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The New Zealand BeeKeeper

The New Zealand BeeKeeper

OFFICIAL PUBLICATION OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND INCORPORATED

CIRCULATION, 1,550. . .
To Members of The National Beekeepers' Association of NZ Inc. who own more than 50 hives each and so are legally subject to the annual hive levy. **THESE HIVE-LEVY PAYERS OWN APPROXIMATELY 87% OF ALL BEEHIVES IN NEW ZEALAND.**

To Beekeepers with less than 50 hives who subscribe to the journal at $33.75 a year (incl. GST) which also includes membership of the National Beekeepers' Association of NZ Inc.

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The New Zealand BeeKeeper

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FRONT COVER: Mark Goodwin with frame of brood and Derek Bettesworth at the microscope (See EBDR story page 8). Photo courtesy Oliver M. Vercoe.

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DRAINING THE SWAMP

By Allen McCaw

One of my personal highlights in attending the Annual NBA Conference each year is the opportunity to listen to some of the very capable "orators" in the beekeeping industry giving voice to a wide range of opinions. Every year so far, I have never failed to pick up some new quotable quote or pearl of wisdom from one of these speakers.

Conference '91 at Blenheim was no exception. I heard a real 'doozy' during a discussion on disease control and industry funding. I understand it is not an original, but stems from America—probably the Deep South. It goes like this:

'When you are up to your backside in alligators, it's hard to remember that the original idea was to drain the swamp.'

I have given this gem of home-spun philosophy a good deal of thought since, particularly having now retired from an eight-year stint on the NBA Executive. It is not difficult to create an image of our industry located in swampy terrain, with numerous murky pools and patches of quicksand waiting to trap the unwary or injudicious beekeeper who ventures to cross it.

Beekeeping is a craft with more than its share of natural pitfalls; such as the vagaries of our weather, or the risk of a natural disaster in the form of an exotic disease outbreak. There are few enough islands of solid and safe ground in our particular swamp, and we have our fair share of hungry 'alligators' waiting to take possession of the little bit of dry land we do hold.

In recent years, successive governments seem hell bent on keeping the swamp well stocked with some particularly nasty specimens for us to grapple with. A hoard of legislation and regulation changes, confusing financial management, so-called 'market driven' economic policies (despite the consequences), bewildering taxation changes, and meanest beast of all—user-pays—are constantly snapping t our heels.

Even more critically, our industry has precious few who are willing to 'man the pumps' to attempt to drain the swamp, or to hunt down and tame some of these predatory reptiles. It is totally unrealistic to expect a tiny group of six executive members, whose efforts are largely voluntary, to have either the time or skills to effectively tackle the stream of problems and ideas coming from within and beyond the beekeeping industry.

An examination of the agenda for a typical Executive meeting, or the minutes which issue from it, will reveal a list of 50 or 60 items to be discussed over the course of two days. Invariably there are five or six critical items, any one of which can and probably should, occupy half a day, to enable adequate debate and rational decision making.

The diminishing MAF AAO presence has not helped reduce this problem. In my experience these skilled people have always been willing to help drain some of the murkier pools, or grapple with some of the larger alligators. Now their very existence is threatened by the application of user-pays to our industry, and the need to be involved in revenue-gathering rather than advisory or technical matters on behalf of beekeepers.

So where do the remedies lie? Is there a supersonic pump for us to apply to the drainage problem? Is there a 'great white knight' out there who will ride in and fend off the alligators? Personally I do not believe so: those solutions are in the realm of the fairy tale, or science fiction, but it alarms me just how many beekeepers still cling to these fantasies.

How often do we hear beekeepers say that: 'the government should be asked to do something about it', whatever 'it' might be. Conference remit debates are typically interspersed with them, usually preceded with a demand for the executive to approach the government accordingly. One thing which should be

obvious by now is that, just as there are no George Washingtons left in Washington (to quote Mr Percy Berry), neither are there any Dukes of Wellington in Wellington.

No one in Parliament is likely to lead our industry into any Battle of Waterloo at present. This has been amply demonstrated by the attempts made by Executive since 1984 to solve the funding problem for AFB control.

Successive ministers of agriculture have dithered over our offers of solutions. They have often caused lengthy delays or reverted to their legislative powers of veto in vote-saving manoeuvres bearing little relevance to their appointed responsibilities towards the beekeeping industry.

The remedies however, will remain largely in our own hands. We must continue to utilise the limited financial and personnel resources we have available in the best ways possible. And we must continue to spread the worklad of the NBA as far as possible, recruiting as much assistance as we can along the way.

It is for this reason that I have advocated the continuation and expansion of "specialty groups" within the wider industry, in which individual beekeepers sharing common interests can collectively represent their concerns and well-being to the Executive and their colleagues.

Such groupings are represented in the Honey Packers' Association, the Queen Bee Breeders' Association, the Beestock Improvement Group, the Honey Exporters' Organisation, the Apicultural Research Advisory Committee, the NBA Marketing Committee, and others.

I look forward to the day when remits to Conference are increasingly presented by these interest groups, in a well researched and positive manner, rather than the succession of hastily prepared and vague submissions we often see at present which call for an already overburdened Executive to perform minor miracles.

I dream of the day when the Executive is free to carry out a greater coordinating, administrative, and planning role, using increased professional input, and is free to tackle the major issues at a more meaningful level. We already have the basis of such a structure, with many of the important elements in place, such as a formal industry planning process, and an executive Officer and Executive Secretarial services.

Slow but steady progress is also being made in the development of a marketing strategy for the honey industry. It has taken some time for us to get over the historical influences of the Honey Marketing Authority, but, there are now encouraging signs of increased awareness and marketing skills developing in the new free-market environment.

The breath of fesh air which Bill Floyd provided at the Blenheim Conference during his marketing address has led to further developments of the ideas he presented through ongoing involvement with the NBA Marketing Committee. Evidence of their potential success has come in the form of a timely media release late last year detailing scientific research on the potential medicinal properties of manuka honey.

This has resulted in that product suddenly increasing from 'feed-honey' values in some cases, to prices which look likely to exceed top-grade clover honey to producers this season. Similar successes have been achieved by some exporters for honey types previously regarded as unsaleable except for industrial use, which sees them now realising premium prices in niche markets around the world.

There is ample room for more of this kind of progress in many aspects of our industry. However, if we are going to make positive progress, we must take a positive approach to our problem-solving and the greatly increased demand for self-sufficiency in management of our businesses and industry.

Let's now move into 1992 with a firm undertaking to drain a bit more of that swamp, and tame a few more of those marauding alligators. Who knows, given enough commitment and determination, we could create sufficient dry land to walk right across without getting our feet wet. Certainly without the jaws of any unwanted 'reptile' firmly clamped around some vulnerable portion of our anatomy.

NBA PRESIDENT WINS ANNUAL CAPE TURNAGAIN FISHING COMPETITION

Story courtesy Dannevirke Evening News

From left to right: *Dudley's son-in-law, Tony Corbett, Kintail's most senior staff member, Willie Gyde, and Dudley Ward*

Dannevirke angler Dudley Ward has won the annual Cape Turnagain fishing competition.

Mr Ward caught the heaviest groper in the competition which ran over 12 months, closing on New Years' Eve. His fish a 46 kilo (around 100 pounds) groper also weighed in as the heaviest specimen ever caught off the Cape by a private fisherman.

This was the first year Mr Ward had ever entered the competition, but now he says there will be a reason to participate in this year's quest for the biggest fish.

Mr Ward caught the grouper three miles out of Cape Turnagain with his two fishing companions Willie Gyde and Tony Corbett. For his efforts, Mr Ward won a fishing rod.

Winner of the heaviest snapper was M. Franklin (6.7 kilos) of Te Tree Point while Lance Austin of Herbertville took the largest blue cod award (4.6 kilos).

Dear Sir,

Having read with interest the 'Beginners Notes, Mostly About Candles" by John Heineman, I agree with much of what he writes. However having made many hundreds and probably thousands of candles over the last 12 or 14 years, with my wife I must disagree on a couple of points.

(1) Mould release agent. We use glycerine, if anything with good results. It just needs a wipe over the mould to work out the candle. It does not need cleaning afterwards.

(2) We have never found it necessary to dip candles in cold water between dips into the wax. If a number of candles are being made, each is dipped in turn. If say a dozen pairs are being dipped, by the time the last is dipped the first is ready for its next dip. We have never put a weight on the bottom of candles to be dipped, and have never thought one was needed.

If the dipped candles start to get too uneven and ridged they can be straightened by gently rolling on a piece of thick glass with the palm of the hand.

Candles made as above have taken a number of awards on the show bench both locally and at the National Honey Show in London.

In England rubber and silicon-rubber moulds are available in many designs and are available in a range of thicknesses. We also use moulds from Al Routs in America.

Peter Dalby
Pebadale Apiaries
37 Cecil Road
Cheshunt
Herts EN88TN
England

Dear Sir,

I am a member of the Mafrak Beekeepers Association in Mafrak - Jordan.

I have 30 hives which became go back until it reach 70 hives and I lost money. This year 1991.

We read your magazine "New Zealand Beekeeper" and we are very impressed and interested with it. It's very difficult and expensive for us to get literature, magazine on beekeeping. We would be extremely happy and grateful to receive your magazine and any old or used bits on beekeeping.

I request you, to send back issues of your magazine as many issues as possible to us in Jordan. We would circulate them amongst our members, and they would be put to very good use. I request that you parcel them up as "printed matter".

Please send them as soon as possible to the address below. If you would like to publish this in your magazine, we would be very happy to correspond with New Zealand beekeepers. If you or your members wish to send us any equipment, books, literature we would accept with pleasure.

With our best wishes to you.

Faisal S. Abu Ghunaim
P.O. Box 347
Flafrak, Jordan.

Dear Sir,

BOUQUETS AND A BRICKBAT

May I offer my thanks and praise for the manner in which the suspected outbreak of EFB in Nelson was handled. The first bouquet must go to Gerard Stephens for his observance and honesty, and who also was prepared to put his family and business on the line.

The second to MAF and the way they handled the whole emergency response. A special thanks to Murray Reid and his team of apiary advisory officers who worked some extremely long hours. I was very impressed.

Thirdly to the beekeepers who responded to the call to arms. For the time of year when everybody is extremely busy, the response was amazing.

Every industry has one and the brickbat must go the beekeeper who in his wisdom decided to move hives out, to beat the gazetting of the enlarged Disease Control Area.

Overall the exercise went extremely well, we will all have learnt something from it. It certainly gives me more confidence knowing that we have an Emergency Response System in place that works.

Gavin White

Dear Sir,

Many thanks for your letter of December 5 — postmarked 5pm, December 5 and received in my box am Saturday, December 7, which must be some kind of record.

On Wednesday 11 I received the November issue and the August issue you posted on December 5 still no trace of the August copy posted on November 15 — probably end up in the next seamail delivery!!

I have read both issues virtually from cover to cover and found most of the contents interesting. I was rather surprised at how few suppliers of beekeeping equipment and queen bees advertise.

Thank you again for your assistance.

Frank Hastings
Tonga

Dear Sir,

I would like to take this opportunity to say a thank you for using the photo of Peter Barber on the cover of the Summer edition. I know Peter would have been very chuffed and his daughters and family are just delighted. A sincere thanks from them as well.

An excellent magazine and one my husband and I always look forward to getting. Keep up the good work.

Best wishes for Christmas and the New Year to you and all your staff.

Dian and John Squires

Dear Sir,

Enclosed please find my payment for my subscription to NZ Beekeeper, $US16.

It seems to be a very high level journal. Every issue has interesting, more scientific articles. Thanks.

Please, greetings also to Dudley Ward.

With best wishes for 1992.

Karl Koivulehto
Porslahdentie
00980 Helsinki
Finland

THE NELSON EXOTIC BEE DISEASE RESPONSE

By Frances Trewby and Allen McCaw

On Thursday, December 5 1991, the MAF issued the following press release:

'New Zealand is free of European Brood Disease,' MAF's Chief Veterinary Officer, Dr Peter O'Hara, announced today.

Dr O'Hara said all the hive samples sent from the Nelson district for testing had been confirmed negative for the disease in tests carried out at Ruakura, in Auckland, and in Australia.

The order imposing the Disease Control Area within the Nelson region would be rescinded from tomorrow morning, 6 December.

'The lifting of the Disease Control Area means beekeepers will be able to go about their beekeeping activities from tomorrow morning without any restriction,' Dr O'Hara said.

Microscopic signs of European brood disease in one hive were found on 11 November. That triggered a major survey effort by MAF of about 4000 hives throughout the district to establish if the disease was present. However, the testing of further samples, including the culturing of samples from the suspect hive, had proven negative for the disease.

'I would like to say,' Dr O'Hara said, 'that the management of this investigation is a tribute to the co-operation of the New Zealand beekeeping industry and the Nelson community, and the skill and hard work of MAF's staff throughout the intensive two week survey.'

Both beekeepers and MAF AAO's greeted this announcement with a collective sigh of relief. It confirmed the EFB-free status of our beekeeping industry and marked the end of a month of strenuous effort by many people.

The Events

What led to the Nelson district becoming the focus of so much attention in November last?

On or about November 5, a Nelson beekeeper noticed unusual symptoms in a queen-mating nucleus. Following recommended and approved procedures, he contacted the local AAO, Dave Grueber, of Blenheim MAF. Samples were immediately taken from this colony, and sent to Ruakura Research Centre for disease analysis.

following an initial examination, further samples were sent to the Elizabeth McArthur Agricultural Institute in Australia for diagnosis by bee disease experts. During the several days it took to receive test results, the MAF Chief Veterinary Officer (CVO) told the media that he suspected an outbreak of European Brood Disease in Nelson. An initial quarantine order was placed on all apiaries of the reporting beekeeper, and further samples for testing were taken from these hives.

Inspecting brood.

On Friday, November 8 a disease control area (DCA) was gazetted covering the Nelson City, Richmond and Moutere areas. This declaration imposed a prohibition on the movement of bees, bee appliances, and bee products into, within, or out of the declared zone except under MAF permit. Effectively, all such activities ceased completely in the DCA, but normal beekeeping operations in surrounding districts continued.

Late on the evening of November 11 a communication was received from Australia stating that 'Melissococcus pluton-like organisms' had been detected in one of the samples sent for testing. On Tuesday, November 12, the CVO travelled to Nelson for a first-hand report and, following discussions with apicultural staff, an exotic disease emergency was declared. An emergency headquarters was set in train.

The duties of EHQ controller and operations manager were shared by Murray Reid and Stephen Ogden. Other MAF Apicultural Section staff involved in running the EHQ were Dave Grueber, Matthew Sole, Ted Roberts, Cliff van Eaton and Derek Bettesworth.

MAF inspection teams began the critical task of checking and sampling all beehives in the DCA on Wednesday, November 13. They were joined by beekeeper-inspectors the following day, when 13 teams of three or four were 'in the field'. Among the first to arrive was a group of nine beekeeper trainees from Telford Rural Polytechnic who, along with their tutor, Gavin McKenzie, remained on the inspection teams until the following Monday.

Laboratory facilities were established at Nelson HQ on Wednesday 13, under the supervision of Dr Mark Goodwin from Ruakura. This enabled the rapid microscopic examination of over 1000 test samples which were brought back to HQ by inspection teams over the next

week.

On Thursday, November 14 an extended Disease Control Area was gazetted. It encompassed a much larger part of the Nelson region. This was established to facilitate the movement of hives for the oncoming kiwifruit pollination period. Hives were permitted to be moved into and within the new DCA to registered apiary sites, but none were permitted to move out of the control zone.

The same day, the suspect colony was destroyed under strict quarantine conditions (and considerable media interest), after adequate samples had been taken, also under quarantine, for further diagnostic testing.

Field inspections by teams of three (two beekeepers and an MAF team leader) continued for six days from Thursday 14. The MAF officer was responsible for meeting the legal requirements. These included property entry rights, record keeping, and sample preparations. The beekeeper-inspectors provided the specialised skills of hive handling, and identification of unusual brood symptoms.

A meeting for all Nelson beekeepers was held on Friday evening, November 15. It was convened by the Nelson Branch of NBA. Several speakers explained the disease control measures. A question and answer session followed.

On Tuesday, November 19, almost two weeks from the initial report by the Nelson beekeeper, the decision was made to scale down the operation and field inspections ceased. By then some 4000 hives had been examined and over 1000 samples taken. None had proved positive for EFB, although some material was sent on for further diagnosis.

The DCA remained in force until all samples had been examined and cleared. In addition, further samples from the original suspect hive were sent independently to MAFTech Ruakura, MAF Lynfield (Auckland), and to Australia for culturing and examination for EFB symptoms.

Once the results from these sources had been received and all proved negative, the CVO made his announcement on December 5 that New Zealand is free of European Brood Disease.

What has been learned from this event?

A number of problems arose during the response which had not been anticipated. Some of these have already been addressed. It is worthwhile to comment on three of the main groups who took part in the response. These are the MAF, the news media and the public, and the beekeeping industry itself.

Suspect lava.

MAF Involvement

From the notification of a suspect hive, the MAF accepted full responsibility for investigation of a possible exotic disease outbreak. The time lapse between finding the suspect sample and the declaration of a full emergency response placed considerable strain upon the few apicultural staff who were first on the scene without full back-up services.

After the declaration was made, an impressive array of resources were brought to bear. Many observers commented on the efficiency and effectiveness of the MAF operation. As a result of the MAF debriefing, we understand there is now provision for an 'initial response phase' in an emergency. This should provide improved administrative support in the early stages before a full emergency has been declared.

The provision of early scientific test results is also important. We have the facilities and diagnosticians in NZ for detection and identification of exotic bee diseases. However, EFB is difficult to detect amongst bacterial diseases, and in this case further opinion was sought from Australian experts where the disease is present and routine diagnoses carried out.

The NBA Executive is supporting the development by DSIR and MAF of more refined tests for the determination of European Brood Disease. We hope there may be a simple but effective field test available in future which will assist early detection.

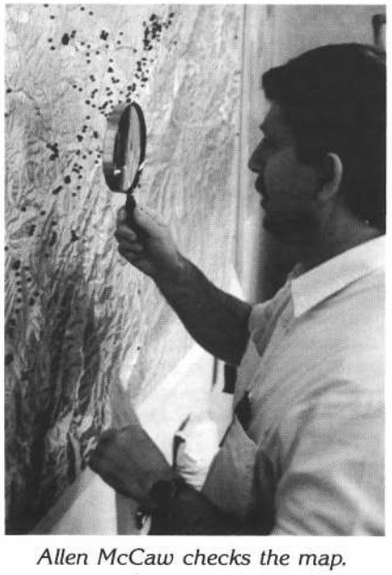
News Media and Public Reaction

One of the more surprising aspects of this emergency was the considerable interest taken by the news media, which in turn resulted in widespread public interest. With the announcement of a suspected outbreak, television, radio, and press all became interested in the story—at times with detrimental results—but it served to inform the public and other beekeepers of the developing situation.

News media enquiries occupied a great deal of the time of MAF apicultural staff prior to the declaration of the full response. The establishment of an MAF news media specialist, Dr Clive Dalton in Nelson, and the formation of the BDAC, provided a focus for media enquiries, and lessened the demands upon headquarters staff.

There is a fine line between information and what the media consider to be 'newsworthy'. Early complaints were received that industry contacts were unavailable when wanted: hardly surprising considering that the emergency took place during one of the busiest periods of the beekeeping year!

Much of the media coverage was well presented and valuable in providing information for the industry and an interested public. Some was less well-informed, and the tendency for the media to seek comment from their nearest 'local beekeeper' led to a few problems.



Allen McCaw checks the map.

The NBA Executive decided at its december 1991 meeting that there was a need or the industry to appoint a national media spokesperson to provide ready contact and information in situations such as this. It was also suggested that, following the AGM each year, NBA Branches should advise local media contacts of their appointed President and Secretary, to provide a contact point for media enquiries.

One of the positive aspects of the media interest was an increase in public awareness of the potential problems associated with illegally imported honey. This must be of benefit to our Border Protection teams in MAF, who intercept over five tonnes of honey and bee products each year!

Above: *Dave Grueber takes the morning briefing.*
Below: *Allen McCaw, Murray Reid, and Nelson President David Haycock telling beekeepers about the situation at the general meeting.*

Beekeeping Industry Involvement

The industry was not unprepared for this emergency. It was to be expected that such an emergency would occur in the worst possible location—namely a queen-rearing operation in the middle of a pollination area. And at the worst possible time: the peak of the spring build-up.

In July 1991, following the Blenheim Conference, a meeting of 17 industry representatives, and MAF apicultural staff was held to discuss new emergency response procedures. Five technical manuals had been updated to cover various possible exotic disease outbreaks.

In September, those who attended this meeting were asked to comment on the NASS Specifications for Response to Exotic Diseases and Pests of Honeybees. No one could have anticipated that within two months several of the recommendations from those discussions would be put in place in the Nelson response. One of the more important of these was the formation of the Bee Disease Advisory Committee, with a brief to provide policy advice to the Chief Veterinary Officer and represent industry interests in an emergency.

The Bee Disease Advisory Committee (BDAC) was convened on Tuesday, November 12 and consisted of five beekeeper representatives: Ian Berry, Gavin White, Allen McCaw, Michael Wraight, and Dave Haycock, plus two MAF representatives, Murray Reid and Stephen Ogden. This meeting continued in an advisory capacity throughout the response period, and co-opted the assistance of NBA Executive members, Keith Herron and Frances Treby, when others needed to return to their own beekeeping businesses.

The role of BDAC has been carefully observed by other industry groups with similar agricultural security problems to ours. They have been interested in the involvement of our industry in the decision-making processes, and impressed by the close interaction between MAF, the Apicultural Section and beekeepers. The advantages of this situation, and the good fortune of having a resource of expertise and industry knowledge, was clearly demonstrated.

Many favourable comments have been made on the co-operation of beekeepers during the response, particularly in the Nelson area, but also beyond. A willing response to calls for beekeepers to join inspection teams came from all parts of the country, and some 78 were involved at various times. The commitment shown in leaving individual businesses at a critical time of the year reflects commendably upon the whole industry. Others who were not free to travel to Nelson put in many hours of effort in organising teams from their Branch district.

Communication with branches was not always easy, or as prompt as may be desired. Rapidly changing information, and reliance upon Executive members contacting branch presidents, not all of whom could be located immediately, led to some complications. The NBA Executive has subsequently requested that each branch supply a fax contact which can be used in an emergency. This contact would be given to the NBA Secretary along with branch-officer addresses which are forwarded after each AGM.

Conclusions

An emergency response as in Nelson results in a great deal of learning in a very short time. We are aware there is a wealth of experience to be shared both among those who were in Nelson, and those who were involved from a greater distance. The Executive is anxious to ensure this is not lost as time passes.

To this end, a report will be prepared giving the reaction of as many sectors of the industry as possible, to what took place, and the wider implications for beekeeping. The NBA Executive is inviting comments from industry groups, branches and interested individuals. It is important to identify areas of strength and weakness in the system, and to ensure that our scarce resources of finance and personnel are utilised to maximum effect.

Comments might be made on basic arrangements such as travel and accommodation, payment of expenses and wages, stores and equipment, vehicles, inspection work and field team

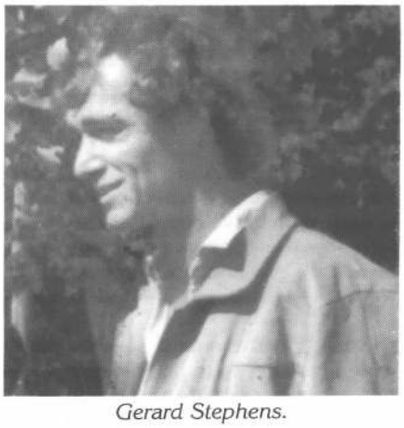
Ted Roberts and Derek Bettesworth review the situation.

organisation such as briefing and debriefing of inspection teams. Other areas could include the implications for beekeepers within the disease control area and beyond, options for control or eradication if disease is confirmed, public reaction, marketing impacts, etc.

Any constructive criticism is welcome. Please send your contribution to: Exotic Bee Disease Response Comment, National Beekeepers Association, P.O. Box 4048, Wellington, by 31 March 1992. Everything will be included in an industry comment document to be used by the NBA and MAF for reference.

Finally the Executive would like to express its gratitude on behalf of the whole industry: to all those who assisted in the Nelson Emergency Response. Beekeepers throughout New Zealand, MAF apicultural staff, field team staff, administration and laboratory personnel, have all contributed to bring the operation to a successful conclusion.

We can all be grateful that New Zealand is free of European Brood Disease. But let us not forget how close it might have been, and the potential risk that remains. **An ounce of prevention is worth a tonne of cure.**



Gerard Stephens.

AND FRON GERARD STEPHENS, THE MAN AT THE HEART OF THE SCARE

Events Prior to Quarantine

November 6—Dave Grueber phoned about the suspicious sample I had sent to Dr Mark Goodwin. He said, 'sit down' and proceeded to tell me that there was a 50^7 chance that the sample was positive for EFB. The slide was being sent to Australia for verification. I was then instructed not to tell anyone, including parents and brothers and sisters.

November 7—Met MAF men for debriefing and looked at suspect apiary. Took more samples. MAF team, Dave Grueber, Dr Steve Ogden, Matthew Sole, were very good to deal with. There was little brood in the hive as cells had been put out 11 days previously. Heard about 'suspect disease outbreak' on 12.00 pm radio news while waiting for the team. Quite a shock because it was still meant to be secret. The media release was made by the acting CVO of MAF, Stuart McDermid. Frances Trewby from NBA executive rang to see how we were coping.

November 8—The first restricted area was gazetted and became law. I was told not to do anything to my hives or bees. Rang Murray Reid to see why there was no result from Australia yet. Sample hadn't been received. Talked to Keith Herron and Frances Trewby again by phone—very supportive.

November 9—Was told I could work on my bees but no queens to be moved, no gear to be moved to sites, and nothing to be taken away. Why bother! I was told that MAF would prefer it if I didn't even go to my sites. There was nothing in the local newspaper or local radio about the gazetted area. MAF rang to say they would go through my hives next day. Talked to Keith Herron and Frances Trewby again.

November 10—Gerard Martin from NBA executive rang to see how we were going. Michael Wraight rang to give me a rundown on what was happening—I was unable to contact the MAF (no-one available) at 5.15 pm.

November 11—Dave Haycock—local branch president, rang to say there would be a committee meeting tonight. MAF was invited but were too busy to attend. Not enough men on the ground at that stage. I was asked not to go to the suspect site. A television crew filmed at the suspect site. My name was released to the media. Had a distinct feeling of being left in the dark temporarily.

November 12—Dave Grueber rang at 7 am. Wanted to come and see me. He arrived at 8 am to tell me that the sample had tested positive for EFB. I was then placed under official quarantine. No bee gear to be moved. No bees moved, everything more or less shut down as far as my business was concerned.

From there the MAF Emergency Response Procedure swung into action. MAF inspectors and beekeepers arrived from all parts of the country. The task of inspecting every frame in every hive within the gazetted area commenced. The BDAC (Bee Disease Advisory Committee) was set up to make decisions for the industry. From there proceedings are fairly well documented.

Effects of the Restricted Zone

Some beekeepers were hardly affected by the restricted zone. It was worse for others who had kiwifruit pollination hives straps cut during inspections which happened just before hives were shifted into orchards. The most affected, apart from myself, were the other two queen producers who were unable to send thousands of dollars worth of queen bees out of the restricted area. These queens were mostly destined for kiwifruit pollination hives so the markets were lost once the pollination started in mid-November.

Effects of Quarantine

We were unable to put our hives into kiwifruit pollination (traditionally our largest source of income). None of our growers were let down however, as fellow beekeepers rallied around and hives came from quite a few different places. That support meant a great deal to us.

We lost queen sales of course and a small amount of pollen and honey. We also had total management disruption at the most crucial time of the year. It took a long time to rectify some of the problems that occurred as a result. There may also be hidden costs yet to surface such as lost future sales due to the stigma that may be attached to being at the centre of the disease scare. However, we are once again in business and accepting queen orders for this autumn and the coming spring.

THE RELATIONSHIP OF QUEEN CELL LENGTH TO PUPAL WEIGHT

By Reg Clarke

Summary

Queen cells from three successive grafts, using three queenright finisher hives, were examined to determine the relationship between cell length and pupal weight. Cells were examined two days prior to emergence, for cell length, pupal weight, and presence of residual larval food.

Cell length alone was found to be an unreliable indicator of pupal weight; however short cells without residual food contained pupae of only average to below average weight.

Introduction

Many queen producers practice a limited form of quality control, by discarding cells they believe to be too short to contain a well fed pupa.

This study examines some of the data from an extensive series of tests where all cells were examined for cell length, pupal weight, and presence of residual food. The data used here is from three successive grafts done between 7 and 15 March, 1991, using three queenright finisher hives. This was a period when results were rather uniform, and a single queen mother was in use. This queen had been instrumentally inseminated with sperm from multiple drones of a single breeding line, giving daughter queens slightly more uniform than with an open mated queen.

Materials and Methods

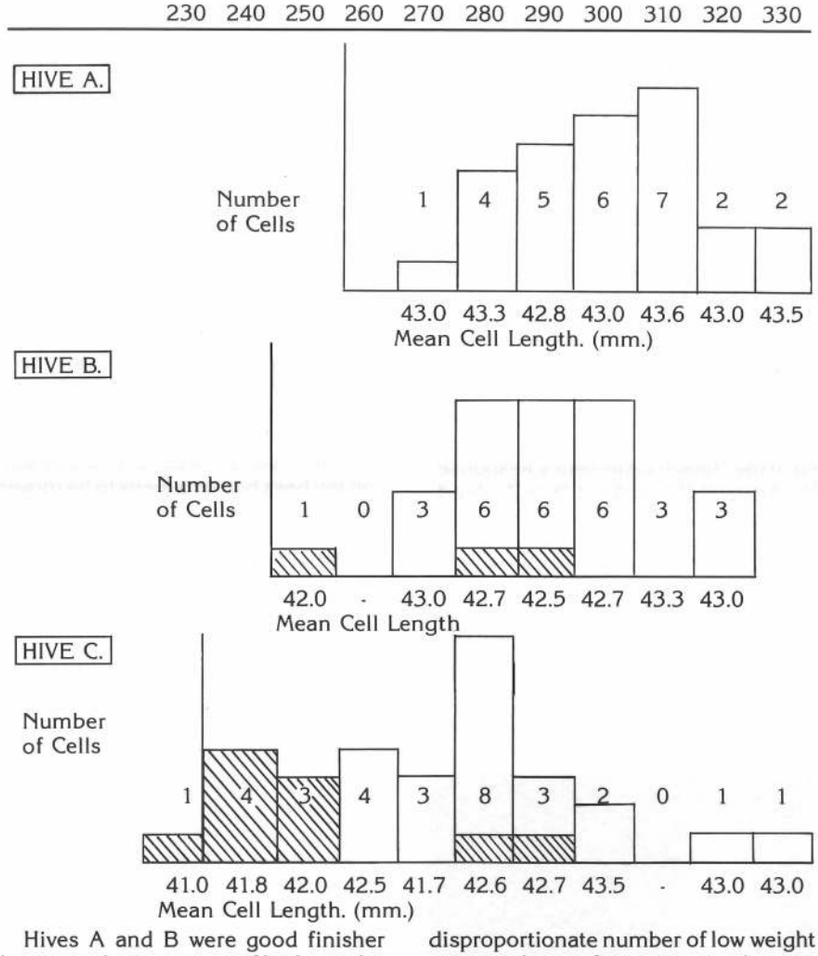
Queenless starter hives were used; these were two-storey units made queenless with a split board several hours prior to grafting. Very young larvae were transferred into "Bozi" pattern plastic queen cells, grafting "wet" with 50/50 royal and water, and placed in the starter hives for 24 hours. The cells were then transferred to queenright finisher hives until mature, with each hive receiving between nine and eleven cells each four days. Hives were given a litre of dilute sugar syrup every second day to stimulate activity and pollen collection.

Cells were removed from the finisher hives two days prior to emergence. The overall length of the cell plus plastic cup was recorded, and the cell opened. Pupae were weighed on an electronic balance to ± 1 milligram: in the data below they are grouped in 10 mg. increments to show the weight distribution pattern.

The Bozi pattern queen cell cup is 21 mm. from flange to cup base. Hence, the overall lengths reported below are 21 mm. greater than the internal length of the pupal case.

Results and Discussion

For each of the finisher hives, data from three grafts is added together to give a larger and more reliable sample size. For each 10 mg. increment, the graph displays the number of pupae in that weight band, the mean cell length, and the number of cells with no residual royal jelly (indicated by hatching ▨).



Hives A and B were good finisher hives, producing pupae of high weight, with a few underfed specimens in hive B only. In contrast, hive C is an example of a poor cell finisher. In that hive, over 50% of cells are 41 or 42 mm., (compared to 11% in A and 43% in B), and 50% of all cells had no residual food.

Of the 85 cells in this sample, nine are 41 mm. and under. If they were discarded, that would get rid of three pupae weighing under 250 mg and one of 270 mg from hive A. However, five good pupae of 280 mg. and over would also be lost. In other words, more than half of the pupae in short cells were satisfactory. There remain six low weight pupae in cells of 42 and 43 mm., which cannot be identified without weighing.

Throughout the trial series, which ran for 24 successive grafts, hive C performed very poorly, and contributed a disproportionate number of low weight pupae plus a few very good ones. However, this hive and others of similarly low standard, could not be reliably identified without monitoring pupal weight.

Based on the data presented here, which is believed to be representative of the broader picture, cell length is an unreliable indicator of pupal weight.

STARTING QUEEN CELLS: A VARIATION OF THE QUEENRIGHT FREE-FLIGHT HIVE

By Reg Clarke

At a basic level, starting queen cells is quite easy: most bees understand their role and will readily produce queen cells for their own purposes when required.

Difficulties arise only from the commercial need to impose our will on the bees, so as to produce large numbers of cells when the market requires them, and at minimum cost.

Basic Principles.

There are four essential preconditions for the commencement of queen cell building. (1) The stimulus - the queen lost or failing, or swarming urge. (2) The availability of fertilised eggs or very young worker larvae. (3) Nurse bees with developed brood food glands. (4) A sufficient supply of pollen.

Methods.

Over the years, beekeepers have devised many methods of inducing bees to produce queen cells. Readers will find details in most of the excellent reference books on queen rearing, available from the NBA Technical Library. My purpose here is to describe the system I use, which is simple, efficient, and reliable, and differs in some respects from methods described elsewhere.

Description.

For simplicity, I prefer to use a standard hive, modified as little as possible. For efficiency, the hive must initiate large numbers of queen cells with minimum labour input, and go on doing so over a four-month period. For reliability, the four essential preconditions must be generously provided for at all times.

The hive used is a two-storey, full-depth Langstroth, well filled with bees and brood. The queen remains in the lower box below the queen excluder, where she receives little disturbance. Cells are started in the top box, which is made queenless temporarily by substituting a split board for the queen excluder. Alternatively, a "Cloake" board can be used, which combines both functions. In this position the cells and feeder are easily accessible. Queen cell cups into which the young larvae have been transferred (grafted) are placed in the top box about three hours after it has been rendered queenless. After 20 to 24 hours, the started cells are transferred to finisher hives where the queen larvae are cared for until pupation is complete. Generally, the hive will initiate 70 to 80 queen cells from 96 grafts, and it can be reused at four-day intervals. As finisher hives can properly care for only 10 to 12 cells, each starter hive needs to be supported by six or seven finisher hives. Thus, using only four starter hives, a batch of cells can be started every day if needed. To have cells available each weekday, it is necessary to graft on Friday, Saturday, Sunday and Monday and on that routine, each starter is used once a week, always on the same day, making the system easy to manage. The queen excluder is modified to provide a wide entrance by cutting away part of the wooden rim. This is very important. The bees must be encouraged to use this as the main entrance to the hive by leaning a wide board against the hive so that it shades and obscures the normal bottom board entrance. To set up this pattern, it may be necessary to temporarily block the lower entrance. The purpose, crucial to the success of the system, is to get most of the foragers using the upper entrance at all times. Thus, when cells are being started, with the split board in place, the population of the upper box is boosted by returning foragers, and - even more important - most of the colony's pollen supply is delivered directly to nurse bees in the upper box.

Four two-storey starter hives.

Hive Management.

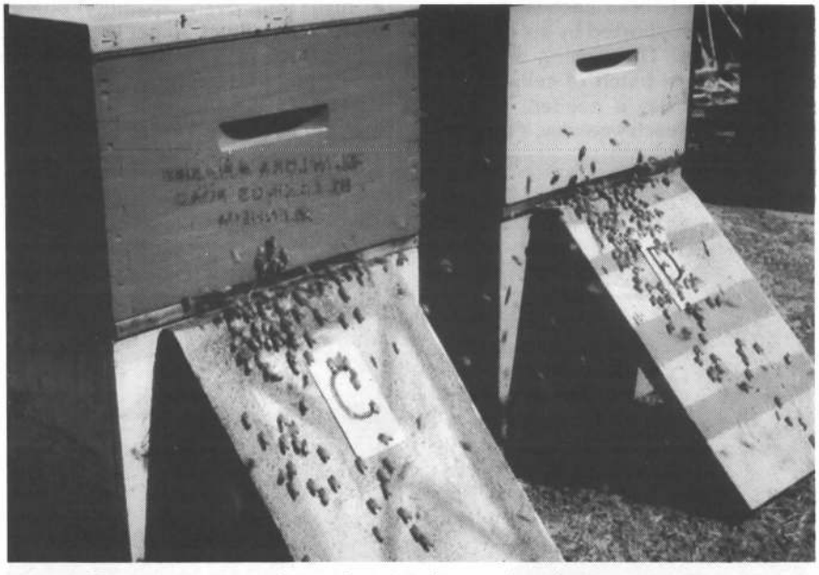
Success is largely a matter of getting all the details right. So let us go through the seasonal management one step at a time.

The Autumn Split. Hive preparation begins in the Autumn, after queen rearing is finished, using the current starter hives (of proven capability) plus an extra reserve hive. To get the required strength early in Spring, the hives are overwintered as singles. Requeening the top box is a simple matter of using the split board once more. In my operation, this is not simply any queen, but a selected high-weight daughter of the finisher-hive queen with the best performance during the past season. In this context, "best" means consistently producing a high % of well formed cells with the highest mean pupal weights. That is done because I believe that heavy queens will on average produce more brood and young bees, and also that the trait of producing good queen cells is likely to be inheritable.

Winter Management. Ensure stores are ample and replace any defective equipment; good brood frames are important. Treat with Fumagillin against nosema. In some districts, it may be preferable to move the hives to a site where Spring build-up will be earlier.

Setting up in Spring. By late August, both colonies should be strong, with five or six frames of brood. Now place the box with the younger queen on the bottom board, remove the queen from the other, and unite the two colonies. The modified queen excluder replaces the split board, and both entrances remain where the bees are accustomed to find them. Put the sloping landing

board in position, and over a few days observe that the required flight pattern, using mainly the upper entrance, is established. A division board feeder is put in the top box, the hive treated again with fumagillin, and regular feeding with light sugar syrup started. I use one litre every second day, which should be enough to stimulate an increase in pollen collection and brood rearing.



Two-storey starter hives showing bees using the top entrance.

If the recommended practice of two-queen wintering is not followed, the hive must instead be boosted with five or six frames of extra bees and brood from other colonies. This is definitely a second best option: other colonies have been weakened at a critical time and now a large proportion of bees in the colony are of unknown cell raising capability. The risk of introducing disease to the queen rearing yard has also been increased.

If using plastic cell cups of a type not readily accepted by the bees, put these into the hive for preparation at least four days before grafting. Wax cups or the "JZBZ" type plastic cups do not need this treatment.

Queen Cell Production. Assuming that drones are already present or emerging in the mating yards, and the finisher hives have been prepared in similar manner, queen cell production can now start.

The frame arrangement I prefer in the upper (cell raising) box is as shown in the diagram. When cell carrier frames are not needed in the positions shown substitute frames of new foundation wax.

Most of the brood in this box should be capped or emerging. I have not found any benefit from placing pollen frames adjacent to the cells, nor from feeding extra pollen or pollen extenders. But this is a pollen-rich area, with weather that allows foraging on most days. In this, be guided by your own experience.

Around 9.00 am. the upper box is made queenless by substituting the split board for the queen excluder. After three to four hours, the bees will be ready to accept queen cells, so take out the cell carrier frames with prepared cell cups (or empty frames) leaving the bees to cluster in the vacant spaces while grafting is done. Feed the hive with syrup. After grafting, return the cell frames to their positions, lowering them in slowly so as not to crush the clustered bees. Now leave the hive undisturbed for 20 to 24 hours for the nurse bees to tend the larvae.

Leave the bees to their work for a moment, and consider the hive situation in relation to the four essentials I started with. (1) Stimulus. The bees are all well aware that a queenless emergency has occurred. (2) Larvae. We have given them plenty of very young worker larvae in queen cell cups, but there are few if any other worker larvae requiring to be fed. (3) The large amount of brood in the hive ensures that there are plenty of nurse bees, of the ideal six to sixteen day age group. (4) Ample supplies of fresh pollen are being delivered directly to the area adjacent to the cell frames. Additionally, these returning foragers, diverted by the split board into the top box, will ensure that the box is crowded and kept well up to brood temperature.

Next morning, replace the split board with the queen excluder, feed the hive, and transfer the started cells to the finisher hives. In the vacant spaces, put in either the next set of empty cell cups for preparation, or foundation again.

This pattern of division, started queen cells, and reuniting can be continued as long as required, at intervals of four days or longer.

Maintenance. For repeated use over several months the conditions we have created have to be maintained. The queen must be kept laying at a high rate, and brood of mixed ages must be transferred to the upper box. Lift one or two frames once a week, or three frames each 14 days. If this is neglected, the number of nurse bees in the upper box decreases and results will be poor. The hive should be kept well filled with bees in both boxes, but not overcrowded. With a vigorous queen, a good start, and regular feeding it should not be necessary to add bees or brood. When the hive becomes too crowded, as it will, remove one or two outer frames with adhering bees to another colony and replace with empty combs or foundation.

Productivity.

For commercial use, the maximum possible number of well started cells is required. It has taken several years of trial and error to get to my present stage, where this last season, the starters have consistently accepted 77 to 80% of the 96 grafted larvae put in. More experienced queen breeders may well be doing better than that. Using thoroughly prepared Bozi cell cups it is occasionally possible to get over 90 good cells. In recent brief trials with JZBZ cups, 134 cells were accepted from 144. If that is repeatable, then perhaps the average number can be lifted to over 100 per batch.

Problems.

There will inevitably be some. To function well, the starter hive must be managed at a high level of stimulus to the swarming or supercedure impulse. Other problems also occur.

Swarming and Supercedure. Minimise the risk by:- (1) Use of a young, prolific queen. (2) Avoid overcrowding. (3) Keep the queenless period to the minimum necessary to induce cell initiation.

Inherently Poor Performance. Some hives are simply not suited to the task. The quick-fix solution is replacement, hence the need keep a suitable reserve hive on hand. Requeening is generally effective, but it takes at least five weeks before the genetic character of the nurse bees changes.

Virgin Queens. A virgin queen above the queen excluder will lead to a sudden drop in cell acceptance. She must be found and removed.

Dwindling Strength. Apart from external factors common to other hives, this can be caused by starting with an understrength hive. The queenright section in the lower box may subjected to periodic stress, during the "split" phase when the bulk of foragers transfer to the upper box. The result is either chilled brood or a temporary reduction in egg laying, and a consequent population decrease later. The remedies are: (1) Start with a strong hive. (2) Monitor bee strength in both boxes. (3) Add emerging brood. (4) Keep the queenless period to the minimum.

Effect on Queen Quality.

Does starting unnaturally large numbers of cells adversely affect queen quality? My experience, based on monitoring pupal weight, is that there is no adverse effect. The larva is either adequately cared for and matures successfully, or neglected and does not survive.

Textbook advice is to discard cells that are not generously fed. To check this, I have compared the weights of a great many pupae, classified as "well fed" or "poorly fed". My conclusion is that the poorly fed group have a lower survival rate, but are sometimes of superior weight at maturity. The reason for this may be that the nurse bees give a greater volume of food to larvae that were older at grafting, but the younger larvae (so long as they receive just sufficient food) may become larger queens. I now use any larva that is not obviously starved, and accept the risk of increased losses in the finisher hive.

Alternative Uses.

Starter hives can conveniently serve several other purposes.

Starter/Finisher. At times of peak demand, or lack of sufficient finisher hives, the starter can double as a starter/finisher. Leave up to 15 cells in the hive after replacing the queen excluder. They will have to be transferred to an incubator hive as soon as capped, to make way for the next cycle of cell starting.

Production of Royal Jelly. As I graft "wet", using dilute royal jelly, a supply source is needed. Surplus started cells are returned to the starter hive for two and a half to three days. Discard any cell that looks abnormal or unhealthy. Store the royal jelly for use, either refrigerated (short term) or frozen (long term).

Escort Bees.

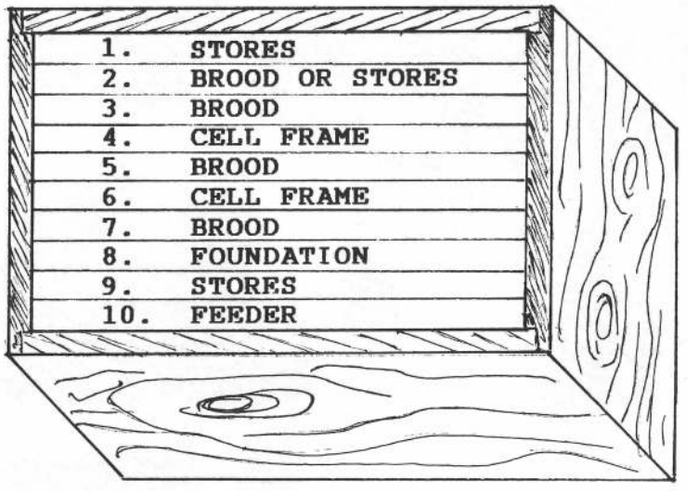
The starter hive is a convenient source of escort bees for caged queens. It has plenty of young bees above the queen excluder, and should be free of nosema. Also, it is likely to need the periodic removal of surplus bees to maintain the correct population.

Conclusion.

This system functions well for me, and involves less labour than many others I have tried. It is self supporting, and remains reliable over a long season of repeated use.

The essential features are:-

1. Start with plenty of bees and brood.
2. Use a prolific young queen, whose bees are of calm, quiet temperament.
3. Establish the top entrance flight pattern before starting.
4. Keep the queenless period to the minimum needed to get the cells started.



Frame arrangement in cell-raising box.

EXPORTING

The NBA has, with the assistance of its members, established an export liaison group. This group will assist members who:

a) may be considering exporting

or

b) wish to discuss an exporting matter with someone else in the industry.

The following members will be pleased to provide information for members new and inexperienced in the export of honey.

ORGANISATION	CONTACT PERSON	TELEPHONE NO.	FAX NO.
Airborn Honey	Peter Bray	(03)243569	(03)324236
Arataki Honey	Percy Berry	(070)775790	(068)774200
Ceracell Products	Stephen Mahon		(09)2740368
Kintail Honey	Dudley Ward	(06)3748301	(06)3748256
	Jane Ward	(0728)58038	
NZ Honey Producers Co-Op	Kevin Ecroyd	(056)48882	(03)6884859
Southern Honey Exports	Allen McCaw	(03417)7198	(03417)7198
Waitemata Honey	Neil Stuckey	(09)4038491	(09)4738556

THE HAWKE'S BAY BRANCH

Above: *Note the age range of the participants.*
Right: *Could it be a prayer meeting?*
Below: *John Dobson looking for a queen.*

REQUEENS WITH CELLS

Right: *Removing the old queen.*
Below: *John Dobson showing the queen cell.*
Bottom: *A discussion about the finer points.*

BE PRECISE ABOUT THE LOCATION OF YOUR HIVES

By John Heineman

No better time to have a look at some very essentials than the present; essentials which concern every beekeeper and would-be beekeeper, hobbyist, part-timer, and commercial operator alike.

All apiarists have a legal obligation in common, namely the registration of hives and the sites they are kept on. A requirement based on some very good reasons indeed, not for the sake of keeping a person in a job.

The European Foulbrood scare in the Nelson district is still fresh in our minds. Luckily it has been a false alarm and no doubt that is a blessing.

In the meantime a very expensive exercise has taken place involving many people, directly and indirectly: MAF personnel, NBA Executive and Emergency Committee members, local beekeepers as well as others from further afield, laboratory people, and others concerned with transport, accommodation, administration etc. Not only a lot of money and effort has been expended, but inevitably considerable personal sacrifices have been made.

Let us not forget to lift our hats to that beekeeper who found the suspect hive in the first place. Reporting it immediately was a very responsible attitude to take for he must have known that if the suspected disease had been confirmed it would have cost him dearly and may even have spelt an end to his beekeeping operation.

It is behind us now and the good aspect of the episode is no doubt the experience, the many things learned which will help in coping with an eventual next emergency.

It once again has become apparent that having an up-to-date apiary register available at all times is imperative if we are to deal efficiently with an emergency and, of course, if we are to control endemic bee diseases.

We cannot expect the register to be the tool it should be unless we all give full co-operation and supply clear and accurate information. That is name, address, and telephone number of the beekeeper, and the address of the land owner on whose property the hives are kept, the description and the exact site of the apiary, the number of hives in the apiary, and whether the apiary is permanent or seasonal. Do this and you will have done your duty for the moment, but as times goes by things have a habit of changing. You must notify the registrar of these changes when they occur. Change of hive ownership, change of land owner, cessation of beekeeping operation, or a change in the situation of the site (the farmer may want to work up a paddock). This may seem to be a fair list, entailing a lot of paper work. Not so, it's pretty simple and really little trouble if it is done immediately when the changes occur. Don't wait till you do your annual hive return for between now and then the next emergency may happen.

This information goes in to the computer and should, in theory, be available at any given moment. The big BUT is that the computer after all only returns its input, including errors and obsolete information. It is not the machine or its operator which can be blamed for shortcomings, only the people supplying the input.

Those of us who have taken part in disease inspection under our New Zealand system will be very much aware of the time-consuming and frustrating business of having to search for sites. Having inspected 30 hives during a day's work instead of, say, 120 does not make for a feeling of satisfaction and achievement. The situation can be easily remedied as long as we all do our part.

Here are a few examples of poor and inadequate info:

1. Hive Owner: J. Smith, Box 45, Pebbletown, 4 hives, at home.
2. Hive Owner: D. Muir, RD 7, Waipapa,
   site 1, 5 hives, at home
   site 2, landowner P. Ross, RD 7, Waipapa, 6 hives
   site 3, landowner S. Latta, Lincoln Road, 9 hives.
3. Hive Owner: H. Hastings, 97 Cliff Road, Purakaka, site 1, 10 hives, at home
   site 2, Mitchell Farm Co, Cox Road, Purakaka, 12 hives.

Mr Smith does not live in his Post Box, so we have first to find out from the Post Shop his home address.

Mr Muir lives somewhere along RD 7, Waipapa, which covers some 150 km and the same goes for land owner P. Ross while S. Latta lives on Lincoln Road, presumably in the Waipapa district, and the road runs for 15 km.

Mr Hastings' home address is clear enough but the description of his site 2 leaves a lot to be desired. First Mitchell Farm Co. is no longer there, they sold the place some three years ago. The farm covers some 500 ha, so where is that apiary tucked away on that expanse of country?

None of these three owners have supplied a telephone number.

Then one may come across an apiary, permanent or seasonal, which has not been registered at all.

Little imagination is needed to get the picture: a very frustrated man in the field, hampered by this lack of information. And when we have to deal with an emergency we will be handicapped right from the start.

Now if you just keep a few hives at home, have given your home address, with the street number and town, your telephone number plus the number of hives, and your particulars are sufficient.

For those out of town, on a rural delivery, more is needed than just the postal address. Make it as clear as you can. And that of course applies to outyards situated on other peoples' properties.

There is a lot of merit in using a grid reference as suggested in Buzz Words a while ago by David Penrose. It is a practice already followed by a number of beekeepers. By using the same kind of maps throughout the country we can easily locate each apiary. We are talking about the NZ topographical maps issued by the Department of Lands & Survey (may have a new name). For our purpose the scale of 1 inch to 1 mile is generally used. These maps are readily available at reasonable cost from book shops, stationers, Dept. of Conservation, trampers shops, etc. These maps cover the whole of the country in great detail. Other types s.a. tourist maps, road maps etc. are no good for our purpose as we need to use the very same as used by MAF to indicate the precise location of our apiaries. The process of giving and finding a grid reference is really very simple. For many of us it is no problem but there are a surprising number of people who cannot read a map properly, let alone find a correct grid reference. If you belong to that category, don't be ashamed, you are not on your own, but do something about it now.

For a start, get hold of the map cover-

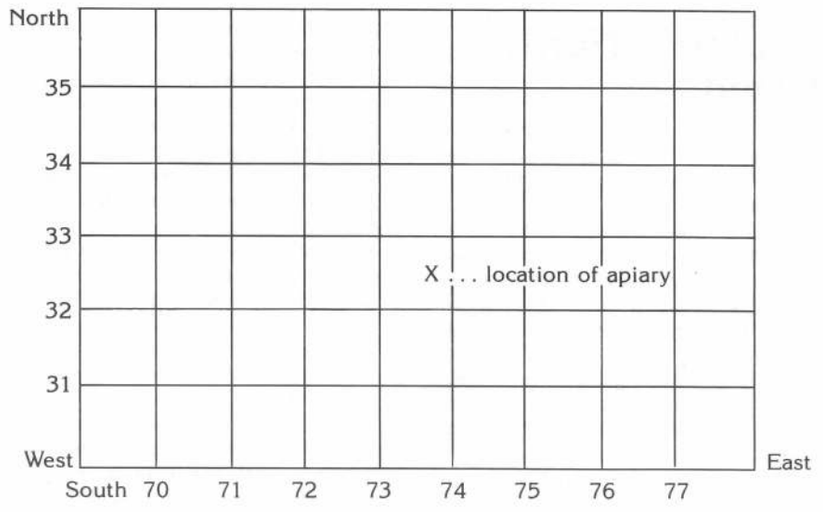
ing the area where you keep your bees. Then sit down and study it thoroughly. They are works of art. I feel great admiration for those early surveyors who often went through much hardship laying the basis for what we have today. Now we are blessed with aerial photography and many technological aids which make for accuracy and much detail. Once you understand a topographical map you will be able to form an impression in your mind of the type of country the map represents.

In the margin of your map there is a clear reference to all the symbols used on the map, different classes of roads, bridges, power lines, water courses, buildings etc. With the help of that you will soon find it easy enough to determine exactly where you live or where the farm is where you keep your hives.

The map is divided into little squares. The lines running vertically are south to north and the horizontal lines are west to east. This is the map's grid, and that's where the nitty gritty comes in. Along the edges of the map opposite each line of the grid you find a number of two figures. Each grid square represents 1000 yards along its sides. Now it is left up to you to pinpoint the location of your apiary within the correct square of the grid. The apiary could be exactly situated at a land mark shown on the map, that makes it easy. If not you may have to measure a distance from a gateway, bridge or something like that using the speedometer of car or truck or by simply pacing it. The average man's stride is near enough to a yard. Ladies take somewhat shorter steps. Also keep in mind the direction you take from the point where you start to measure in relation to the apiary site. A compass may be used by a very fussy person but that is hardly necessary. Having done this you will be able to pinpoint the location exactly within the particular grid square.

Now to read the correct grid reference use the numbers along the edges of the map. Always take the numbers opposite the vertical lines (from west to east) first. The site is situated in the square between the numbers 73 and 74. Your measuring told you that it is 500 yards within the square which is half way. The figure 73 then gets a 5 behind it and becomes 735. Do the same using the horizontal grid lines. Your grid square is between 32 and 33 but 300 yards past the 32 line. So the 32 becomes 323. Your grid reference on this map is 735 323. Not so difficult really.

To make sure now that your location is known correctly, give the map and grid reference (map S 79 Mt Cook 735 323) alongside the other required info. Into the computer with it and a pin can be stuck on a similar map.



Now don't forget to place your registration number in an obvious place in your apiary. That is also a legal requirement.

It would not be such a bad idea if NBA Branches and Beekeeping Clubs could devote a little time on this subject of map reading and grid reference. There will be someone among the members who knows the ins and outs. Is it not just as important as knowing the different stages of breed or the recognition of B.L.?

Having a good look at a map on which a district's apiaries are indicated before one established a new apiary is very wise and informative. It will show the gaps with potential and will help to avoid poor relations with one's neighbour beekeepers.

BE LEGAL — BE REGISTERED.

Southern North Island

It is mid-January and I have just returned from collecting a swarm: three supers of bees, perhaps the biggest I have ever hived.

The El Nino weather pattern has caused the season to run about two weeks later than usual. It remains unsettled, with two or three days hot and fine followed by two days of light rain (5-9 mls per day). Christmas was four days of fog in Wellington, however there is a plus side to this. From north to south, the countryside is lush and green.

It looks like the bees are bringing in an above average honey crop except in those areas close to the mountain ranges where growth has slowed due to the colder climate. Most hives have honey in the second super (but it's not capped yet) and even those used for pollination will produce a crop.

Let's hope it's a good crop and that honey prices don't depreciate any further because of it. Some areas report supermarkets are still specialing honey that tends to reduce the local price. Remember the figure presented at the Blenheim Conference? To make ends meet we have to get more for our honey.

We are all looking forward to our next field-day. It will be in Wanganui on February 22. This will extend into the evening when we will celebrate our Branch's 21st birthday. Thanks to all those over the years that have supported our Branch and made it so successful.

NELSON

A lot has been written about the Nelson "Experience" so I won't repeat it. On the personal side I really enjoyed the experience. As some said, it was like a big combined field-day. Beekeepers got together, talked, swapped experiences and helped with advice to those less experienced. It wasn't until I arrived home that I noticed just how tiring the exercise was.

There were also humorous sides to each day. First you had to get your bearing and note how the country lay. For an outsider it was very easy to find yourself heading in the wrong direction.

Then around the orchards of Motueka you had to adjust to no fences or road signs. If you asked directions from a local, you had to know the local expressions: a road is a shingle track usually about 6 feet wide without grass growing down the centre. Those with grass were driveways. Sometimes these roads went through a property owner's back garden.

The two-storey or blue house you just can't miss was usually set back from the road or was found tucked behind some trees. Sometimes it took two or three passes to find it.

It was suggested by some that it is time we all adapted a standard mapping system (Lands and Survey) and added a map reference to our apiary description returns. This would help pinpoint locations and make hives easier to find in an emergency. Reference to map locations is already in the hive inspection computer software so let's make it part of the "Industry Plan" for this year.

Little things spotted in the field created topics for discussion during the evening meal. For instance, someone spotted cells of dark green honey. Everybody has a different idea about its source: from 1080 bait to Matagouri. Apparently it comes from a high country plant that grows as a carpet and has little blue bell-shaped flowers (2 mls long). It disappears from farm land because it can't tolerate fertiliser. Each district of the South Island has a different name for it. In Otago it is known as "Lukim Pokim Franjai" (sorry about the spelling), while some other areas referred to it as "Axle Grease". I am not quite sure if we were being had on or not.

On the serious side, most beekeepers should now stop and ask themselves: 'What would I do, and how would it affect my business, if such an outbreak happened in my area?'. No beehive movements or crop sold outside the district for possibly 18 months. I believe most businesses would not survive such a restiction.

What can we do to prevent an outbreak of an exotic bee diease? Quite a lot. Work through your branches and target your customers to see that no diseased honey comes into N.Z. Make sure your local landfills are covered each evening.

I am sure all the beekeepers who assisted from our Branch found it a very educational and enjoyable experience. Thank heavens it turned out to be only an exercise.

Frank Lindsay

Otago

November 1991 has been the coldest on record for the past 50 years in this part of the country. The effects of this weather is being felt by all beekeepers throughout the province with the exception of a small area round Alexandra. Poor build up of colonies and well mated young queens at a premium. This, on top of two previous seasons which left a lot to be desired, is not very heartening. We just hope for a prolonged main flow now as many hives will have to build up on the clover. Weather over the Christmas-New Year has been more favourable.

Our pre-Christmas branch meeting was well attended. Matthew Sole, MAF, Alexandra, showed the slides he made during a study tour in Australia, and Alan McCaw reported on the experience during the Nelson EFB scare. Some further discussions in relation to endemic disease control took place. The last meeting of the year was followed by a social hour when members enjoyed some goodies and did a lot of chin wagging (as usual).

Back trouble has handicapped a few of our members while another one has become the victim if a serious accident with a chain saw. To them our best wishes.

John Heineman

Southland

We in the far south have just been through one of the most difficult times for keeping bees in many a year. To add to that we have had little or no return from the hives for the last two years, the weather has been dealing its additional problems as well. October was a reasonable month, but November, which is usually reasonably settled for at least a couple of weeks, reverted to wintery southerlies. The hives were at the crucial stage and brood was reduced, queens stopped laying, and feed meant more sugar needed to be brought on an already strained overdraft.

However the second week of December saw a change with bees and beekeeping picking up with much better weather. It has been said before how amazing it is to see how quickly the bees recover when suddenly they are hanging out of the hives and require extra boxes. With rainfall above average and warmer conditions clover is flowering well, and as I write this report In mid-January the hives already have a crop. If favourable conditions continue a better than average crop is possible.

Alister Lee

Westland

It has been reported that temperatures throughout NZ during November were the coolest since 1946. Westland was no exception. By the time the temperature improved we were into the

middle of December and the honey-flow had long since commenced.

With these cool temperatures very little hive activity took place; just enough for the bees to know that the honey-flow was on. Being confined to their hives for long periods at this time inevitably brought about more swarming than usual. Some hives were also affected by depleted stores. However, now that the weather has warmed somewhat and production has begun, it appears a well-below average kamahi crop is in the making. A light showing of rata has begun and if this proves to be a general flow then Coast beekeepers may finish with average production this year.

The Branch held its Discaseathon during October, not an easy undertaking considering the length of the province and the weather.

Overall prospects appear to be good enough to see most of us through another year.

Sandy Richardson

Auckland

A lot has happened since the last issue. The barberry flow was bountiful and so creating a few swarming problems, but it provided a much needed boost for hives going into kiwifruit. Hive shifting seemed to go well for most and kiwifruit growers seem happy.

They say a way to sell more of any food product is to fool and confound the housewife. I've found a method. A friend came around to buy some honey for her Christmas cake and took a two kg pot. The next day I received a call to discuss the recipe which she has obtained from me. The result seemed very sloppy. Had she put in too many ripe bananas? not enough flour? Then it clicked, the label on the two kg pot said: 500g, the amount the cake required! So she'd put the whole pot in! Fortunately all was not lost. With the addition of more flour and eggs it made two large cakes and a christmas pudding. They were very rich, but delicious.

The honey is pouring into the hives at the moment and promises a good year.

Nigel Birse

Nelson

A lot of water has gone under the bridge since the last NZ Beekeeper was published. Full marks to the person who reported the suspected EFB outbreak, and to those who rallied round to help prove that it was a false alarm. But a thousand kicks in the whatnot to those, including the media, who insisted on calling it: 'The outbreak of European Foulbrood Disease'. Almost two out of every three people I meet ask: 'And did your bees have that nasty disease?'.

I have not heard of my hobby horse, kiwifruit pollination, much this year. I have been too busy with other things. We had a very good honey flow. I had trouble with the queen-raising units until I found a way of getting the six to work together and store the surplus honey in a ¾ in. eight-frame Manley with prepared drone comb foundation. Some have filled their box with 50 lbs or better.

At one point it seemed drought might singe all vegetation and stop the flow, but a splendid rain between Christmas and the New Year must have been worth thousands to primary producers. Alas, although there will be a trickle of nectar in the (hopefully) fine, hot weather to come, the flow has been scaled down considerably.

The wasps are beginning to show up again. If they become thick they will help reduce the honey take.

Now we have had some rain it seems to be one of those years that bring cer-

tain plants into flower early. I have noticed tree lucerne in bloom. Normally it does not bloom around here until April or May with flowers continuing into September. Perhaps after the harvest and we have washed the plant, and the dregs have been turned into honey-mead, the weather may still be clear.

Ron Stratford

Marlborough

An above average crop seems to be there. Though yet to collect it. Rain in December and January was a great boost. A low fire risk most of the time!

It was good to see manuke honey taking up a minute 30 seconds on TVNZ One news twice plus newspaper articles and radio stories. Good to see the manuka receiving a bit of marketing. The beekeepers should be asking a much higher price for the honey, $2.10 is not enough especially if it is Active Manuka.

Bill Floyd has a fixation on the number 40 and it's not just his age. I had visions of $10.00 per kilogram. I suggest that producers of manuka should get as much testing of their product as possible. Every drum should be sampled. Dr Peter Molan, Waikato University, will test samples for activity free this year. If you end up with a good activity level, then go for a good price, eg $10.00 per kilogram for that drum. Thnk of that as a medicine, and not a very good one at that.

If anyone has an inline filter system that will filter thick manuka without heat please tell us all about it.

The EFB scare had some sorry ramifications. It was disappointing to see no one representing the beekeeping industry for several days when it was in the headlines. For example, Murray Reid's statement about how we would have to feed drugs to combat the disease went unchallenged. The event was only months after the conference when the industry reaffirmed its opposition to the feeding of drugs. The whole operation went smoothly. We are pleased that the outcome was negative. We would like to know what was the bacteria involved. Has it been identified? If not, will it be identified? I'd like to congratulate the MAF personnel and beekeepers who organised operation EFB. A difficult operation.

It is Marlborough's turn to organise our combined branches' field day at Lake Roto-iti in January 1993.

James Jenkins

South Canterbury

The extremely cold winter we experienced seemed to continue well into spring, with heavy feeding being required until mid-December. However good rains and no drying nor'west winds, which wreck most honey crops here, has given what seems like an average honey crop, with prospects of a more substantial harvest if we can get two weeks of hot settled weather.

The summer weather has been very unusual with high humidity and warm misty showers, which is probably why the Canterbury Plains are still covered with lush green grass in mid-January. So prospects are excellent at this stage with beekeepers in a jovial and contented mood.

Peter Smyth

Hawke's Bay

Twenty-six members and partners made a proper job of getting merry for Christmas on December 10 at a social function in Hastings. An interesting visitor was a German apiarist with his photos and equipment samples; typical Teutonic craftsmanship with sharp clear pictures and beautifully finished equipment of practical design.

Swarms are the 'in' thing. The first was reported way back in August and even as late as January 13 our inimitable Walter was still chasing one which split into three separate clusters. In between many were the swarms and many were the tales of what they did. One didn't like the hive box it was introduced to, so promptly moved into the adjacent occupied hive. No worries.

The weather has been warm enough and wet enough to maintain a good nectar flow in the urban areas. This has seen the hobbyists scurrying about cleaning old frames and supers to keep up with the demand. Further out, where the bulk of the sites are commercial, the season has been patchy but a slightly better than average yield is expected.

Ron Morison

Canterbury

Our province experienced very cold and overcast weather with a lot of showery southerly winds during November and December, the bees became very difficult to work and a close eye had to be kept on stores.

During these difficult times we had the disease outbreak in Nelson. I would like to thank the branch members who gave their time so willingly in Nelson. We were very impressed by the way MAF and our association threw everything they had at this problem. We could come home and put our members at ease.

Spring honeydew has been very hard to find in most areas. Late December weather settled with warm light winds. There have been good nectar flows and predictions of very good crops for 1992.

We held our spring field day at John Syme's. It was very well attended. We discussed the outcome in Nelson, the different techniques of two queening hives, the latest trends on the export market, and the finer points of making and drinking mead. To top it all off we had venison marinated in honeydew and babequed. It was delicious.

Ross McCusker

LIBRARY NOTES

Only one new item has come to hand this time. It is a copy of "THE MARKETING OF HONEY AS A MEDICINE". It is a case study and report for the National Beekeepers' Association by Dawn Joanne Willix. 48 pp., 1991, NZ

Mrs Willix has had a good look at the different aspects of the problems associated with honey being accepted as a medicine and the possibilities of developing this niche market. A thorough study.

This copy was sent to us by Mr Murray Reid, MAF, Hamilton. Thank you.

John Heineman

HONEY INDUSTRY TRUST

Honey Industry Trust applications close twice a year, on February 15 and August 15.

Application forms are available from the NBA, Box 4048, Wellington.

Applications will be considered within six weeks of receipt of recommendations from the NBA Executive.

DRAFT SPECIFICATIONS FOR AN NZ STANDARD FOR GATHERING HONEY SAMPLES

Prepared by Peter Bray and Steve Lyttle

SAMPLES

Samples must be representative of the entire parcel they relate to.

TAKING SAMPLES

They should be prepared for each BATCH as follows:
As drums are filled from the extraction holding tank:

- For batches that are five drums or less, a sample should be taken from every drum.
- For batches that are greater than five drums, a sample should be taken from every second drum.
- At the end of the tank mix these together to create one total sample of the entire batch.
- This total sample created from the batch should be approx 2 kilos.

From this several samples of the batch can be supplied, should it be required while still keeping some in reserve. This remaining sample must be kept for at least nine months after the honey has been sold.

SAMPLE CONTAINERS

The producer should keep the master sample in a airtight container to prevent moisture being absorbed into the honey. It should also be stored in the dark.

There are a number of suitable containers for sending samples through the post. Nexus Packaging supply Polyjars of 150gm, 250gm, and 500gm sizes with good sealing caps. Salmon Smith Biolab can supply a 50gm (30 ml) polycarbonate container. These are indestructible.

BATCH NUMBERS

- Batch numbers must identify the batch that each sample and drum came from.
- Every sample and drum must carry a batch number.
- Batch numbers should consist of two parts. One part should identify the batch and the other the drum in the batch.

E.g. In a batch of five drums the first drum could be marked **A1,** the second drum marked **A2,** the third **A3** and so on. The sample should be marked **A1-5** in this case. If you like you can add other figures to the first part of the batch number for your own reference e.g. **HDA** to remind you that this is "Honey Dew" batch "**A**". Don't get too complicated though. The industry can supply appropriate drum labels as required.

The Executive seeks comment on these draft standards. Comment should be sent to: The Executive, NBA, P.O. Box 4048, Wellington or faxed to 04/4712-882 before 14 March 1992.

MARKING SAMPLES

- **All sample containers** must be marked with the **batch number and producer's name** on the container, not the lid because lids have a habit of getting swapped from one container to another.
- There is an industry standard label for marking samples. It should be used if possible.
- **Use a permanent, black felt tipped pen.** E.g. a "Sanford Sharple Extra Fine Point Permanent Marker". These pens don't fade and will write on most surfaces.

DRUM LABELLING

- **ALL** drums must be labelled, preferably with the industry standard label. To prevent errors this must be done at the time the drum is filled.
- Stick the label on a **CLEAN, DRY** part of the drum so it is there to stay. Place the label near the edge on the top of the drum. Placing it near the middle and the label may be damaged should another drum be stacked on top. Use a **permanent, black felt tipped pen** (see above for suggestion) to write on the label. Note: Ballpoint fades and may be completely unreadable six months later. Remember that the label could be needed for up to **two years.**

DOCUMENTATION

The producer should keep records of all extractions and samples.

The following information should be kept:

- Batch details including
  - * Date of extraction.
  - * Apiaries the batch came from.
  - * Number of drums.
  - * Approx. type of honey.
- Details of where and when samples are sent.

HONEY SAUCES

By Sue Jenkins

Sauces and Honey

Whether it is a marinade for a barbecue, a dressing for a salad, a sauce for fruit, honey is a product that when incorporated into these recipes, brightens foods and menus with beauty and flavour.

Different floral sources produce differently flavoured honey. The different honey flavours, will give the sauce a different taste. A true honey connoisseur knows that honeys can be enjoyed as pure floral source honey or blended. Select mildly flavoured honeys such as Clover, Blue Borage, for use in cooking where delicate flavours predominate. Use strongly flavoured honeys such as Manuka or Kanuka in spreads or other recipes where a distinct honey flavour is desired.

Also the viscosity of honey enables honey to add body. It also makes honey a natural thickener.

Because honey is sweeter than sugar, in fact one and a half times sweeter, we can use less honey than sugar in our recipe, hence less calories (kilojoules). The reason why honey is sweeter, is because of its high fructose content, in fact approximately 38.5% of honey is fructose.

Pears in Honey Citrus Sauce

6 large pears, ripe but firm
6 tablespoons honey
¾ cup water
1 orange peeled with a vegetable peeler
juice of 2 oranges
juice of 1 lemon

Peel pears, leaving on stalk. Combine remaining ingredients in a large saucepan, heat gently. Add pears, cover and simmer gently until pears are tender. Turn the pears occasionally or spoon syrup over them during cooking. serve warm or chilled with sauce spooned over. (Serves 6.)

Chocolate Sauce

Serve this smooth velvety sauce with ice-ceam, over fruit such as pears, or over cake.

2 tablespoons butter
2 tablespoons cocoa
¼ cup water
salt
½ cup honey
½ teaspoon vanilla essence
2 tablespoons butter

In a small saucepan, melt butter, add cocoa until smooth. Add water, honey, salt and gradually increase heat until sauce is smooth and a bit thicker. Remove from the heat, add remaining butter and vanilla essence. Serve warm or cold.

Fruit Honey Compote

250g fresh apricots, diced
250g fresh plums, diced
½ cup blueberries
¾ cup water
¼ cup clover honey

Dissolve the honey in the sugar. Add prepared apricots and plums, simmer gently until just tender. Add blueberries. Remove from the heat. Either serve warm or chilled with ice-cream, yoghurt, or with whipped cream. Or serve cold in a brandy basket or flower, or in a chocolate cup. (Serves 6-8.) Variations: other fruit in season can also be used.

Lamb Fillets with Manuka Honey, Garlic and Soya

Quick simple but very tasty!
1 kilogram lamb fillets sliced
2-3 cloves garlic crushed
3 tablespoons liquid manuka honey
4 tablespoons soya

Place fillets in baking dish. Warm the manuka honey a little in the microwave, combine with crushed garlic and soy sauce. Brush over the meat and marinate for 2 hours. Preheat oven to 200°. Cook in hot oven for 15 minutes, basting frequently, and shaking the pan to ensure the meat is covered in sauce. Drain and serve. (Serves 6-8.)

Honey Marinade for Kebabs

4 tablespoons light soy sauce
2 tablespoons dry sherry
2 tablespoons hoison sauce
2 cloves crushed garlic
2.5cm fresh root ginger grated
½ teaspoon Chinese five spice powder
500g diced meat such as pork, chicken or beef
vegetables of your choice
2 tablespoons sesame oil, to baste

Combine marinade ingredients in a bowl. Add meat and mix well. Cover and chill for at lest 4 hours, turning once or twice. Drain meat and reserve marinade, then thread on to skewers alternating with vegetables of your choice. Brush all over with sesame seed oil, then cook on the barbeque or grill for about 10-15 minutes, turning frequently and brushing with marinade.

Excerpts from the Bee EHQ News, or From the Nelson Coalface

Major Scientific Breakthrough

While on location in the Appelby area this morning, the editor of this esteemed news-sheet made an epoch-making discovery.

Bees don't like black socks!

A control test confirmed this hypothesis, by the editor rapidly leaving the scene and returning in sacking gaiters—ably assisted by Rob Smith. No further strings were received. QED!

Ted Roberts leaves today—for a well-earned break. Back to see what's in his in-tray! Murray Reid the EHQ Controller says Ted did a fantastic job and was here when the heat was greatest. Murray described Ted as "very cool under fire!" It's all the leeks he ate as a youth! It is now known that it was not the RAF Spitfires that kept the Hun back in 1940—it was the aroma of Celtic leeks!

Only at one stage did a special mission have to be sent out to restock Ted's Panatellas. Once when there looked to be a shortage of sacking for smokers, it was suggested by some non-smokers in Ted's group that they take him out to breathe in a few hives. Somebody else said that was a right daft idea as that would be the best way to get all the Nelson bees to clear off to the North Island!

Don't Read This

Linda's pearl for today.

Today's news reports the birth of a baby in Auckland Women's Hospital with both male and female organs. The head of obstetrics and gynaecology Professor Fallopian was able to confirm by phone that the baby had both a penis and a brain!

And a lunchtime pearl from Linda Bergman—now graded up to scientist since Mark Goodman went home.

Question: Who invented copper wire?

Answer: Two Scotsmen trying to share a penny!

EXPORT CERTIFICATION SYSTEMS

**By Hans Verberne, Plant Export Certification,
MAF Quality Management, Ruakura, Hamilton**

There have been a number of changes to the way export certification has been provided in recent times. The split between Policy and Delivery within the Ministry of Agriculture & Fisheries, and the trend towards the adoption of quality systems, are two of the main reasons for these changes. These changes have caused some concern in the industry as to their effect on industry operations and costs.

There has been some confusion about a number of terms used to describe these changes. Terms such as quality assurance, quality systems, conformity certification and quality control are commonly used. I intend to explain these terms and relate them to how export certification is provided.

The trend towards quality systems, as opposed to inspecting product to see if it meets quality standards, is a definite and growing one. Many companies and countries are demanding quality systems be in place before they purchase product. The International Standards Organisation has developed a series of uniform standards agreed on by countries throughout the world for quality systems. The main standards in use are known as the ISO 9000 series. The terminology surrounding these standards can be described very simply.

Some of the more common terminology:

QUALITY

Quality is a term used to describe all the features and characteristics of a product or service that have an impact on its ability to satisfy stated or implied needs, i.e. quality is "fitness for purpose", "customer satisfaction", "conformance to requirements". Quality in this sense is not used to describe the ultimate features available in a product range. In other words, a quality product may be a Mini or a Rolls Royce.

QUALITY SYSTEM

The organisational structure, responsibilities, procedures, processes and resources that contribute to the quality of a product. In many situations in New Zealand's primary industries, quality systems are wholly or partly in place. They may however not be documented or audited as is stipulated in the ISO standards.

QUALITY ASSURANCE

All those planned actions necessary to provide adequate confidence that a product will satisfy requirements for quality.

QUALITY CONTROL

The operational techniques and monitoring activities that are used to fulfil the requirements for quality.

These terms may be better understood by describing a quality system.

A quality system consists of three basic components: management responsibilities, specifications/standards, and procedures.

Management responsibilities include an organisational policy statement, the organisational structure, job descriptions and procedures for reviewing the quality system.

Specifications outline what you want to achieve. Examples of specifications/standards include:

- Honey grade standards
- Zoosanitary specifications
- Packaging specifications
- Storage specification
- Transport requirements
- Training standards
- Document control

Procedures outline how you want to achieve the standards. Procedures may include:

- Training programmes
- Grading/packing procedures
- Packaging preparation
- Quality control - sampling
  - inspection
  - recording
- Internal audit procedure
- Procedure in event of a breakdown
- Transport procedures.

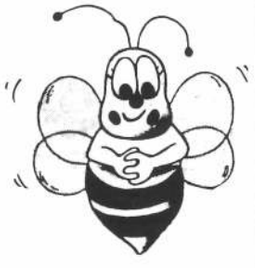
All these procedures are the planned actions that will satisfy requirements for quality, i.e. quality assurance. Quality control is just one type of procedure usually related to product inspections, sampling and recording.

Having briefly discussed the background to quality systems, they need to be related to how export certification is being provided now and into the future.

The questions commonly asked are why bring these concepts into certification procedures and why change what has been done in the past.

There are a number of reasons for bringing the quality systems approach into export certification:

1. User pays means that MAF inspecting **every** consignment of export produce can be very expensive.
2. Some importing country requirements are difficult to inspect on a consignment by consignment basis, i.e. statements to the effect that an area is free of a particular pest or disease.
3. Importing countries want evidence that we have systems in place and that these systems are meeting their requirements.



4. MAF Policy require that any systems operated by MAF Quality Management (as the contracted certification organisation) conform to the ISO 9000 series standards.
5. Developing a quality system at an exporter/producer level means that the exporter/producer can have control over the product, i.e. they are not waiting on a knife edge to see if the product passes MAF inspection after they have gone to all the trouble of producing and packing it, because they already know that it meets the required standard for certification. There is also an added benefit of a quality system providing a company with the opportunity to expand the system to include other standards and specifications, apart from those required as part of the export certification process.

The Conformity Certification Scheme operated by MAF outlines the options available to exporters for certification of their product. These options now include a MAF audit of exporter quality systems as well as MAF end point inspection on a consignment by consignment basis. Alternatively the exporter has the option of exporting without MAF certification.

The certification option chosen by the exporter will be affected by:

— The amount of product to be exported
— The frequency of export consignments
— The type of certification required.

The options for certification being offered to the Apicultural Industry are very similar to those offered to the Horticultural, Seed and Dairy Industry. The Meat Industry situation is somewhat different at present in that importing countries (especially the European Community and USA) demand quality control/inspection by Government officers. This situation is likely to change dramatically as more people come to have confidence in quality systems and cost pressures of such as expensive certification system come increasingly to bear on the users of that system.

There are a number of assurances provided as part of the certification of apicultural product that would be extremely difficult to provide on an end point consignment inspection basis. For example, an exporter may want product certified that required an endorsement to the fact that the apiary and the area surrounding it was free of a particular disease. If there was no system in place, then each time a consignment was presented, the apiary and surrounding area would have to be inspected before the endorsement could be provided. If the exporter develops a quality system which documents and puts in place those procedures to ensure that the apiary and area is free of the disease and MAF audits this system and is confident that it is operating effectively, the certification endorsement can also be provided. The quality system approach therefore offers the exporter much greater control and less cost than an inspection approach.

How does MAF Quality Management's Conformity Certification Scheme work? Firstly an application to join the scheme is made to MAF. The quality system must then be documented by the exporter. MAF then checks the document to ensure that the system meets specifications. An initial audit of all aspects of the system is then carried out and provided the outcome of the audit is favourable, the exporter is admitted to the scheme. On-going audits of the company's system are then carried out on a regular basis. Certification will continue to be provided on the basis of successful audits. If breaches of the quality system are noted during an audit, they are classified and apppropriate action is taken. A critical non compliance may result in the company's removal from the scheme and return to end point inspection. A minor non compliance will result in a note on the audit report and a timetable agreed to correct the non compliance negotiated with the company. The continuing recurrence of a minor non compliance may eventually result in the company's removal from the scheme.

For further information of MAF Quality Management Certification Scheme please contact your local Apicultural Advisory Officer.

Excerpts from the Bee EHQ News, or From the Nelson Coalface

Will my Pollen be Cut Off?
A 75-year-old lady phoned Derek Bettesworth today to say she was worried in case her pollen supply would be cut off because of the emergency. She has eaten bee pollen for the last few years and been completely free from bronchitis. She didn't want a recurrence of her old problem. Derek was able to reassure her.

Done Under Stress (Real Cases)
Scientist made up baby's bottle and wondered why baby not interested. He had used flour!

An AAO mailed himself some surveillance samples to himself.

A scientist tried to send a fax to himself and wondered why the number was always engaged.
(Footnote—You can actually fax yourself and there is unequivocal evidence to show that you don't go blind.)

Corridor Dangers
Boy, haven't the corridors been diabolical places these last few days. Architects clearly don't plan for such events as bee emergencies. You soon learn not to tear around a corner assuming nobody will be there, or walk along having a conversation over your shoulder! Yarning in the corridor is an equally dangerous exercise, especially if you have anything protruding—it gets wiped off! Some of us have no problems here!

Another Cure for EBD
Roly Anderson ERP Co-ordinator in Auckland had a call on his emergency MAF freephone at the weekend. A lady phoned to give him information from a book printed in the 1800s. You take 8 grains of salicylic acid and mix it with 8 grains of borax. Mix with 8 oz of rain water collected when the moon is full. Use the mix as a spray!

EHQ News Editor Mystified!
A Post Haste Couriers "Overnight letter" was delivered today from a "Mandy" at MAF Batchelar containing a "French letter". Would anyone who has a rational explanation, or knowledge on how to use them please contact the editor. The record of staff having been at the EHQ is being searched. The covering note says that "the idea of feral condoms would put more sting in your zing!" The packet is now available from the store.

Linda's Pearl for Today
An AAO, a BPO and a beekeeper arrives at the pearly gates on Christmas Day only to be told by God that he was closed for the holiday. He wasn't very pleased to have to open up and did so only when they could show their reverence and show something that illustrated the spirit of Christmas.

The AAO when challenged pulled a piece of holly from his pocket. "Great," said God. "Step this way." The BPO pulled out a bit of holly which got him entry. The beekeeper pulled out a pair of ladies knickers! "What the heck has that got to do with Christmas mate?"

"Ah," said the beekeeper. "It's bloody obvious. They're Carol's!"

STARTING YOUNG

Story and Photo Courtesy The Marlborough Express

Secondary schools tend to be a hive of activity, none more so than Marlborough Girls College these days.

As part of their bursary level horticulture studies, three of the college's senior students are experiencing "hands-on" experience of the honey producing industry.

Kirsten Dalton, Karina Foote and Nikki Elliot are tending two beehives in a corner of the college grounds. They are among 10 bursary level horticultural students this year under the tutelage of Brian Wallace.

This is the first year the course has been available at the Marlborough Girls' College and the second year it has been available nationally, Brian says.

"We didn't make it available here until this year because we wanted to see what was being done elsewhere," he says.

While their classmates are studying such subjects as the peony rose as a cut flower, grapes and the various varieties thereof, wines and wineries and feijoas, the three would-be apiarists have concentrated their efforts on honey production, from starting a hive, through to harvesting, packaging, advertising, marketing and sales.

Professional aptarists Reg Clarke and Rod McKenzie have taken the girls under their wing for a study on commercial bee keeping, while their teacher Mr Wallace, a hobbyist beekeeper made available two of his hives for their study.

One hive was full of townie bees, the other, from his Anakiwa Bay home, occupied by the smaller, black "Sounds beasty" bees. Part of the girls study was to compare the behaviour of both bee species.

"Local beekeepers always say that the Sounds bees are more likely to go out and work in wet and cold weather, where the local ones will stay in. The girls are conducting a scientific investigation to see whether this is imprinted in the bees DNA, in other words genetically controlled or an environmental thing," Brian explains.

In their study of beekeeping the girls have also taken up carpentry as they made their own frames for the hives. In the course of the study so far the girls have become quite attached to their little buzzy friends, to the point where recently they took the honey gatherers a little too lightly and as a result were on the receiving end of the sting department.

Kirsten Dalton, Karina Foote, and Nikki Elliot.

On the day in question some contractors were working near the hives preparing to build a double garage. Their presence stirred up the bees so that when the students went to fit a special counting device into the hive entrance, their winged friends took umbrage, stinging one student several times on the face.

One important lesson learned from that was to be fully kitted out before working the hives, Brian says.

On another occasion the bees caused havoc in room P11, the room used by the students to extract their honey.

"They left some honey behind and the bees soon found it, gorging themselves," Brian says.

The bee banquet put room P11 out of action for an afternoon until the students could return their charges to their hives.

But all in all the study has been highly instructive and useful to date and at the end of the day should provide the students with an insight into beekeeping, some useful marks towards their bursary qualification and some scrumptious jars of Buzzy Honey for consumption.

Cleaning floor and walls more efficiently

An efficient, economical method of cleaning the flat surfaces of walls, floors and windows has been produced by a British company.

The Combine System, from Scot Young Research, uses a cleaning mop and bucket combined with a soil seperation detergent and a dirt trap (the Mermaid Mat).

The system solves the problem of dirt being put back on clean floors by the mop, through its design. The bucket, made from heavy-duty plastics and fitted with four castors for easy movement, has a sloping floor along which dirt particles slide until they become trapped beneath the mat, which acts as a one-way system. Footpedal rollers allow the mop to be rinsed as often as necessary and since the dirt is filtered from the water, the mop is always rinsed in clean water. The system uses less water, detergent, time and labour than has been necessary until now.

The unit is offered in a choice of widths to suit different duties. A range of mopheads in sponge, Syntex and cotton is also available. Everything can be laundered or autoclaved and colour coded versions can be supplied.

WATCH YOUR STANDARDS

By Ham Maxwell

On one of our recent trips into the countryside, designed to give us an uplift in spirit, a fresh look at things and a change from the humdrum of suburbia, we called as usual on small roadside stalls. The variety of goods offered for sale in these stalls is truly amazing, and the better half often purchases small items to be put away for a while and later to be gifts for friends or grandchildren. Costs us a fortune at times, but as you can't take it with you, the money is being turned into something which will bring delight to the recipient.

My interests are less expensive; they tend to concentrate on things of practical value, things which can be used, not just plonked on a shelf to collect dust. Naturally, following my interests, I take a look at the honey offered for sale. The innovative methods used to contain the honey are often a useful source of ideas for the future marketing of my own honey. Pot size, shape, labelling and tasting, all are part of presentation. These conditions often are net successfully, but all too often are not.

If the owner of the stall is a beekeeper, the presentation often varies from stalls where honey is merely just another commodity on the shelf. Principally, the main variation is that the beekeeper lets the prospective customer taste the product before buying. Too often the method is crude; at one stall the customer was invited to: "dip your finger into the honey of your choice". Nothing was provided for the customer to wash the sticky finger, and we all know how sticky honey can be. This is not excusable, principally because of hygiene, but it is also not common sense. Leaving your customer with sticky fingers is a sure way of arousing resentment.

The customer is your life blood. No customer, no life in your business. By all means encourage your customer to taste your wares, but make sure reasonable standards of hygiene are met, as required by local by-laws anyway. Provide tasting sticks, a waste bin for used sticks, wet tissues for the occasional customer who will manage to get his or her fingers sticky. By interesting the customer in testing the flavours on offer, you have gone a long way toward getting him or her to leave with a pot of your honey clutched in a fist. The majority of customers will use discretion in the use of the tasting sticks, and not dip the same used end into each pot of honey. They themselves operate on reasonable hygiene standards. However you will need to watch for the occasional young customer, often operating with a sense of "having you on". Be firm in your standards. The result is more often the appreciation of your standards by other customers.

In demanding a good standard from the customer, you must be seen to set a good standard yourself. The way you dress, for example. Look as if you have washed your face and hands, particularly your hands. My better half will not buy food from anyone whose hands give the impression of having just emerged from the dismantling of some machine. Fingernails which have not seen the pointed end of a nailfile for some months are another "no-no" in her book. Should you decide to wear a bee suit make sure it was washed before selling day. Customers will accept well used clothing if it is laundered. If you wear a bee suit, particularly for market-stall selling it can arouse curiosity in the prospective customer. It can also excite young children who ask their parents if they can go to see the "Moon-man".

Goods on the shelf must be well displayed, with prices clearly shown. Have your honey pots been cleaned of honey drips from the filling process? If not, you will be cursed all the way home because the customer's hands are sticky. Are the lids of the honey pots secure? Nothing is worse than a lid coming loose and covering the carpet in the car with honey. Screw top jars overcome that problem and are worth the slight extra cost. Alternatively, provide a "free" plastic bag for the honey pot to be carried in.

With a variety of honies on display it pays to clearly identify the various types. Label them according to the predominant flower type in the area the yard is located. You may also label them by the area from which you gathered the honey. With the Sale of Goods Act in force the area label will give you the most scope, because some customers will delight in making you justify the label. To have the honey clearly identified by pollen analysis is not cheap, and may be necessary if you insist on using that type of label. Words such as 'Bush', 'Meadow', 'Farm', allow for a lot of latitude in your labelling and keep you within the limits allowed by the Act. Experienced beekeepers claim to be able to tell by taste the predominate species of nectars in the honey. That skill this beekeeper has yet to acquire.

Whether to sell direct ot through agents is always a vexing question. Control of the mark-up is lost once the goods have left your hands, unless a formal written agreement is completed. This is too troublesome for the stall holder and the small beekeeper and could be a point of friction between the two. More often the agent offers the one thing the beekeeper lacks, that is, direct access to the customer. This means a commitment by the retailer to lease premises, insure stock, and a host of other matters which see them dipping into the till. Naturally all this must be recovered, so be reasonable when discussing the on-selling of your product. Give some thought to whether you really want to be bored stiff for long periods when business is slow and customers are few. For this beekeeper, direct selling to the customer is probably the most boring part of beekeeping. As a small commercial beekeeper, my stocks are not high enough to bulk-sell to packers, so for me direct selling is a must.

The label on your product must meet various requirements such as the name of the packer, the content, in this case honey, and the weight. The name is required to give a starting point should any complaint arise about the product, particularly in respect of disease prevention. Honey from hives infested with foulbrood could cause a major outbreak of disease. While humans are not affected by foulbrood, diseased honey on the market may be all that is necessary to transport the disease to an area previously free. The type labelling of the contents has already been discussed above, but needs careful thought on your part.

By showing the net weight of the contents and the container you will meet the requirements of the various Acts applicable. The machine on which these weights are set will also need to be certified, another expense. For the amateur beekeeper a good method is to weigh the jar and contents without a lid, bring each one up the weight stated on the label and then put on the lid. The parsimonious types will wince at the thought that the weight of the lid in honey is lost with each sale, and commercially this will add up over the sale of thousands of pots. But it is a precaution. You must always give the stated weight, even a fraction more, as you are

prohibited by an Act of Parliament from selling goods by weight and failing to supply the stated amount. It could be costly if you are picked up by the Weights and Measure Inspector and your pots are short by only a few grams weight.

In practice, a fair degree of latitude in the marketing of our product exists. If you meet the majority of requirements, particularly those related to health regulations, no problems should arise. When trouble does rear its ugly head it usually comes from one of two sources: a competitor or an over-zealous official. Both are frustrating, time consuming, and it can be expensive if you are summoned to court. The vexacious complaint of a competitor in the market place is the most common type met, so make sure you are on firm ground and able to defend your actions. In these tough times your competitor is more likely to take action against you in order to frighten you off his or her turf. Don't be intimidated. Stand up for yourself vigorously, particularly if you have gone to some trouble to get yourself established. Make sure your product will stand up to any scruitiny, have an answer to criticism that is rational and self explanatory, and see the criticism for what it usually is, unfounded, ill informed, and motivated my malice.

The over zealous official is a different kettle of fish. Be polite at all times without buckling under or giving the impression you are scared stiff! Identify the precise complaint as early as possible. Request a formal written notification of the complaint and, if need be, pack your traps then and there to avoid prolonging the agony. Don't forget to DEMAND that the official produce formal identification. Did you know that you are entitled to have a full council revue of any decision of any directive one of its officers makes? This beekeeper used this most effectively when ordered to remove bees from an area. All official action stopped dead when the request was made!

The only person who will look after you is yourself. Be prepared to meet some really nice people when you let yourself and your product loose on the unsuspecting public. Conversely be prepared for meeting the occasional nasty who lurks in every crowd. Have faith in your product, yourself, and go out there with but one thought — "SELL, SELL, SELL".

NATIONAL BEEKEEPERS' ASSOCIATION 1992 CONFERENCE

AGM, Conference of Delegates and Seminar
Hawke's Bay, July 20-23
VENUE: Angus Inn Motor Hotel, Hastings
P.O. Box 498. Telephone (06) 8788111. Fax (06) 8787496.

N.B.A. Seminar

Most sessions have been provisionally allocated to a broad range of speakers but if you know of someone who should be heard contact the Conference Secretary.

PROGRAMME

Monday 20th	Specialty Group Meetings from 9 am. Special "Happy Hour" from 6 pm.
Tuesday 21st	N.B.A. Seminar, 9 a.m. to 4.30 p.m.
Wednesday 22nd	Conference all day from 9 a.m. Partner's tour in afternoon Conference "Function" evening
Thursday 23rd	Conference all day from 9 am.

COSTS

Yet to be finalised but expected to be similar to last year.

REGISTRATION

Please assist us by registering early in June after complete information is published in the New Zealand Beekeeper (Winter).

VENUE: Angus Inn Motor Hotel, one of the leading motels and conference centres, has all facilities including courtesy cars connecting with the airport. Air New Zealand has offered a 30% fare reduction with the authority number DOM 605/91.

Hawke's Bay, the fruitbowl of New Zealand, has many attractions which can be arranged around Conference.

If you are a prospective registrant, wish to be a sponsor or to mount a trade display but have not yet been approached contact the Conference Secretary, 6 Totara St, Taradale. Phone (06) 8449493.

A NEW WAY OF CONTROLLING SWARMS

By Ham Maxwell

To the majority of beekeepers the tendancy of bees to "swarm" in the spring is a nuisance. Bang goes the production planned for that hive in the forthcoming season. To add insult to injury the bees always seem to know that their keeper is not available to attend to their immediate needs at the time they elect to swarm. Recourse to learned documentation by authors renowned as "experts" on the subject of swarm control tends to leave one no further ahead. Expert A differs markedly from expert B,C, and for as long as one cares to travel the alphabet. So what is to be done?

This question has been pondered by many, and it seems that everyone has overlooked one basic factor. This omission, for all its simplicity, would provide the answer to swarm control, giving beekeepers peace of mind forever. That the answer has not been found before is nothing short of amazing. It gives rise to doubts about the ability of beekeepers down the years to adequately comprehend the messages the bees have been sending to us for donkeys' years.

Following on from close studies reported in learned journals, many methods of swarm control exist for today's beekeeper to adopt. Clipping the wings of the queen bee is a commonly advocated method, rejected by many as unnecessarily cruel. Your individual sensitivity would guide you in the acceptance or rejection of this method.

Re-arrangement of the brood chamber has also received attention from the worthies, with learned dissitation as to the detail necessary in carrying out this proposal. Results still seem variable.

Removal of swarm cells has received its share of attention from the pundits, with successes and failures being recorded. Congestion of the colony is said to throw the balance of the community out of kilter, so the beekeeper should arrange immediately for improved accommodation within the hive.

Total destruction of any new queen cells found within the brood chamber is a further method adopted by beekeepers who profess to know just what should be done. This wanton loss of life is appalling to those with any sensitivity and who care for all creatures great and small.

Reorganisation of the bee-yard colonies is a further method. By interchange of the physical siting of strong and weak hives in the yard during the working day, the balance of distribution of bees amongst the colonies is altered. The stronger hives are believed to be most prone to swarm, thus losing population to weaker hives. This reduces the stress on accommodation, leading in turn to loss of desire for the stronger hives to swarm.

Placement of screens over the hive entrance to inhibit the exit of the queen bee has also attracted its share of comment. No loss of life is the most noticeable claim offered for this method. That a queen determined to leave the nest will diet and slim down until she can slip between the bars of any screen fitted at the hive entrance may be overlooked or ignored by the tenderhearted keeper.

Replacement of the queen bee at two-yearly intervals is probably the most preferred method among beekeepers. It means a once only visit to the hives, and less work than in the methods previously considered. Whilst tough on the resident queen, it would appear on balance to be the one method which gives some degree of reliability and stability in control of swarms.

Now I did say earlier that the bees have been sending the message to beekeepers for years. That beekeepers have failed to get that message can hardly be blamed on the bees. To be fair to beekeepers, many of whom are highly intelligent, there must be a way for beekeepers to interpret just what the bees are saying. Sign language is out, acute observation by beekeepers still has not produced a fail safe method of interpretation. The word 'language' may well prove to be answer.

By looking at the communication problem from the other end, this may prove to be the one factor beekeepers need to understand the message the bees have been endeavouring to get across. In order to progress in our chosen craft, reading of all available literature is recognised as a sure fire way to absorb all the observation undertaken and presented, and hopefully understood. This is assumed, naturally, because man is smarter in intellect than other creatures.

This intellect so far has failed to lead us to our goal of complete harmony and understanding with the honey bee. Now, if we believe we are so smart, and we believe that the bees also are smart little critters, then why the current barrier? The answer is staring us in the face. WE all have read the books relating to the control and management of honey bee colonies, so it's about time we taught the BEES also to read these same books.

My one language is English. Now will the Italian bee be capable of understanding me? Some of my flock have German ancestry I'm sure. If we had Carniolan bees, in what native tongue should we address them? The Africanised bee may one day visit, would the schools I establish be able to cope? Don't forget we have indigenous native bees. Now a good friend of mine is a fluent speaker of the Maori language, I'll just go and 'phone him.....

LEADING THE RACE FOR CLEANER DIESELS

An advanced rig for testing electronically-controlled diesel fuel injection systems is helping Ford of Britain to claim a lead in the race to develop cleaner diesel engines.

The innovative rig, which realistically simulates normal engine running conditions yet measures the performance of the fuel system much more accurately than would be possible in a vehicle, has been installed at Ford's Dunton Research and Engineering Centre near London.

The British company believes that only electronic fuel injection technology will enable engine makers to meet the stringent emission standards that will be set internationally by 1997. Development work on such systems is currently a priority for most motor manufacturers.

One of many innovators incorporated into the test rig is an extremely accurate electronic device designed by Ford engineers to trigger the delivery of fuel to each cylinder at precisely the right moment: a key factor in combining efficiency and power from a diesel engine. Another Ford "first" is a technique for ensuring very precise control of the temperature of the fuel, which will also be a critical factor in meeting planned future emission standards.

"We believe our rig with its unique features is the most advanced in the world" said Mr Jeff Gill, supervisor of engine testing at Dunton. "Without it, developing electronic systems would take several months longer and costs would be substantially higher."

The new £160,000 test unit will enable Ford to avoid the motor industry's usual procedure of relying on a supplier to carry out repeated expensive and time-consuming tests. "Doing our own testing ensures we achieve the highest quality and best fuel consumption levels while improving overall engine performance," said Mr Gill.

Ford also has a test rig at Dunton for electronic fuel injection systems for petrol engines, which in its turn also represented new technology for the motor industry when it was first installed a few years ago.

Classified Advertisements

Available only to registered beekeepers selling used hives, used plant, and other apiary equipment, and those seeking work in the industry. $17.50 for 20 words (inclusive of GST) payable in advance. No discounts apply. No production charges. Maximum size: 1/6 page. No box number available.

FOR SALE

12-Frame older-style extractor, goes well, $1200 ono. 200 pallets and lids for palletised hives, well made, price neg. 500 top feeders, ex condition, price neg. Ph. (06) 363-764 S.

Large beekeeping business in Mid-Canterbury on site plus 600 on honeydew. Gear in top condition. Sale due to health. Phone (05) 321-829.

For sale 30 beehives ready to receive bees. Phone 438-9491 Whangarei.

OTHER PUBLICATIONS

BEE CRAFT

The official monthly journal of the British Beekeepers' Association, covering all aspects of beekeeping in the UK. Annual subscription including postage $37 surface mail $69 air mail to Mrs S. White, 15 West Way Copthorne Bank, Crawley, West Sussex RH10 3QS. Our editor has advised that he has not received a copy of your journal for the last six months. Please could you arrange to resume delivery to him. His name and address are as follows:— Mr R. Young, 23 Beaconsfield Rd, Vincent Park, Sittingbourne, Kent ME10 3BD.

INTERNATIONAL BEE RESEARCH ASSOCIATION (IBRA)

What do you know about the INTERNATIONAL BEE RESEARCH ASSOCIATION? The many books and other publications available from IBRA will deepen your understanding of bees and beekeeping. An IBRA membership subscription — including BEE WORLD, a truly international beekeeping magazine published quarterly in the English language — will broaden your beekeeping horizons. Details and a wide selection of books and publications from New Zealand IBRA representatives, Cliff Van Eaton, MAF, Private Bag, Tauranga or Peter Brunt, Nelson Polytechnic, Private Bag, Nelson.

THE SPEEDY BEE

Keep up with the latest in the United States beekeeping industry with reports of meetings and developments from The Beekeepers' Newspaper. Published monthly. $20.00 per year (mailed First Class). Write for air mail rates. The Speedy Bee, P.O. Box 998, Jesup, Georgia 31545 USA. Write for free sample copy.

OTHER PUBLICATIONS

THE APIARIST

A New Zealand Beekeeping Journal. Published every two months. Contains informative and interesting articles on beekeeping in New Zealand and overseas. Subscriptions: Free to all registered beekeepers in New Zealand with six hives or more. $5.00 per annum, if less than six hives. Write to: The Editor, "The Apiarist", P.O. Box 34, Orari, N.Z.

SOUTH AFRICAN BEE JOURNAL

The leading bee journal in Africa for over 75 years. Official organ of the Federation of Beekeepers' Associations, published bi-monthly in English and Afrikaans. Primarily devoted to the African and Cape bee races. Subscription, including postage: R35.00 per annum, payable in advance in South African Rands. Apply: The Federation Secretary, PO Box 4488, 0001 Pretoria, South Africa.

AUSTRALASIAN BEEKEEPER

Senior Beekeeping Journal of the Southern Hemisphere. Complete coverage of all beekeeping topics in one of the world's largest beekeeping countries. Published monthly by Pender Beekeeping Supplies P/L, P.M.B. 19, Gardiner St., Maitland, N.S.W. 2320 Australia. Subscription by Bank Draft. $US27.00 surface per annum.

FARMING UNCLE

Magazine for homesteaders! Covering small stock, gardening, bees, and much, much more. Free information or $US8.00 one year ($US12.00 foreign). Money-back guarantee! Farming Uncle, ® , Box 91E92, Liberty, N.Y. 12754, USA.

Notice to Classified Advertisers

As a result of representations by Sue Walker, the executive has agreed that advertisements for surplus honey may now be accepted in the classified columns of the NZ Beekeeper. Advertisers should note that copy for such advertisements must be accompanied by full payment as laid down at the head of this page.

Michael Burgess
Editor

OTHER PUBLICATIONS

SCOTTISH BEE JOURNAL

Packed with practical beekeeping. $4.80 a year from the Editor, Robert N. H. Skilling, F.R.S.A., F.S.C.T. 34 Rennie Street, Kilmarnock, Ayrshire, Scotland.

BRITISH BEE JOURNAL

Monthly — Single copies 22p plus postage. OVERSEAS. Annual subscription 4.20 sterling or $18.40 post paid. Keep up to date by taking out a subscription now from us at — 46 Queen Street, Geddington, Northans, NN14 1AZ, England.

GLEANINGS IN BEE CULTURE

Do you have questions or problems about beekeeping in different areas? Learn how to solve them by reading "Gleanings in Bee Culture", the largest circulation English language bee journal, and made up of articles by well-known professors and beekeepers, like yourself, who tell how they have succeeded in beekeeping. For Subscription rates write to: Gleanings in Bee Culture, P.O. Box 706, Medina, Ohio 44258, USA.

BEE WORLD

World renowned, world respected. A truly international beekeeping magazine published quarterly in the English language. Included as part of membership in the International Bee Research Association (IBRA), the world's leading charitable trust providing scientific and practical information on bees and beekeeping. For full details of IBRA services and membership contact: International Bee Research Association, 18 North Road, Cardiff CF1 3DY, UK. Tel: (0222) 372 409 Fax: (0222) 665 522 or New Zealand IBRA representatives, Cliff Van Eaton, MAF, Private Bag, Tauranga or Peter Brunt, Nelson Polytechnic, Private Bag, Nelson.

THE SCOTTISH BEEKEEPER

Monthly Magazine of the Scottish Beekeepers' Association. International in appeal, Scottish in character. Subscription rates from: D.B.N. Blair, 44 Dalhousie Road, Kilbarchan, Renfrewshire, PA10 2AT, Scotland, U.K. Sample copy on request — $1 or equivalent.

AMERICAN BEE JOURNAL

Subscribe now to the oldest bee magazine printed in the English language. Amateur, professional and scientific news makes ABJ an attractive buy for any beekeeper. World-wide crop and market page an outstanding feature. The American Bee Journal is the largest monthly apiculture magazine in the world. Enquiries to American Bee Journal, Hamilton 1U.62341 USA.

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Stuart Ecroyd (Proprietor)

IMMEDIATE DELIVERY

BEEQUIP'S UNCAPPING MACHINE

$3195 + GST

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IMMEDIATE DELIVERY

LEGA HONEY PACKING MACHINE

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Complete with 400 kg s/s tank, stand and bench. 400 kg per hour capacity.

IMMEDIATE DELIVERY

LEGA HONEY PUMP

$1600 + GST

50 mm, 1 HP motor reversible, 1500 to 2000kg per hour, complete unit on wheels.

WANTED

POLLEN

We currently require supplies of fresh, clean and dried pollen. Please contact us advising quantity available and your price.

WANTED

EXTRACTORS CAPPINGS SPINNERS ETC

We often have a demand for good second hand machinery. (Spinners urgently required).

SELL

EXTRACTING PLANT

$5500 + GST

Complete plant includes 48 frame s/s Pender extractor, baffle tank, reducer, warmer etc. Full details available on request.