

The **BEE CAUSE**

**The Official Publication of the Red River
Apiarists' Association**

January 2002

Free to Members

Volume 5: Issue 1

Important Dates:

Next Meeting Date is:

8 January 2002

7:30 PM Upstairs Meeting Room

Program: Annual General Meeting and Nomination Report, followed by general discussion of future activities for 2002.

Door Prize: Door Prizes for the January 8th meeting will be a small camera plus a Bee wall plaque.

Meeting Location:

River Heights Community Centre
1370 Grosvenor St.

(Intersection of Oak & Grosvenor
Door Prizes will be offered, Guests are welcome and free coffee will be available.

The Bee Cause Newsletter is published by the **Red River Apiarists' Association** eight times per year excluding June, July, August and December.

Membership in the **Red River Apiarists' Association** is \$20.00 per year and includes a subscription to the **Bee Cause**.

President's Comments

As we begin another new year, it seems much milder than last. What memories we have of a year ago when we were getting the coldest season in many years. Makes us glad that our bees don't have to go through that every year doesn't it? Welcome to the new year folks!

We will begin the year 2002 with our Annual Meeting on the 7th. Somehow it seems like an early date for our meeting doesn't it? Looking forward to getting together again as we begin the Thirty Ninth year for RRAA. We still have an active group, with lots of ideas and questions to make the meetings interesting. Thanks to all those who have helped during the past year, making it a Great Success, with our Field Day, Honey Show, plus the invigorating meetings. Special thanks to Doug Henry for collecting and distributing our meeting notes in the newsletter.

Our Annual Meeting will begin

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with a few formalities, then we'll hear from the Nominating Committee, headed by Rhéal. Although by the time you read this article, it may be too late to add your name to the list, I would encourage you to think about helping out anyway. If you would like to be on the executive of our organization, give Rhéal a call at 945-4825.

Keep in mind that The Manitoba Beekeepers Association will be holding it's Convention out west in Brandon this year. Usually it's bitterly cold for these days as well. In any event, some great speakers are being lined up, so mark your calendar for February 11 & 12, 2002. For those attending the AGM, there was a lively debate on the issue of permitting imports of packages and queens. By a slight margin, the voters confirmed that they desired continuation of the border closure for package bees. However, also by a slight margin, changes were approved to permit treated queens to be imported. Thanks to several of our RRAA members who turned out to discuss and vote on the issues.

Once again your executive will prepare various programs for your education and enjoyment, however as we demonstrated in the past, we will be responsive to the desires of the membership.

See you at our A.G.M.

Jim Campbell

The Queen - Essentials For Success by Ron Rudiak

The queen bee, a fascinating creature, is essential to successful beekeeping. As the mother of all the bees produced in that colony, she controls the characteristics through traits inherited from the mother hive from which she comes and the drones with which she mated. She produces a pheromone that the workers within the hive detect, resulting in an active and productive hive unit. Loss of the queen causes this pheromone to vanish and results in a hive which is distressed, especially noticeable when the colony is disturbed by smoking and removing frames for inspection. Queenless bees produce a high-pitched sound with their wings that we soon learn to recognize as a problem sign. If conditions are favourable, loss of the queen (pheromone) will cause the worker bees to feed one or several larvae large amounts of royal jelly and one or more queens to begin development as a replacement.

As we observe our bees, we soon notice differences between our colonies. Some bees are light yellow, others tan, grey or nearly pitch black. Some hives will begin foraging while there are still patches of snow on the ground while other colonies may wait for warmer weather to look for food. Other differences such as wintering ability, wax production and resistance to disease may not be apparent without closer observation.

We need to decide what colony characteristics are important to our style of beekeeping. Certainly, while we want to have strong, disease free hives, we may not all want or need the same kind of bee. For instance, for most of us, honey production is very important but there may be a few beekeepers who want to produce pollen as a crop, so pollen gathering becomes most important. For other beekeepers propolis production can be a major objective if one wants to sell propolis as a commercial crop. Wax production is desirable if we need to build out frames of new foundation. From this we realize that one type of queen will not likely not fill everyone's needs.

Gentleness is one of the characteristics that makes beekeeping enjoyable. I have not yet found a beekeeper who likes to work aggressive bees. Most of us prefer to put on our veils only after we light our smokers, arrange our honey removal equipment and set out the empty supers which we will add later. It's not much fun getting suited up before getting out of the truck or ducking into the brush to avoid attacking bees. It is not necessarily true that aggressive bees are good honey producers, we have had a few aggressive hives from time to time that seemed to place a low priority on producing surplus honey. Needless to say, these colonies get re-queened whenever they are found, although we have not had this problem for several years. Many of our visitors and honey customers,

who stop at the honey house, are surprised and pleased to find out that they can walk among thousands of flying bees without encountering even one aggressive bee. Many have taken time to look at the bees leaving and entering their hives and marveled at the activity. We have not had any stinging incidents even though there are often 50 to 75 hives right next to the honey house.

Hans Penner, a beekeeper from the St. Anne area, has raised his own queens for many years. His primary goal is to have colonies for honey gathering. His second consideration is outdoor wintering ability. Any hive that is aggressive or has disease problems such as chalkbrood is culled. Hans does not attempt to use substandard stock and culls mercilessly those queens that do not measure up. He keeps meticulous records on each hive and from observations made during the season decides which colonies he may want to consider as queen breeders for the following summer. A breeder queen is at least two years old and has proven herself in the second season in a full production hive.

To evaluate a new queen line for build up, honey production and wintering ability, Hans gives each new queen or queen cell two pounds of bees with no brood. The reason combs of brood are not used is because of the difficulty in obtaining brood which is all the same age. Brood that is ready to emerge will give an advantage to the new colony while brood that has just been sealed will be a disadvantage for evaluation. Using only bees (with no brood) provides an even playing field.

Are you satisfied with the queens that you are presently using? Most beekeepers will tell you that they are looking for improved stock, myself among them. In February, 1994 at the Manitoba Beekeepers' Convention, James C. Bach detailed some of the characteristics that we might want to consider when purchasing queens or raising our own. In purchasing queens, besides inherited characteristics, other factors are also very important. They are cost, availability on the required date, shipping, satisfactory agreement between the producer and beekeeper, and climatic conditions.

In his presentation James Bach outlined characteristics that he deemed important.

- Cell cleaning by the housekeeping bees. Clean cells help to keep disease levels down.
- Strong hives
- Clustering for heat conservation during cold weather
- When the hive is opened and a comb removed, do the bees remain calm on the comb or run to the corners or opposite side?
- When the hive is opened, do the bees keep serving the queen?

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- Does the queen produce an adequate amount of queen pheromone?
- Wax Production - Do the bees build out new foundation quickly?
- Pollen Collection - Do the bees supply themselves with adequate protein for brood rearing?
- Propolis Collecting

To these characteristics I would add:

- Acceptance rate for a new queen when splits, nucs or packages are produced.
- Gentleness of strain
- Stops brood rearing during dearth conditions or the onset of cold weather
- Longevity
- Resistance to varroa and tracheal mites
- Lack of swarming impulse
- Regular brood pattern
- Prolific egg layer
- Forage in cold weather This is advantageous in the spring for build up and in the fall for pollen storage.
- Color - I have no preference although many beekeepers may prefer a certain color for reasons of their own.

In the years that we have had bees I have had queens from many sources. Some of them were more desirable than others. While most of them produced large colonies of bees and a good honey crop, many of them were not suitable for our long winter season. Some queens lasted only a season before becoming drone layers and others were not accepted by the package colony or split. Some produced aggressive colonies and others would run on the combs whenever the hive was opened. We had spotty brood patterns and a tendency to swarm in some colonies. Could these problems be solved by re-opening the Canada - US border to the importation of US queens and packages? I do not think that our experience today would be a lot different from the 1980's when we got whatever came up north on the truck. Admittedly some years the packages were great but other years were anything but fabulous as many of the old-timers will recall.

Is it worth the risk of bringing more exotic diseases into Canada more rapidly than they would spread normally? Personally, I am working to use less chemical in my colonies and not looking for any new diseases or pests to introduce to make beekeeping more complicated. Am I satisfied with the queens that we produce? The short answer is yes, but we are looking for improvements wherever they are to be found.

What can you do to improve your queen stock? Talk to other beekeepers who have been working to improve their stock to see how you can get better results for yourself. Keep records of hive production and queen perform-

ance so that you will know which hives to use as a source for queen stock. Consider setting up an isolated mating yard so that you can control the drone population in that area. You can provide drones that come from hives with the characteristics that you want. Some beekeepers are willing to provide others with queen cells, virgin or mated queens from selected lines. Go ahead, try grafting larvae or purchase one of the queen raising kits from a bee equipment supplier so that you may propagate from your best colonies nest summer.

Manitoba Honey Wins

Manitoba Honey has once again proven to be among the best at the Royal Agricultural Winter Fair (RAWF) in Toronto, and the Canadian Western Agribition (CWA) in Regina.

Congratulations to Red River Apiarist President Jim Campbell, Stonewall, for his recent showings with his Manitoba Honey. Jim secured the top prize for Granulated Honey at the RAWF held November 2-11 in Toronto. Along with this first place ribbon comes the Canadian Honey Council Trophy. Jim noted that this year it is an engraved rectangular tray about 9" by 6" wide. Another former member of RRAA, Bruce Fallis, Winnipeg, took a prize in the class open to beekeepers West of Ontario. However Jim noted that for the liquid honey category, both he and Bruce lost to superior products from the East. Probably due to our humid summer, says Jim, as his liquid honey was tested at 16.7 this year. In the Granulated Honey class, there were 10 entries, with Bruce taking 5th place. The winners can be seen on the website by searching for royal.org on the Internet.

Similarly, Jim captured second place for his Liquid Honey at the Canadian Western Agribition. The CWA was held November 19-24 in Regina. In this class there were 12 competitors, with the majority coming from Saskatchewan. In the granulated class, Jim noted he did not fare as well, securing a 4th place ribbon. However he was quick to point out that his liquid

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honey won him an engraved wooden plaque, along with the Blue ribbon. Winners from CWA can also be found at agribition.com on the Internet. Jim pointed out that last year Charles Polcyn, also from RRAA, took several top prizes with his Manitoba Honey. He also noted we have encouraged our members to enter by publicizing the CWA in our newsletter.

You will probably remember that Jim took some of the top prizes at our own Honey Show in St. Vital Centre, Winnipeg. Since the winners have already been reported in our last newsletter, I won't comment on these further. We don't want him to get a swelled head would we! Kidding aside, he just wants us to promote our product. I'm sure you will also remember Jim reminding all of others or us at our meetings to enter the honey competition, whether that is our own around us. Sounds like he enjoys promoting honey doesn't it. Great to see Manitoba Honey in the Winners Circle!

Doug Henry

MANITOBA EXTENSION REPORT

Rhéal Lafrenière
Extension Apiarist
Manitoba Agriculture & Food

Since giving the 2001 Apiary Inspection Report at the MBA Annual General Meeting, I have had several people ask me questions about the future of antibiotic use to control American foulbrood disease (AFB). For example, "how are we going to be able to control AFB without drugs when we do not seem to be able to get rid of it now when the drugs supposedly still work"? Well you know me; this sounded like the perfect opportunity to do some extension on the fundamentals of how antibiotics work to control AFB. I would also like to highlight some of the cultural (i.e. non-chemical) practices that can be used to control AFB. Some of these practices can

be used instead of chemicals but many of them can be used in conjunction with antibiotic treatments. Beekeeping is no different than any other agricultural industry, the trend throughout the 70s, 80s, and 90s were more inputs equals more outputs and adding new and/or more chemicals were most peoples' vehicle of choice. Now that we have been on the so-called "chemical treadmill" for over 30 years it is hard to imagine food production without them. It is not to say that chemicals have not played an important role in the growth and development of Agriculture, but it has likely come at a cost.

In the case of antibiotics used for the control of AFB, residues in honey, resistant strains of the disease, and reliance on drugs to manage disease at the exclusion of cultural disease control practices has now become all too real. Like it or not we are going to have to look at our current practices and determine whether they are sustainable and economical. Our advantage is that we know a lot about this disease and despite not being able to completely eliminate AFB, we have been able to manage it with and without chemicals before. If we choose to continue to use antibiotics it is important that we know how and why they work, so we can use them to our maximum advantage.

At this time oxytetracycline hydrochloride (OTH), which is the active ingredient in products like Terramycin, Oxytet, Oxysol, and Foulbrood mix, is currently the only registered antibiotic to be used for the control of AFB and EFB. OTH is what is known as a bacteriostat in that it does not kill the AFB bacterium, but rather prevents it from growing and reproducing. The antibiotic hasn't cured the disease only suppressed it. The bacterial spores remain viable and once the antibiotic is no longer

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present the disease has the potential to return. The way OTH works to control AFB is that hopefully it has slowed down the development of the disease to the point where the natural disease control mechanisms of the hive are able to overcome the disease. These natural control mechanisms may be as simple as the bees cleaning up the cells, thereby reduce the bacterial load in the hive. An alternative to simply allowing the bees to clean up the disease themselves is to help the colony reduce the spore load by removing infected frames from the hive. This way the bees do not have to contaminate themselves while trying to remove that gluey mess or even worse the scale. Both processes are not 100% effective and in cases of heavy disease infection, these methods are likely to be ineffective at reducing the amount of spores in the hive. In those cases, the hive may need to be destroyed by fire and/or rendered for its wax. The real problem with relying on antibiotics to suppress the disease to non-detectable levels is that we are not fostering the natural disease control mechanisms of the hives. When the day comes that OTH is no longer controlling the development of the disease, we may find ourselves without many alternatives.

The other problem with being dependent on antibiotics to control AFB is that it is not only an individual beekeeper's problem but also a community problem. Even if an individual wanted to stop using antibiotics to control AFB, it would be very difficult. Our prophylactic use of antibiotics has caused the disease to be in remission but it is certainly still present. Unless that person is working in an isolated area the possibility for re-infection would likely be very high.

Cultural methods of AFB control have been around for as long as the disease has. One method that most beekeepers are fa-

miliar with but do not particularly like is the destruction of infected hives. In some countries such as New Zealand this is the primary method of controlling disease. Other countries choose to decontaminate the equipment either using heat, radiation, fumigants and/or disinfectant solutions. As you can imagine these methods do not address the concern of controlling the bacterial spores in the bees, which is often the primary source of infection in areas that do not use antibiotics. One method to control AFB without killing the bees is move the adult bees from an infected hive into a confined hive with only foundation. This procedure works because you are removing the bees from the diseased equipment and making them build comb with the contaminated honey they have in their gut. By feeding the bees disease free sugar syrup and pollen substitute by the time the bees have built enough combs to start raising brood there would be no AFB spores around to infect the larvae. Although this method has been proven to work, it could be argued that it is not very practical, especially for the commercial beekeepers.

One simple and practical method of reducing the amount of disease spores in the hive is to cull-out the old brood frames on a regular basis. In many European countries, frames that are older than 5 years old are generally culled out of the operation. Where as in North America most beekeepers have frames that are older than I am and I am 35. Introducing a couple of frames of foundation or disease-free, newly drawn comb into your brood chamber at least every other year would greatly reduce the age of the comb in your hives.

There are many other issues regarding antibiotic use in honey bee colonies which I am not going to going into at this time, such as amount of antibiotic used per applica-

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tion, the methods of application, the breakdown times of antibiotic residues and what it breaks down into). These are all very important issues and I would be glad to continue this topic in the next issue of the Manitoba Beekeeper. For now, I would just like to say that we need to start considering how much longer do we want to be on this chemical treadmill and how would we get off without jeopardising our industry in the process.

MBA Annual Meeting Active

The 96th Annual Meeting of the Manitoba Beekeepers Association proved to be a buzz of activity with emotions running high.

At the MBA meeting held November 26, a number of guests had planned on representing others by using a proxy vote privilege. The only problem with that plan is that there are no provisions for this in our by-laws. This caused quite a stir for those of us staffing the registration desk. Despite the flurry of activity, the meeting room filled up quickly with about 85 people attending.

The major contentious issue was the opening of the border to permit package bees to be imported into Manitoba. This move has been triggered by several beekeepers in the Peace River District of Alberta pressing their provincial organization to adopt an open border policy. A paper was presented and distributed at the meeting outlining several items to consider on this issue. To strengthen the presentation, Jean Paradis, from Alberta, spoke to the group identifying benefits of increased honey production should packages be permitted.

In a ballot vote, a resolution to open the border to importation of treated package bees and queens was defeated by a nar-

row margin of 37 against, and 32 for the motion.

In other business, Melvin Dueck, Merv Malyon, Bryan Ash, and Todd Yakimishen filled the director vacancies. The group also desired that all apiary sites be registered, the newsletter be distributed electronically, minutes of meetings be included in the newsletter, and meetings be rotated within the four regions of Manitoba. Detailed resolutions will be published in the next issue of Manitoba Beekeeper. One of the key resolutions however, is one to investigate alliances with American queen producers to produce genetically favourable Canadian stock. Part of this resolution would be to consider opening the border to importation of treated queens.

The MBA Board will consider all resolutions at their next meeting on 7 January in Brandon.

Jim Campbell, MBA rep.

Honey-Pumpkin Butter

2 cups cooked, pureed pumpkin
1/4 cup honey
1 teaspoon grated lemon zest*
1 Tablespoon fresh lemon juice*
1 teaspoon ground cinnamon
1/4 teaspoon nutmeg
1/4 teaspoon ground ginger
1/8 teaspoon ground cloves

Combine in a saucepan and simmer, uncovered, over low heat, stirring occasionally for about 35 minutes, or until the mixture is quite thick. Test the consistency by dropping a small amount of the butter onto a chilled plate. It should retain its shape and resemble jam. Store tightly covered in the refrigerator.

*Can use orange instead. Also adjusted the seasoning to taste.

Adapted from The City Gardener's Cookbook, by the Patch Advisory Council, Sasquatch Books, Seattle, 1994

Formic Acid Specific Gravity

% Water	% Formic	Spec. Gravity
100	0	1.0000
95	5	1.0110
90	10	1.0220
85	15	1.0330
80	20	1.0440
75	25	1.0550
70	30	1.0660
65	35	1.0770
60	40	1.0880
55	45	1.0990
50	50	1.1100
45	55	1.1210
40	60	1.1320
35	65	1.1430
30	70	1.1540
25	75	1.1650
20	80	1.1760
15	85	1.1870
10	90	1.1980
5	95	1.2090
0	100	1.2200

Formic acid will pick up water from the atmosphere if the lid is not on for awhile. Do we always remember what we put in that container last spring?

Specific gravity indicates the amount of formic acid in solution. Measurement can be done with a battery or wine hydrometer. Because formic acid will destroy most materials use only a glass hydrometer. Knowing the specific gravity of the formic acid which we are using may ensure more reli-

able results.

Ron Rudiak

Peace of Heaven

By Rhéal Lafrenière

This summer I got the opportunity to visit the Peace River region of northern Alberta. Initially I was simply going up there to attend the 48th annual Beaverlodge Beekeepers Field Day at the Agriculture and Agri-Food Canada Research Station in Beaverlodge, but once there I knew that this was going to be a defining moment in my career as an apiculturist. I also now have a greater appreciation for the sayings "God's Country" and "the land of milk and Honey".

My adventure started when Adony Melathopolous, the Apiculture Technician at Beaverlodge brought me to the Beaverlodge Motor Inn. Although this place was not much to look at, you got the sense that it had a lot of history. Most visiting scientists and extension people that come to the AAFC Beaverlodge Research Station stayed in this hotel. I found it very exciting to imagine that legendary apiculturists like Roger Morse and Eva Crane may have even stayed in the same room I was going to be staying in. If it were not for the beer stained carpet to remind me that it was simply a hotel and not a club for the Apicultural Elite, I do not know if I would have been able to sleep at nights. Speaking of sleeping at night, intellectually I knew that due to the northern latitude summer would have long days and short nights. But until you have experienced it yourself, you really cannot appreciate the fact that it is midnight and it is still light outside.

Jennifer Otani, a U of M alumni and an entomologist now working at Beaverlodge,

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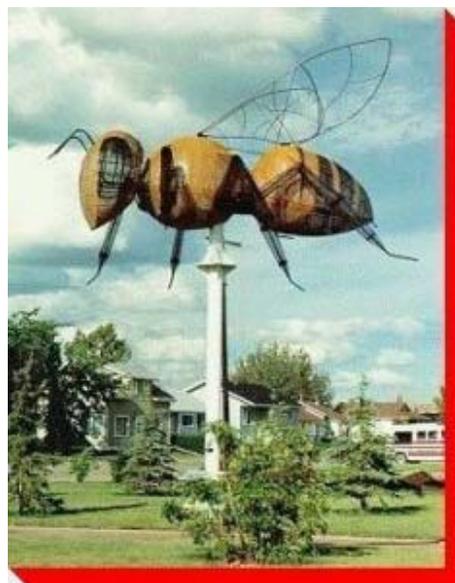
showed me around a bit my first days there. She took me to the local points of interest such as Saskatoon Mountain, which over-looks part of the Valley near Beaverlodge. It really gives you an idea of how vast and productive the arable land is up there, despite that fact that it is so far north. Jennifer also brought me to see a local leafcutting bee and alfalfa seed producer on our way to Falher. Due to the poor snow cover and the drought they had last year much of the perennial grass and legume forage crops suffered severe winter kill. Many of the clovers and alfalfa fields I saw had practically 100% kill. Despite this, leafcutting bee producer, Bernie Legault still seemed optimistic that he would still get some seed production and hopefully get his bees back.

Once we got to Falher, we met up with the Doug Colter, Chief Apiary Inspector with Alberta Agriculture and Rural Development, who showed me around the area and even took me on a field inspection. Falher claims to be the Honey Capital of Canada, but Tisdale Saskatchewan also makes that claim. I do not know who is right but beekeeping sure is part of the culture in Falher. Given that they have a museum dedicated to beekeeping, they hold a honey festival during the summer and they have a huge statue of a bee located in the middle of town (See adjacent photo), they get my vote. Not only does Falher have all this bee related artifacts and activities it is also centrally located in the primary beekeeping area known as the Peace Honey Block (See map on bottom of page 10). This area is home to close to 90,000 honey bee colonies, which coincidentally is the colony count for the entire Province of Manitoba.

The day of the Beaverlodge Beekeeper Field Day, I made a presentation on Small Hive Beetle to a group of about 100 bee-

keepers, I quickly realized that many of them do not necessarily like to think of themselves as beekeepers but rather as honey producers. They have very large operations (i.e. 3000+ colonies) and will often remark that they are not keeping bees for the sake of keeping bees but rather for the production of honey. Although Manitoba has some beekeepers that think this way, by and large most of our beekeepers are proud of being beekeepers and do not differentiate between keeping bees and making honey. Let's say that I ran into a few guys that indicated that the pest I was discussing did not pose an immediate threat to their honey business therefore why do they need to know about it. I must of handled my reply correctly because many of them came to greet me afterward including the guy that made the comment and thanked me for my presentation.

The next day, Adony took me on a world-wind tour of several beekeeping operations near Fairview, Grimshaw and Peace River. We visited, we taught, and we learned, it was an experience I will never forget.



The World's Largest Bee at Falher, Alberta

Items for Sale:

No postings received for this month's issue.

This Space is Available to Rent

Your Ad Could be Here

Classified ad - 50 words (or less) non-members
\$10.00 per insertion; 1/4 page ad - \$20.00 per is-

Editor's Comments

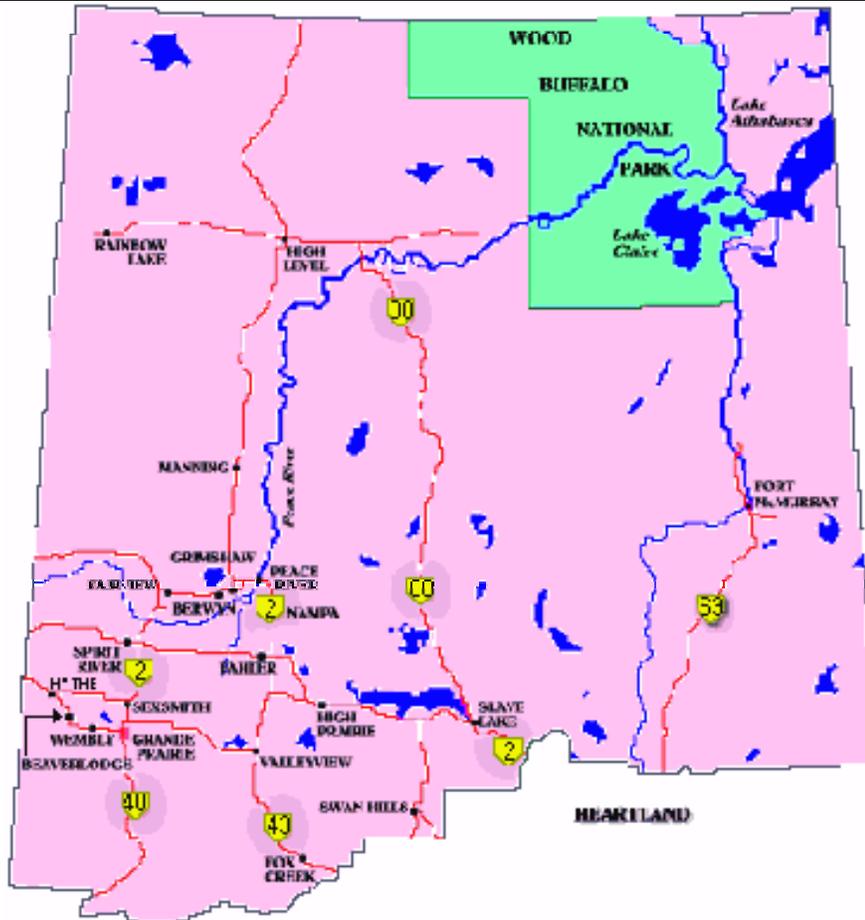
Welcome to 2002 and may it be a prosperous and healthy one for all.

There are a lot of good articles in this month's issue; I hope you enjoy them and find some useful information applicable to your operation or interests.

If you have any items for sale please let me know and I will post them for you.

Hope to see you at the next meeting on 8 Jan 2002

Doug



Map of Northern Alberta showing Peace River District