the Irrigated Branch; \$2,000 are held back for checkoff investigation. The Irrigated Branch is doing some irrigation timing and scheduling work. The Peace Branch runs an annual chalkbrood survey and all producers were sampled this year with no chalkbrood found. There are about 7,900 acres in the Peace.

Agriculture Canada at Lethbridge has received Farming for the Future money for chalkbrood research. Agriculture Canada at Beaverlodge has Farming for the Future money for shelter comparisons; other research projects include bumble bees and other non-*apis* on red clover (as a result of the great reduction in honey bee colony numbers in the Peace district in the last two years, due to border closure and financial difficulties in that industry).

The Alberta Forage Seed Council, an appointed body, has been charged with looking into checkoff for the Alberta forage seed industries. They have been given a list of criteria from the Alberta government, and the plan must be acceptable to the Seed Trade. They are hoping for a 1992 start up.

British Columbia has a checkoff in place. They have a 0.33% levy on forage seeds, and the money is apparently earmarked along with matching funds from the Western Diversification Fund for a forage breeder at Beaverlodge.

5. CANADIAN ALFALFA SEED SCHOOL

The 10th Canadian Alfalfa Seed School will be held at the Besborough Hotel in Saskatoon on January 10, 11 and 12, 1991.

6. The following resolution was passed by the Manitoba Forage Seed Producers' Association. If you have any comments write or phone Raymond Wood, Box 6209, Peace River, Alberta T8S 1S2; phone 403-624-1438.

Resolution No. 2 - Alfalfa & Birdsfoot Trefoil Foundation Seed Standard

Be it resolved that in order to further the Manitoba forage seed industry, that Seed Purity Standards for Foundation be tightened on Alfalfa and Birdsfoot trefoil.

Birdsfoot trefoil

	Primary		Total Weeds	Sweet Clover	Brassica Crops Including S. Alba	Other Non Brassica Crops	Germ.
	Primary	Secondary					
New Found No. 1	0	0	5	1	1	2	75%
Old Found No. 1	0	1	10	1	0	50	75%
New Found No. 2	0	2	22	1	2	20	65%
Old Found No. 2	0	2	75	1	2	300	65%

Alfalfa

New Found No. 1	0	0	5	1	0	2	85%
Old Found No. 1	0	0	5	1	0	5	85%
New Found No. 2	0	2	10	2	2	10	70%
Old Found No. 2	0	2	30	2	2	20	70%

The resolution was passed by the Manitoba Forage Seed Producers Association.

REPORT FROM THE UNITED STATES

The following have been abstracted from "IMP Alfalfa Seed" by D.F. Mayer, WSU, Prosser-IAREC.

CHALKBROOD SUSCEPTIBILITY OF CANADIAN BEES

There is some concern that Canadian bees are more susceptible to chalkbrood than our bees and that importing Canadian bees on a large scale increases the chalkbrood susceptibility among the larger total bee population in the Pacific Northwest. **Dr. J. Eves** compared several different populations of bees and found little difference in the amount of chalkbrood between Canadian bees and a local Washington population during the first year of nesting in Washington. Actually, the local bees had the most chalkbrood. **J. Vandenberg (USDA)** in preliminary laboratory studies using bees from Canada vs. USA, found no difference in larval susceptibility to chalkbrood.

HOLDING ADULT LEAFCUTTING BEES

In the loose cell system, emerging adult leafcutting bees are released into the field around the 22nd day after incubation was initiated. Bee incubation should be timed so adults emerge when there is good weather and good alfalfa bloom. Sometimes (most of the time) the weather can be terrible (below 75 degrees F.) for bee flight when it is time to take bees to the field. If this happens, shut off the heat and put the bees back in the incubator at 60 degrees F. **W. Stephen (OSU)** reports bees incubated for 21 days can be held at 59 degrees F. for up to 2 weeks. If there is any mortality, it is mostly male bees.

REDUCING FOLIAGE UNDER LEAFCUTTING BEE SHELTERS

Dr. Jack Eves had some success in removing the foliage from an 8' x 8' area underneath and in front of alfalfa leafcutting bee shelters. In 3 different tests he found 0%, 5%, and 15% increase in the number of live bees at the end of the season. Foliage was treated with Roundup and then burned off after drying down. Bees probably get out earlier and work later due to increased temperatures caused by removing foliage.

VAPONA STRIPS

Vapona Strips are alive and well. Shell Chemical Company holds the U.S. patent for Vapona and there are a number of manufacturers. Vapona "No-Pest" resin strips are still available. A new manufacturer, Loveland Industries, has their product "Vapona Resin Strip" available through Tri-River Chemical in Pasco. Vapona strips are labelled for control of flies, mosquitoes, gnats, and meal moths.