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OFFICIAL ORGAN of the
NATIONAL BEEKEEPERS' ASSOCIATION
OF NEW ZEALAND
(Incorporated).

(An Organisation for the advancement of the Beekeeping Industry in New Zealand)

Better Beekeeping | Better Marketing

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HONEY PRICES

The new Price Order for honey was finally gazetted on January 27th, 1955, and provides for an increase of approximately one halfpenny per pound. The delay in the appearance of the Order has caused some concern among producers, but every possible step was taken to have it released before the end of 1954.

Immediately after Conference, the assistance of the Extension Division of the Department of Agriculture was sought and obtained in revising the 1952 Cost of Production schedules, and at the same time preliminary advice was given to the Director of Price Control of the Association's intention to lodge an application for a price increase.

The re-costing was completed on 17th August and the case lodged with the Price Control Division with a request that the matter be accorded urgency. No delay was expected as the increases applied for were in most cases simple percentage "on-costs" to basic allowances which the Tribunal had previously recognised.

No intimation had been received from the Control Division (the investigating body) up to the time the Executive met in Wellington on 28th October. The President (Mr E. D. Williams) therefore waited on the Director of Price Control, and ascertained that, after examining the application, he was prepared to pass it on to the Tribunal with a recommendation that the increases applied for be granted. The Director was also prepared to accept a further addition to the application to make allowance for the 3% General Wage Order which was announced on 28th October and would become effective after 18th November, 1954. These amendments were made without delay, and the application passed back to the Control Division. At this time the Executive were advised that the Division was considering an application lodged by the Honey Marketing Authority in connection with increased packing costs, and it was likely that the Tribunal would be considering the two applications simultaneously with a view to making one overall order for Price Increase.

It was realised that the release of the Order could not now be expected until after 18th November, but every effort was made to impress the Control Division with the necessity for having the matter finalised by 30th November at the latest.

The Order did not appear on 30th November, and on enquiry it was learnt that there had been disagreement over some points of the H.M.A.'s case and that the Order was now expected to appear on 16th December. On 22nd December the Secretary to the Tribunal was urgently contacted and he advised that the matter was to be held over until the New Year. An eleventh-hour effort was made through the Minister of Agriculture to secure the passage of the price order, but to no avail.

It will therefore be seen that no effort was spared to have a new Price Order in operation before the flow of new season's honey, and that the delay has been due to matters outside the Association's control.

NEW HONEY PRICE ORDER

The following provisions are contained in the new Price Order for honey, gazetted on the 27th January, 1955:—

Preliminary

1. This Order may be cited as Price Order No. 1591, and shall come into force on the 28th day of January, 1955.

2. (1) Price Order No. 1381 is hereby revoked.

(2) The revocation of the said Order shall not affect the liability of any person for any offence in relation thereto committed before the coming into force of this Order.

3. (1) In this Order, unless the context otherwise requires—

"The said Act" means the Control of Prices Act 1947.

"Honey in the comb" means either (a) Honey sold in standard sections; or (b) cut comb honey—that is, honey containing no visible traces of stored pollen or other impurities stored in clean new combs that have not been used at any time for brood-rearing purposes:

"Packer" means a wholesaler who sells to another wholesaler honey packed in retail containers, and includes a producer who sells to a wholesaler honey packed in retail containers as aforesaid;

"Producer" means a beekeeper whose apiary is registered pursuant to the Apiaries Act, 1927;

"Retail container" means a jar, carton, or tin supplied by the vendor of the honey and containing not more than 10lb. net weight of honey;

"Standard case" means a case or other outer container containing in the aggregate approximately 60lb. of honey packed in retail containers;

"Wholesale free delivery area" means any area within which any wholesaler normally undertakes the free delivery of goods to retailers.

(2) Terms and expressions defined in the said Act when used in this Order have the meanings severally assigned thereto by that Act, unless the context otherwise requires.

4. For the purposes of this Order, and notwithstanding anything to the contrary in the said Act, any person who sells by retail to any one purchaser for delivery at any one time not less than two standard case lots of honey shall, in respect of the sale be deemed to be a wholesaler, and the provisions of this Order as to maximum wholesale prices shall apply accordingly with respect to every such sale.

5. The maximum prices fixed by this Order shall apply with respect to sales by auction as well as to other sales.

Fixing Maximum Prices for Honey Sold in Retail Containers

6. (1) Subject to the following provisions of this clause and of clauses 9 and 10 hereof, the maximum price that may be charged or received for honey packed in retail containers of the kinds described in the first column of the Schedule hereto shall be the appropriate price fixed in the second, third, or fourth column of that Schedule.

(2) Where the quantity of honey sold by a packer to a wholesaler or to a retailer in any one transaction is six standard case lots or more the cost involved in effecting delivery to the port (where carriage by sea is entailed) that is nearest or most convenient of access to the wholesaler's or to the retailer's place of business shall be borne by the packer.

(3) The maximum prices fixed in the fourth column of the Schedule hereto are fixed in respect of supplies of honey available to the retailer free of freight charges for delivery at his store from any source whatever.

(4) Where supplies of honey are delivered to a retailer (other than a retailer situate within a wholesale free delivery area) otherwise than free of freight charges as aforesaid the price that may be charged by the retailer shall be the appropriate price fixed as aforesaid, increased by a proportionate part of the freight charges incurred by him in obtaining delivery: Provided that the amount added to the price in respect of freight, pursuant to this subclause

shall not in any case exceed ½d per pound.

(5) The several prices fixed by this clause include the price of containers.

Fixing Maximum Prices for Honey Sold Otherwise than in Retail Containers of a kind described in the Schedule hereto.

7. (1) Subject to the following provisions of this clause and of clauses 8, 9, and 10 hereof, the maximum prices that may be charged or received for honey sold otherwise than in retail containers of a kind described in the first column of the Schedule hereto shall be determined as follows:

	Maximum Price Per Pound At the Rate of s	d
(a) For honey, cut and wrapped	1	5½
(b) For other honey—		
(i) Sold by a producer to a consumer—		
(a) In lots of 60 lb. or less ..	1	2½
(b) In lots of over 60 lb. ..	1	1½
(ii) Sold by a producer to a packer, wholesaler or retailer	1	1½
(iii) Sold by any person whomsoever to a wholesaler ..	1	1½
(iv) Sold by a wholesaler (not including a producer) to a retailer	1	2½
(v) Sold by a retailer	1	4½

(2) The maximum retail prices fixed by the last preceding subclause are fixed in respect of supplies of honey available to the retailer free of freight charges for delivery at his store from any source whatever.

(3) Where supplies of honey are delivered to the retailer otherwise than free of freight charges as aforesaid, the price that may be charged by the retailer shall be the appropriate price fixed as aforesaid, increased by a proportionate part of the freight charges incurred by him in obtaining delivery: Provided that the amount added to the price in respect of freight, pursuant to this subclause, shall not in any case exceed ½d per pound.

(4) The several prices fixed by this clause include the price of the containers.

Honey Sold in the Comb has been Exempted from Price Control.

General.

9. If in respect of any honey the retail price charged in accordance with the foregoing provisions of this Order is not an exact number of pence or half-pence, the maximum price shall be computed to the next upward halfpenny.

10. Subject to such conditions, if any, as it thinks fit, the Tribunal, on application by any person concerned, may authorise special prices or margins of profit in respect of any honey to which this Order applies where special circumstances exist or for any reason extraordinary charges (freight or otherwise) are incurred by any producer, packer, wholesaler, or retailer. Any authority given by the Tribunal under this clause may apply with respect to a specified lot or consignment of honey or may relate generally to all honey to which this Order applies sold while the approval remains in force.

SCHEDULE

MAXIMUM PRICES OF HONEY PACKED IN RETAIL CONTAINERS

Size and Kind of Container	Maximum Price that may be Charged by a Packer to a Wholesaler	Maximum Price that may be Charged by a Wholesaler (Including a Packer) to a Retailer	Maximum Price that may be Charged by a Retailer (Including a Packer) to a Consumer
	Per Dozen	Per Dozen	
	s d	s d	s d
½ lb. cartons - - - - -	10 9	11 9	1 2 per carton
12 oz. glass jars - - -	19 6	21 3	2 1 per jar
1 lb. glass jars - - -	22 9	24 9	2 5 per jar
1 lb. cartons - - - -	19 3	21 0	2 1 per carton
1 lb. tins - - - - - -	24 0	26 3	2 7 per tin
1¼ lb. glass jars - - -	26 3	28 6	2 10 per jar
1½ lb. glass jars - - -	31 9	34 6	3 5 per jar
2 lb. glass jars - - -	41 0	44 6	4 4 per jar
2 lb. cartons - - - -	37 9	41 0	4 0 per carton
2 lb. tins - - - - - -	42 3	46 0	4 6 per tin
2½ lb. glass jars - - -	51 3	55 9	5 6 per jar
2¾ lb. glass jars - - -	56 6	61 6	6 0 per jar
5 lb. tins - - - - - -	94 0	102 3	10 0 per tin
10 lb. tins - - - - - -	176 3	191 9	18 9 per tin

HONEY-EATING HEAVER

The appearance on a number of New Zealand athletic grounds this season of a tremendous young man who regularly scoops large gobs of honey from a jar he carries will be welcomed by avid sports enthusiasts in this country. The honey eater is Parry O'Brien, world shot put champion.

O'Brien constantly eats honey while competing, but he is unlikely to need any extra energy to defeat New Zealand weight men in his specialty. His world mark stands at just over 60 feet, whereas the best here can just exceed 46 feet.

The shot is not a spectacular event, but O'Brien is the equivalent of a four-minute miler in this line and he is also among the first three discus throwers in the world, with a best throw of over 180 feet. The Dominion record is 143 feet.

—"Weekly News."

1,000,000 WASPS ?

WHANGAREI, Jan. 27.

A considerable problem for Mr L. E. Oxborrow, a Parau Bay farmer, is a huge wasp nest which he describes as "the daddy of them all."

The nest, hanging eight feet from the ground in a puriri tree with the bottom of the nest two feet from the ground, is about five feet in diameter.

Mr Oxborrow estimates that the nest contains well over 1,000,000 wasps.

The nest is in a large stand of bush and Mr Oxborrow cannot use fire to get rid of it because of the risk of firing the bush.

He would welcome any suggestion on how to get rid of it, and says he would pay anyone offering to do the job.

All stock have been moved from the paddock, which is out of use until the nest is removed.

—Press Association.

MEMBERS OF THE APIARY INSTRUCTION STAFF AND OTHER OFFICIALS AT THE TIMARU COURSE

Back row : Messrs W. T. Herron (Honey Marketing Authority), F. Bartrum (Christchurch), D. W. A. Seal (Greymouth), I. W. Forster (Oamaru), C. R. Paterson (Hamilton), L. H. Johnson (Palmerston North).

Middle row : R. E. Binfield (Horticulture Superintendent, Christchurch), R. Davidson (H.M.A.), S. Line (Invercargill), J. W. Fraser (Vice-President, N.B.A.), H. Cloake (N.B.A. Executive).

Front row : J. McFadzien (Editor), E. A. Field (Chairman, H.M.A.), E. D. Williams (President, N.B.A.), A. M. W. Greig (Director, Horticulture Division), T. S. Winter (Superintendent), T. Palmer [illegible]

HONEY MARKETING AUTHORITY

I am sure beekeepers must be feeling somewhat anxious concerning marketing prospects for the coming season, as indications at the time of writing are for good crops in most districts.

I am well aware that it will long be remembered that when I was appointed chairman of the Honey Marketing Authority I stated I had no policy to offer other than to sell honey at the best possible prices. At the present time I reiterate it is still impossible to follow a clear-cut policy when conditions here and overseas change continually. Already we have had to alter plans on marketing because of changed conditions.

Of one thing I am certain, and that is we should retain our Imperial Bee pack on the United Kingdom market in the meantime even though it may not return the best price just at the moment. A packer cannot change over to bulk honey selling for a year or so to collect a better price and then go back and pick up his market where he left off. The Honey Marketing Authority is in the same position as an individual packer but on a larger scale.

Old Season's Crop

Most of you will know by now that we disposed of all of last season's honey and some of the previous year's at reasonably satisfactory prices, and with the amount of honey we expect this year it is proved that our action was a wise one. The United Kingdom and European markets were nearly bare owing to the bad honey season experienced in that part of the world last year. This encouraged us to clear everything in stock at prices which were considerably higher than had been ruling.

This Season's Crop (Export)

We have completed an agency agreement with Messrs Kimpton Bros. Ltd., London. This firm has undertaken to sell 600 tons of honey with guaranteed minimum returns ranging from 110/- to 116/- per cwt. and there are prospects of higher returns should the market remain firm. We anticipate Kimptons will handle a greater quantity if we can supply.

This Season's Crop (Local)

Recent sales on the local market have not been as good as last year, due no doubt to the increased packing by producers. We have not pushed local market sales in any way, realising that all parts of the country were being well supplied, but steady sales have and will be made to those who prefer Imperial Bee honey.

Seals Levy

It is regrettable that there are still some beekeepers selling honey without the appropriate seals. The Honey Marketing Authority dislikes intensely the thought of prosecuting fellow beekeepers, but we will not fail in our duty should definite cases of seals evasion come to our notice. Last year the total seals revenue was £15,893, a considerable increase over the previous year, but I believe it should be higher still.

Contracts

Beekeepers generally appreciate the contract system, which is proved by the fact that this year we have received contracts to supply almost 1200 tons of honey. The contract system is of considerable advantage to the Authority in that it lets us know well in advance what we have to sell and gives us an opportunity of maintaining a steady supply in advance to the markets.

Manuka and Rewa Rewa Honey

Manuka honey sold well last season in limited supplies, and it is hoped we can retain the same prices this year. However, we will have to wait to see how much of the demand for this honey was due to the general shortage overseas.

Rewa Rewa honey has not come forward in such large quantities for some time and at present we are finding difficulty in obtaining a market. We have, however, shipped 25 tons to the United Kingdom and anxiously await our agent's report on its selling value.

Accommodation

The Authority has kept in mind the need for a suitable building. Several possible places have been examined, but for various reasons have not proved satisfactory. I am of the opinion that we should not be in too great a hurry in this matter, until we are reasonably sure how much blending and packing will have to be done in New Zealand, for on that question our requirements largely depend.

Depots for South Island Honey

South Island depots have been a problem, but we hope that this year producers will find conditions considerably better than previously, and that gradually we will make arrangements suitable for the majority of suppliers.

May I close by thanking all beekeepers for their toleration since I have been Chairman. Letters of encouragement and an understanding of our problems have helped me personally and the members of the Authority considerably. With continued constructive criticism and each beekeeper doing his part we can and we will build our marketing organisation.

E. A. FIELD, Chairman.

HONEY CONTRACTS — 1954-55 SEASON

(a) Contracts to supply fixed quantities (with 25% tolerance).

(b) Contracts to supply total production (less consumer sales at apiaries).

	(a)		(b)		Total	
	T.	Cwt.	T.	Cwt.	T.	Cwt.
North Auckland	18	10	8	15	27	5
Auckland	24	10	4	0	28	10
Hamilton	236	15	146	10	383	5
Tauranga	77	10	96	0	173	10
Hastings	15	5	—		15	5
Palmerston North	33	18	—		33	18
Taranaki	75	10	—		75	10
NORTH ISLAND	481	18	155	5	737	3
Nelson-Greymouth	40	5	15	10	55	15
Christchurch	66	10	13	10	80	0
Oamaru	96	0	29	10	125	10
Invercargill	170	15	20	0	190	15
SOUTH ISLAND	373	10	78	10	452	0
TOTAL	855	8	333	15	1189	3

No. of Contracts: 187.

W. H. CHUDLEY, Manager.

DEPARTMENT OF AGRICULTURE
HORTICULTURE DIVISION

ADDRESS — GORE AND SOUTHLAND COMBINED BEEKEEPERS' FIELD DAY

It is not generally known that the principal role of the honey bee is not in the production of honey and beeswax, as is commonly supposed, but in the pollination of agricultural crops for the production of seed and fruit.

Governments in all progressive agricultural countries throughout the world to-day realise that the only way to ensure an adequate spread of honey bees to provide a pollination service to agriculture is to foster the keeping of bees and to provide a protection service to the beekeeping industry in the control of bee diseases and pests.

Beekeeping in New Zealand continues to expand—particularly in newly developed pasture land areas where beekeepers are welcomed by farmers, who are beginning to realise that wherever a proper balance

exists between plants and pollinating insects both flourish.

No beekeeping statistics are available for 1954 owing to decentralisation of apiary registration and the extra work involved in getting the new procedure established in the various apiary inspection districts.

Statistics for the year ended 30th June, 1953, however, show a total of 12,530 registered apiaries containing 191,553 hives of bees.

In Southland and Otago, taking in the Invercargill and Oamaru apiary inspection districts, there are 947 beekeepers operating 2305 apiaries containing a total of 36,673 hives of bees.

Production

Overall production from commercial and domestic apiaries last year was estimated at 6447 tons of honey and 225,645lb. of commercial beeswax. Approximately 5700 tons of the total crop of honey was produced in commercial apiaries of 30 hives and over and the balance of 700 odd tons in domestic apiaries.

Following is an estimate of production for the current season up to the end of January in commercial apiaries of 30 hives and over:—

	Tons Final End Jan.	
District.	1954.	1955.
North Auckland ..	350	420
Auckland	350	250
Hamilton	1152	1170
Tauranga	455	900
Hastings	460	550
Hawera (Taranaki)	325	400
Palmerston North .	448	560
Greymouth (W.C.)	190	165
Christchurch	875	500
Oamaru	680	600
Invercargill	430	550

These estimates are subject to adjustment at the close of the season.

Now let us take a look at some of our problems and conditions in some of the main honey producing countries overseas that have some bearing on the welfare of beekeeping in New Zealand.

It is recognised that to maintain stability within the industry in New Zealand it is sound policy to draw off to export all honey that is surplus to our local requirements, and in this we have to face certain conditions overseas beyond our control. You will remember I stated at your last Annual Conference that honey production in U.S.A. in 1953 totalled in round figures 100,000 tons, which was 18 per cent. less than the previous year. As you know, a price support programme for honey and other agricultural products going to export, from U.S.A., has been operating during the past few years. Latest information, however, shows that the subsidy on honey going to export from U.S.A. has been gradually reduced from 4 cents and subsequently 3.75 cents down to 2.5 cents per pound for 1954 (roughly 2.16d per pound based on 1953 exchange rate.

Australia has over 305,000 hives of bees and produced 15,900 tons of honey for the year ended 30th June last. This was 28.7 per cent. greater than the previous season's production but 32.8 per cent. lower than the record crop there in 1948-49. Export of honey for 1952-53 was 7400 tons. Australian honey in the main is darker in colour and stronger in flavour than New Zealand honey and sells at slightly lower prices than our honey on the U.K. market.

Export of Beeswax from Australia

Season 1952-53, 156,932lb., valued at £27,515 (Aust.), av. 3/6.1d.

New South Wales, 47,182lb., valued at £5743 (2/5.2d (Aust.). Value N.Z., 1/11.4d.

Victoria, 26,924lb., valued at £5174 (3/10.1d) (Aust.). Value N.Z., 3/0.9d.

South Australia, 68,395lb., valued at £13,621 (3/11.8d) (Aust.). Value N.Z., 3/2.2d.

West Australia, 14,431lb.,, valued at £2997 (4/1.5d) (Aust.). Value, N.Z., 3/3.6d.

A surprising feature was that Australia imported that year a total of 15,327lb. of beeswax valued at £4430 (equal to £3544 N.Z. or 4/7½ per lb.), and in 1951-52 Australia imported from Tanganyika (Africa) 27,720lb. of beeswax valued at £9665 and from New Zealand 23,020lb. valued at £6428, equal to 4/5.6d Aust. (5/7 lb. N.Z.), and small parcels from other

British countries and France.

The United Kingdom takes the bulk of our surplus production of honey and fairly large parcels go to Germany, also to other Continental countries, delivered through the U.K. market, but conditions are gradually changing in some Continental countries, where they recognise the value of honey bees as pollinators of economic agricultural crops, and encourage beekeeping.

Denmark for instance used to take fairly large quantities of honey from outside sources.

Denmark now has some 44,600 beekeepers in a total population of 4.2 millions, and there are now 270,500 hives of bees fairly evenly distributed over the country. The overall average production of honey, however, is very low (approximately 16lb. per hive).

All foreign honey going into Denmark must now be marked foreign and can only be imported in glass jars.

There is a bright side, however, which should give New Zealand beekeepers heart and confidence in the future, in that the local market is in your own hands to develop to the best advantage and the demand for honey in the U.K. and other important honey importing countries remains good.

Canada for instance is a great honey producing country and the demand for honey there is far greater than her own production, In 1953 there were 13,950 beekeepers operating a total of 341,300 hives of bees. Production that year was estimated at 11,700 odd tons.

Preliminary estimates for 1954 indicated a crop in the vicinity of 8900 tons, and yet Canada is in the position of having to import millions of pounds of honey from U.S.A. to satisfy her local requirements.

I have the feeling, however, that our position regarding production in New Zealand and a draw off each year to stabilise our local market is much better from a beekeeping point of view than that of any country where the door is opened to allow in millions of pounds of honey, which could upset internal beekeeping economy.

We must, however, see to it that only honey in first-class condition is used to develop our local and overseas trade.

The Department is doing everything possible to assist producers.

We are fortunate in having the assistance of Mr Palmer-Jones, Research Officer, Wallaceville, in all matters of a highly technical nature pertaining to beekeeping.

Recently Mr C. R. Paterson was appointed Apiculturist. His duties include the provision of advance instruction in honey house equipment methods by packing honey, and the planning and conducting of trials and experiments, etc. His activities during the past year included experiments to develop suitable equipment for the removal of excess moisture in honey, working co-operatively on the problem with Mr Palmer-Jones. That work was successfully completed and the plant developed is to be taken over by the Honey Marketing Authority to enable them to deal effectively with any honey of low specific gravity.

In addition we have a tie-up whereby the honey grader passes out to district Apiary Instructors the names of any producers who submit honey for grading that is found low in condition or is below the acceptable standard for export, so that they may be given helpful advice and encouragement to overcome their honey packing problems.

Manuka Honey

To assist producers in the far north of New Zealand who are established in manuka honey areas the Department initiated package bee trials which appear to have led up to a worthwhile trade in package bee sales. During the current season over 800 packages of bees have been sent by air to the South Island.

At the present time trial shipments of manuka section comb honey to the United Kingdom are on the water. These trials are being made with the approval of the Honey Marketing Authority in an endeavour to find an outlet for a class of honey

as a full-time occupation at some future date.

Perhaps a word or two of advice at this stage would not be amiss.

I sometimes feel that too much of the sunny side of beekeeping is written and spoken, whilst the less attractive side is passed over lightly. This tendency is not, of course, confined to Beekeeping Journals. Almost any trade or professional publication tends to be inspirational to a marked degree. It will be argued that this is desirable. It develops enthusiasm, and enthusiasm is essential to success.

I will concede the point, but I still feel it necessary to make a few observations on the less attractive side of beekeeping as a full-time occupation.

In this connection it must be realised that any project can be made to appear well nigh hopeless, when only the worst features are studied. Take, for instance, marriage.

If any young man or woman were to sit down and note all the difficulties and responsibilities which can be encountered in the married state, few would be willing to take the plunge. Here are just a few: Loss of personal freedom; long years of hard toil and financial worry to support a home, wife and family; seemingly endless sleepless nights, whilst the children are small, and whilst you are having to work your hardest; measles, whooping cough, not to mention more serious illness; extensive insurance policies to be maintained; two can't live as cheaply as one (if they do it's for only half the time). For good or ill it lasts a lifetime.

This is all true, but what a sorry picture it makes compared with the real joy and lasting satisfaction which is invariably the experience of happily married folk.

Each disadvantage can, in most cases, be cancelled by an advantage, but—back to our subject:

Lest you should view a commercial beekeeping venture through rose-coloured glasses only, consider these points:—

(1) You need at least £2500 to £3000 worth of hives, extracting plant, truck and buildings to operate 300 hives. This is the minimum number for a one-man unit. You cannot expect to make financial headway until you have all this clear.

(2) New districts where a compact outfit can be established are becoming harder and harder to find.

(3) A good outfit, at a reasonable price, is difficult to find when you are a buyer, and exceedingly difficult to sell when you are a seller.

(4) There is no easy way to make a living from bees. The work is often hard and done at high pressure.

(5) You rely on your product only, honey! Unlike the average mixed farmer, you have all your eggs in one basket.

(6) You are completely at the mercy of the weather—and what can be more fickle

(7) Your risk of loss through fire, flood and gale is high.

(8) You own few or none of your apiary sites, and are altogether dependent on the goodwill of the farming community in your district. This often leads to much unnecessary moving of apiaries, especially in clover districts, to suit the farmer's whim.

(9) Experienced labour for honey production is almost impossible to obtain.

(10) The costs of honey production are increasing faster than the price of honey.

I could go further, but I think this is sufficient for your consideration at one session. These are not imaginary difficulties and should be acknowledged in the general consideration of your plans.

The result of your ultimate decision will rest, to a major degree, on your enthusiasm for the beekeeper's life, and on the suitability and financial success of your present vocation.

I will endeavour to outline some of the more attractive aspects of commercial beekeeping in my next "Notes for Beginners."

smooth-textured honey which does not granulate too hard for easy use. Cool temperatures are desirable during the process of granulation.

Comb Honey

Good comb honey is a source of delight to both beekeeper and customer.

Fresh from the hive, the demand is almost unlimited.

Sections are, of course, the ideal package, but these are not always easy to secure.

Bees rather dislike working in confined, separated squares. On the other hand, new half frames fitted with thin super comb foundation are very attractive for family use, and bees work them readily.

The instructions I give customers who buy these, is to suspend the whole frame in the meat safe or refrigerator by a wire hook passed through a corner of the frame. Place a small basin under the suspended frame. Small squares suitable for table use, can readily be cut out with a knife dipped in hot water without any mess or fuss.

The great advantage of producing comb honey is that very little outlay is required for equipment. In fact, all you need is your hive and hive fittings.

Work for March

If honey harvesting is completed, there is little of moment to be done at this period. Wet combs could be placed on hives for cleaning up, preparatory to careful storage for the off-season.

This is a good time of the year to re-paint hives and generally tidy up the apiary.

Work for April

Remove and carefully store all supers of empty combs. Make them mouse-proof and, as far as possible, moth-proof. Check hives for disease and winter stores. Pack in additional combs of honey from your reserve, to any hives which appear light.

Unite any queenless colonies with other hives by placing a double sheet of newspaper between the two units.

Late April is a good time for autumn requeening, if this is in your programme.

In purely clover districts, where short intense honey flows are the rule, autumn requeening gives best results.

In such districts, hive build-up in the spring is often retarded, due to lack of early nectar sources.

Often young queens are not available in the spring until late November, which can be too late to take full advantage of an early December flow.

In these circumstances, autumn requeening is the ideal procedure if it can be managed. The queens should be introduced to hives in late April or May.

Young queens introduced earlier tend to lay vigorously. Colony strength is abnormally increased at a time when surplus bees are a liability.

Besides exhausting themselves uselessly, large amounts of store are consumed, which should have been conserved for the hive's spring requirements.

Late requeening obviates these disadvantages and the hive will be just rearing to go in the spring.

Entrance guards should be fitted to the entrances of all hives at the end of this month to keep out mice.

An effective entrance guard can be made from a piece of timber 16in. long, 1¼in. wide and ¼in. thick, by cutting an entrance out along one edge 6in. long by ¼in. deep. This will allow easy passage of bees whilst excluding mice. These rodents can cause untold damage to combs if allowed to house themselves in the hive over winter.

A reduced entrance, and snugly fitting boxes and cover, will also assist your bees to repel wasps.

Your Plans for the Future

Many of the beekeepers who read these notes will be content to keep a few hives as a hobby. Perhaps rather more as a side-line or part-time occupation, but there will doubtless be some who, for a variety of reasons, plan to enter beekeeping

In Southland the honey crop is of something like normal dimensions except on some of the plains areas where dry weather has been responsible for lighter yields. Visitors from North Otago and South Canterbury indicated that in those regions the returns would be generally from light to average—somewhat disappointing after the very good prospects at the beginning of December.

NOTES FOR BEGINNERS

By "SKEP"

The Bible promise, "As long as the earth remaineth seedtime and harvest shall not cease," is faithfully fulfilled each year.

The march of the seasons is inexorable, and whether we are satisfied with our harvest or not, it is indeed upon us now.

This year many will be well satisfied with the rewards of their labours, but not all will be in this happy position.

To the successful ones I say "Well done."

Perhaps not all the credit is yours, but obviously you have played your part well and have been fortunate enough to enjoy the smile of Nature.

To those whose harvest is disappointing I would say, check your early season's work. If errors and omissions have to be admitted, make sure you profit by them, and do not make the same mistake twice.

Experience is a hard teacher, but a very sure one, if you have the enthusiasm to stay the distance.

The best beekeeper in the world, however, can only tend his bees; he cannot put the nectar in the flowers.

If your disappointment is due to unfavourable seasonal conditions, there is nothing to do but accept the position with as much resignation as you can muster, and keep going.

You will be amazed how quickly time passes and, before you know it, you will find yourself planning next year's programme. All beekeepers must accept the fact that there is not an abundance of honey in all districts every year. This is a universal truth.

Honey Harvesting

To those with honey to harvest, let me stress again the necessity for cleanliness in every phase of the work.

Thoroughly scald your honey extractor, and all utensils used in connection with honey.

Take a pride in your product, and pack it attractively. A good article is worth a fair price. Make no concessions to anyone.

If you wish to repay a favour, make a gift of a portion of honey by all means, but any balance required should be charged at full P.I.T. price list rates.

A copy of the ruling price order for honey can be readily obtained from the Government Printing Office, Wellington. This price order is your protection against bargainers.

Harvest Enthusiasm

Do not let your harvesting enthusiasm run away with you. Remember that a long, cold winter will arrive in due course, and your bees cannot live on air alone.

Stores required for winter use would, in most cases, be not less than 40lbs., and in many districts considerably more.

It is false economy to be overzealous in taking honey from your hives.

As well as leaving your hives heavy, keep a small reserve of honey in combs in the shed for future use.

Removing Honey

A Porter bee escape board is the best method of clearing the supers of bees.

Allow about 36 hours from the time you put the board on for the bees to run out.

Inspect your uncapping knife and cappings melter carefully for steam or water leaks. Few things are more detrimental to honey than the addition of moisture from any source.

Strain your extracted honey carefully through fine brass gauze or cheese-cloth. Allow it to stand for 24 hours in the tank before skimming; then add not less than 5 per cent. of smooth-textured granulated honey and stir thoroughly. Keep stirring daily until granulation is well advanced. This will ensure a

SOUTH CANTERBURY

On Saturday, 4th December, our Branch held the second Field Day of the season at the Otaio Gorge Apiary of Mr W. Jennings. We found the hives in good heart, with plenty of honey, bees, and brood. Our Apiary Instructor (Mr I. W. Forster) had gassed a hive the previous day, and all present were interested to note the effects the gas, nitrous oxide (laughing gas) had on the hive 24 hours after application. The onlookers would have liked another hive gassed, but Mr Jennings was reluctant to accept this suggestion; the best we could get was a top super of bees. The gassed hive was carefully examined, and we sympathise with Mr Jennings in that he had not only lost all the drones (they were all dead on the grass in front), but the unsealed brood did not look normal, and we surmised that it was either dead or dying. Our President (Mr H. Cloake) thanked Mr Jennings for the use of the hive, and expressed regret that no queen could be found. One spectator suggested that the queen might be found on the grass amongst the dead drones.

Mr Cloake had shifted three package bee hives to this site, and commercial men were especially interested to examine these, and to surmise what honey return could be expected from them.

Our families had a swim, or a paddle, depending on their ages; our wives had a real exchange of family news, and we bread earners exchanged ideas which, when applied, should improve the standard of living of our dependants.

Our November Field Day is a real picnic enjoyed by all.

—R. Davidson.

OTAGO

Honey crops in Otago generally will be good. In some of the drier inland districts more rain would have been welcome, but elsewhere there has been an abundance of clover which has yielded well over a long period. But the rather broken weather during December and January has prevented anything in the way of record crops.

On January 22nd the Branch combined with Clutha in a Field Day held at the apiary of Mr J. M. Marshall, Outram. One or two skiffs of rain cramped our style somewhat, but we had an interesting programme and an enjoyable meeting. Among the visitors were the Apiary Instructor, Mr S. Line, and Messrs J. W. Fraser and W. T. Herron, of Southland.

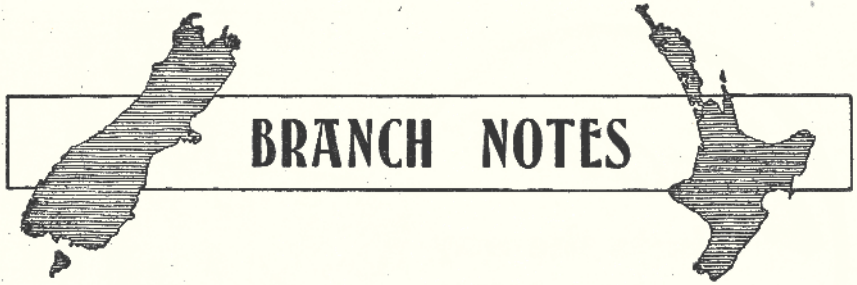
—J. McFadzien.

GORE

A Field Day on the grand scale, organised by the Gore and Southland Branches, was held at the apiary of John and Norman Glass, Waikaka Valley, on February 5. The weather was perfect, the grounds and buildings provided an ideal setting, and the programme was well planned and ably carried out under the direction of Mr S. Spence and Mr J. W. Fraser. On the domestic side, Mrs Norman Glass was ably assisted by an enthusiastic staff of visiting beekeepers' wives, so everyone was well catered for.

Several beekeepers were present from North and South Canterbury, with a wide representation from Otago and Southland. The Department of Agriculture was represented by Mr T. S. Winter, who surveyed the present state of the industry, Mr T. Palmer-Jones ("The Anatomy of the Bee"), Mr C. R. Paterson ("Creamed Honey"), and Mr S. Line ("Removing Surplus Honey"). Other speakers were Mr A. V. Hartley, Southland President of Federated Farmers, Mr R. Davidson, and Mr J. McFadzien, and there was a demonstration by the Glass Brothers of their extracting plant in operation.

The day concluded with a meeting for commercial producers at which the speakers were Mr H. Cloake (N.B.A. Executive) and Messrs W. T. Herron and R. Davidson (Honey Marketing Authority). A number of questions came from the audience, and also one or two awkward ones from the speakers.



MANAWATU

The 1955 honey extraction appears to be the best for many years. Good spring weather commenced in September and has continued to the end of January. Artificial feeding has been the highest on record. The first honey flow was from willows. Clover bloomed early and yielded lightly until the 6th of January when temperatures rose. Good warm weather was continuous for fifteen days, and crops should average a little over five tons per hundred hives. Honey is of a good quality. Coastal districts have yielded better than last year but the best crops of honey will be inland. Pastures are drying up, but on low-lying and damper soils clover bloom is excellent. It is expected that the honey flow will continue into February.

More swarms have been seen this year than ever before. Wasps are beginning to appear in the district, and it is expected that following the dry weather their spread will be most noticeable. While it is over to the property owners to destroy wasps' nests, some firms have undertaken to destroy wasps' nests and bees in buildings. The owners must, of course, be prepared to pay for this service.

—H. M. Hansen.

CANTERBURY
SEASONAL REPORT

Beekeepers seldom experience two seasons alike; nature seems to make it that way just to try us. This past winter—well it was more like summer up till June—and the bees just kept on eating. It was a case of dish out the feed wholesale when we went around on the first inspection late in August. Everyone despaired of a decent willow flow, expecting the weather to break and spoil things as usual, but we were all wrong. North-west conditions prevailed with exceptionally high temperatures for the time of the year, and did they haul in the willow honey; they went miles to get it. One and a half supers was the order of the day, and what a few weeks before was a dire necessity to sustain life in the hives was now an embarrassment; but it was all to be needed. Those north-west winds were soon to sizzle up the plains and all our clovers, and by mid-November things could not have looked worse. The dry conditions had one consolation: it was good queen-mating weather, but what was the good of queens with no pastures to flower? The Christchurch Show came and with it a break in the weather and this helped things a little bit, but it was early December before we had any real rain. Clover commenced to yield about mid-December on the heavy land and about Christmas on light land. Since then scattered showers have been the rule and this has made crops rather variable. One to one and a half supers on light land, up to two supers on heavy, and in some cases a little better on the medium soil types according to rainfall. Crops should be slightly above average this year.

—R. R. Bushby.

manipulation, etc., to coincide as near as possible with the beginning of the main honey flow. The result of such conditions is a waste of much capital expenditure, transport costs and time spent in apiaries where there is a high percentage of low and non-producing hive units.

Few commercial beekeepers are in a position to raise sufficient young queens each year for their own requirements. It would therefore pay many producers to arrange for a regular supply of young queens each year from a reliable breeder.

It would also pay groups of beekeepers to club together and place bulk orders regularly for young queens and to put into the pool each year one or two selected breeders from their own stocks.

A break away into more positive stock improvement and maintenance methods to ensure greater returns at lower cost appears to be very desirable.

Hive Equipment

A method developing in recent years to save double handling, storage and transport costs is to winter colonies in three storeys, but in doing so many producers neglect to strip down their hives in spring so that full use is made of the bottom boxes. The colonies are allowed to work upwards, away from the bottom box, which stands in the apiary as an impediment to the bees and an economic loss to the beekeeper.

On the basis of 10 per cent. of established hives neglected in that way, over 19,000 hive boxes and approximately 152,000 bee combs and frames stand unused in New Zealand apiaries each year.

I trust that the information I have given you may be of some assistance to you in shaping your future policy and methods in the production and marketing of your produce.

—T. S. Winter.

"Next I sing of honey, the heavenly ethereal gift."

—Virgil

which is not suitable for ordinary blending purposes. Our part is to find the most suitable package to carry that class of fragile produce with a reasonable margin of safety.

Now let us turn to affairs in the apiary.

Control of Bee Diseases

Disease foulbrood (Bacillus larvae) is one of the hazards of beekeeping in all countries where the disease has become established, but it can be kept under control and even eradicated under certain conditions in pasture land areas where there are few places for stray swarms to become established unnoticed.

Down through the years it has been the objective of all beekeeping organisations and of the Department of Agriculture to deal with bee diseases as effectively as circumstance would permit.

At the last Annual Conference of your Association it was shown how new methods for dealing with bee diseases introduced in 1951 were showing good results and that foulbrood was reduced to less than 1 per cent. of the hives inspected last season in some of the main honey producing districts and appreciably reduced in other areas.

It was also pointed out that the rapid improvement in the foulbrood situation caused some beekeepers to relax their usual vigilance in the inspection of their apiaries, and that we were having difficulty in some areas to secure the services of competent beekeepers for part-time apiary inspection work. Any further drift in that direction would have bad effects on the industry and would greatly increase costs of production.

The responsibility to see that bee diseases are kept down to a minimum and where possible eradicated is in the main the responsibility of beekeepers themselves. It is therefore up to all beekeepers to cooperate fully with us in this work. There was a time when we had difficulty in getting sufficient funds or the work. The main drawback today appears to be the great difficulty in getting sufficient competent beekeepers to carry out the work at the appropriate time.

Capital Expenditure and Running Costs

One of the principal dangers to any rural industry such as yours would be to proceed on a high cost structure. To have to face a competitive market when the cost structure is high could be disastrous.

From time to time in recent years producers, including beekeepers, have been advised to keep down their production costs as far as possible.

I believe that many producers have so arranged their apiary sites and methods of management that their costs of production are down to the lowest possible level for this class of business and that they are getting good results from their beekeeping efforts, in relation to locality and available nectar resources.

There is, however, much room for improvement in the overall position. Much expensive equipment is lying idle throughout New Zealand and thousands of bee-stocks established and kept at high cost are non-productive.

Many producers build up in beekeeping from domestic to commercial status, and as the years go by they progressively purchase larger and more expensive equipment needed in their expanding business.

In many cases, however, no attempt is made to tidy up as they go along and dispose of all surplus equipment, the disposal of which would bring in needed capital, and would also assist many beginners to establish in beekeeping at comparatively low cost.

I suggest that more use of a sales or even a swap column in your Journal would assist to bring much surplus equipment back into use and keep down industry costs generally.

Bee Stocks

Much could be done to improve bee stocks in many apiaries and to see that only those colonies in good heart and condition are carried on into the main honey flow period.

It seems to me that far too many colonies in some districts are left to build up on the main honey flow instead of being worked up by hive

NOTES FROM GORE

Speaking at the Gore-Southland field day, Mr W. T. Herron made special reference to the work of the Beekeeping Superintendent (Mr T. S. Winter) and his staff and to the assistance they had given to the Honey Marketing Authority. Their co-operation and advice in problems relating to the handling and grading of honey was to the benefit of the industry generally and was greatly appreciated.

* * *

One of the items noticed during the extracting demonstration at the Glass Brothers' honeyhouse was the steam heated fixed knife for uncapping combs. The first obvious advantage of the fixed knife is that the operator can use both hands to manipulate the frames. Working along quietly and without fuss, and scraping the top and bottom bars in the process, Norman was uncapping at the rate of five combs per minute. Doubtless if he had been consciously working against the clock he could have made much better time for statistical purposes.

* * *

An interesting point was mentioned by Mr T. Palmer-Jones in the course of his talk on the anatomy of the bee. In the year following the outbreak of acarine disease in the British Isles, and the resulting decimation of the bee population, there was a very poor fruit and seed crop throughout the country. It was a striking indication of the value of bees as pollination agents, one of those things which is not fully appreciated until it is absent.

* * *

Mr T. S. Winter made a good point when he referred to the unused gear which is standing idle in many honeyhouses and apiaries. Especially that empty bottom storey which results from faulty hive management and can become a real liability. Useful equipment which is displaced in the honeyhouse is another matter which deserves attention; what about a swap session at some of our Field Days?

The Southland President of Federated Farmers, Mr A. V. Hartley, showed a keen interest in the beekeeping industry and a broad-minded approach to farming generally, and his attitude is a great help toward co-operation among primary producers. Mr Hartley mentioned two recent developments in agriculture which should allow considerable expansion in the honey industry—the work on essential trace elements in the soil and the increase in aerial topdressing. In this connection he emphasised the mutual interests of farmers and beekeepers.

* * *

Two maxims from Mr R. Davidson which every beekeeper should think about: (1) If you want your bees to pay, you must not look for queens. (2) Any two-queen system requires an extra four full frames of honey for each hive.

* * *

Two points about creaming honey from the address by Mr C. R. Paterson: (1) Honey becomes lighter in colour when it is creamed, but it is only an apparent difference. If the honey is returned to the liquid state it also returns to the original colour. (2) There is a certain crucial point in the process of granulation, and if the honey is disturbed after this point has been reached the crystals or particles will not again set together, i.e., the honey will remain in a "creamed" state. It is difficult to define this particular point but it appears to be at a stage when the honey is almost too stiff to handle.

* * *

The date of the Field Day coincided with another important function in Christchurch—the wedding of Apiary Instructor Bartrum. The meeting sent a telegram of congratulations and good wishes, and we hope that Fred and Mrs Bartrum will have a long and happy association with the honey industry.

The man who is too busy to worry in the daytime and too tired to lie awake at night need not worry about being able to grow old gracefully.

LAUGHING GAS

A review of some trials with nitrous oxide is given by J. E. Eckert, of the University of California, in "Gleaning in Bee Culture." The gas is said to cause the bees to "forget" their locations so that hives can be moved short distances without the bees returning to the former sites as they normally would do. Beekeepers have also been searching for a quicker and less costly method of requeening a large number of colonies than by searching out and killing the old queens before introducing the new ones. It was thought that nitrous oxide might prove the medium for this operation.

In the trials mentioned the nitrous oxide was prepared and delivered by dropping a handful of the fertiliser, ammonium nitrate, on to well lighted smoker fuel in a bee smoker and puffing the resultant yellowish smoke into the entrance of a hive and between the hive bodies. This amount is enough to gas several colonies, if one works fast.

It was found that the gas overcame the bees in a minute or less, with recovery of movement taking place in from 8 to 10 minutes. Some bees were killed, probably by suffocation, and unsealed brood was killed in many cases when high temperatures prevailed. The queens stopped laying and the bees were disorganised for from one to three days.

The tests indicated that gassed bees "forget" their locations partially, but not completely. The attempt to introduce queens to queenright colonies by gassing both the colonies and the queens being introduced resulted in failure.

The author concludes with a warning that nitrous oxide should be used with caution on strong colonies of bees, especially in hot weather.

SHORT CUTS IN MANAGEMENT

(By John W. Holzberlein, Jr., in American Bee Journal)

It still takes 21 days to develop a worker bee, so there isn't much we can do along that line. But when one has 1000 colonies of bees scattered out in 35 yards in all directions as ours are, it goes without saying that some short cuts will have to be made if one is going to get around on time. In order to do this we follow a schedule using the outlined principles.

1. Arrange yard work so that all the yards on a certain area, or on a certain road can be worked in a single day. This saves time and cuts down mileage. Anticipate needs and carry equipment so that all necessary work can be done on one visit.

2. Two men are used as a crew or team. Two men working together can accomplish more than two men working separately, because in all our build-up operations we systematically reverse the brood chambers on each visit. With two men doing the work they can be handled in a moment. But where one man does it alone each super has to be set aside, then set back, doubling the time necessary. Reversing brood chambers in itself is a short cut as it is the greatest single swarm prevention measure that we know of.

3. We try to handle brood chambers instead of single combs in our manipulations. When the top brood chamber is raised a puff of smoke is given and a glance taken at the underneath side. The whole story is usually right there. If brood is present it can easily be seen, even the quality of the brood can usually be detected without removing a comb. The progress of swarming can be observed in the development of queen cells along the bottom bars. The presence of stores and their estimated amount can be successfully judged by the weight of this top super as well as the size of the cluster. If all is as it should be the reversal is made and more room given if needed. Throughout the summer I would say that not more than one colony in ten needs the

combs inspected individually until it is time to begin removing the crop.

4. We believe that we save time in the long run by giving the brood in each colony a thorough inspection before taking off honey. Our incidence of disease is practically nil, but we can still remember when it was not, and how we felt when we found that a few supers of honey had been taken off a diseased colony and mixed through the outfit. With confidence that the supers are clean they can all be stacked together and handled indiscriminately.

5. All hive equipment is handled on one level, concrete floor. It is all stacked on flats and handled with a hand truck, even to being loaded on to the truck. The inside dock puts the truck bed at floor level, thus making this possible. The full supers of honey go into the "hot room" ahead of extracting, then into the extracting room where they are emptied, then on out into the comb storage area where they may again be loaded on to the truck. In this way they describe a full circle, never crossing over their previous route and never getting in their own way.

6. Extracted honey flows by gravity to tanks in the basement that are large enough to hold any day's extracting. It is warmed and clarified en route and may be drawn off and stored at the end of the day. The basement, which is well drained and ventilated, offers ideal storage space and is used only for the storage of containers and honey. It has an outside door at ground level which facilitates the loading of trucks at time of sale.

7. We think it saves time to keep equipment organised, and not let a cluttered up condition build up, or at least prevail if it does build up. Each class of equipment has a definite location and is kept in it. The little time that is required to maintain this condition pays big dividends in the long run.

THE MANAGEMENT OF BUMBLE BEES

By B. Elwood Montgomery, Associate Professor of Entomology, Purdue University, Lafayette, Indiana.

Darwin appears to have been the first to point out the importance of bumble bees in the pollination of red clover, when he wrote, in 1859. that '... the bumble bees alone visit the common red clover *(Trifolium pratense)* as other bees cannot reach the nectar. Hence, I have no doubt that if the whole genus of bumble bees became extinct or very rare in England ... red clover would become very rare and disappear." He also stated, somewhat later, that with one exception, he had never observed honey bees working red clover except through perforations in the corolla made by the short-tongued bumble bees. This matter of red clover pollination was the centre of a bitter dispute for many years, but Plath, in 1925, pointed out that the importance of bumble bees was established beyond a doubt in the years following 1885. In that year bumble bees were introduced into New Zealand where no red clover seed had been produced previously, even when honey bees were placed in the fields, and within five years yields of 500 and 600 pounds per acre were obtained regularly. Plath carried on some experiments in the vicinity of Boston and concluded that little or no red clover seed would be set in the absence of bumble bees.

However, much work has been done since that time and Westgate and Coe determined as early as 1911 that "the honey bee can be as efficient as the bumble bee" under special conditions —in irrigated areas or during periods of low moisture supply where very few other nectar producing plants are available.

There is a rather general agreement that honey bees almost refuse to work red clover when more attractive plants are in bloom; that the deep corolla tubes are probably the limiting factor in bees working red clover and that pollen, itself, is not sufficiently attractive unless competition is at a minimum. In spite of these deterrents we have continued to use honey bees for red clover pollination because "the honey bee is the only pollinating agent that can be managed by man."

About the only "management" of the bumble bee in the past was its introduction into New Zealand. However, after I had made a survey of bumble bees and red clover seed production in that country during the season 1949-1950, I considered the close zoological relationship of the bumble bee and the honey bee and I see no reason why methods to "manage" the bumble bee cannot be developed.

The colonial life of the bumble bee differs radically from that of the honey bee in many respects so that Bombiculture, if it is ever developed, will be quite different from Apiculture.

During the middle of the summer the bumble bee colony works much the same as the honey bee colony— the queen remains in the nest (unless disturbed) and appears to do no work except lay eggs, and the workers gather nectar and pollen and do the "housekeeping." Late in the season there is a change in the brood rearing; workers are no longer produced, but many (sometimes several hundred) queens and drones are produced. Usually the drones leave the colony immediately upon emergence from the cocoon and do not return, but the young queens remain in the colony for some time, even gathering nectar and helping in the work of caring for the larvae. The queens and drones mate and the queens burrow into the soil for hibernation before the coming of cold weather. A small number of workers and, sometimes, the old queen, may survive in the nest until the first heavy frost or freeze, but only the young, fertilised queens survive the winter. In the spring these queens emerge from hibernation, and after a few weeks search out a suitable site (old mouse or bird nest, bunch of fine grass, etc.) for the establishment of a nest. Until the first generation of workers is produced the queen continues to visit flowers, gathers nectar and pollen, produces wax (which is

used for cells in which to store honey until empty cocoons are available and is also mixed with pollen as food for the larvae) and cares for the nest.

Our first work with bumble bees for red clover pollination has been concerned with the development of methods of handling colonies and queens. Although we have not yet domesticated bumble bees, or even developed methods by which we can have as many as we need for our experiments, we have been able to carry through every phase of the life cycle in small cages. The cage which is used consists of a package bee shipping cage with a small box (approximately 6in. x 6in. x 6in.) attached to one end. A one-inch auger hole through the end of the cage and the adjacent side of the box allows the bees to move freely back and forth.

Colonies of bumble bees moved from their natural locations to the box and furnished a honey-water mixture in a fountain-feeder in the cage and pollen pellets trapped from honey bees placed directly into the nest have continued their normal life and produced a generation of queens and drones in the fall. The queens and drones have mated in these cages and mated queens released in the greenhouse and in a large outdoor cage have burrowed into the soil for hibernation. Some of the queens released in the outdoor cage last fall hibernated successfully and were returned to the small cages this spring. At the time this is written they are still alive. Many queens were captured this spring and placed in the small cages in an attempt to secure the establishment of nests. Two queens have established nests and both colonies have developed workers.

Using the methods which we have developed the past two seasons we hope to be able to move enough colonies of bumble bees into our experimental plots this year to study the activity and efficiency of colonies and individual bees in pollinating clover. We shall try to determine how many bees from a colony are in the field at any given time, how long each field trip lasts and how many blossoms a bee visits during a field trip. Attempts will be made to determine how much seed can be produced with maximum pollination by caging colonies over small areas.

—"American Bee Journal."

Honey Ginger Nuts.

One cup honey, 1 cup sugar, ½ cup melted butter, 2 cups flour, 1 cup chopped nuts, 1 egg, pinch of salt, 2 teaspoons baking powder, 2 teaspoons ground ginger. Mix honey, sugar, melted butter and beaten egg. Sift baking powder, ginger, flour and salt, add nuts, stir into other ingredients. Drop in spoonfuls on a greased tray, moderate oven, approximately 25 minutes.

COMBS

One of the most valuable assets a beekeeper can possess is a quantity of well-drawn-out combs.

The price of foundation nowadays is such as to make it necessary that every sheet be converted into a good useable comb, which will be carefully preserved to give several years' service.

Too often beekeepers expect comb to be built under conditions which can only produce inferior comb. This is wasteful and inefficient.

It is hopeless to expect bees to build comb unless there is a honey flow in progress, or unless heavy and continuous feeding is resorted to.

A comb building stock should be, at least, reasonably strong.

A nucleus, even under ideal conditions, should be allowed to concentrate all its energy on brood-rearing and gathering stores. To impose the additional strain of comb building on a growing colony is bad beekeeping. An expanding brood-nest requires drawn comb to prevent any check on the rearing of brood and storage of pollen and honey.

But the fundamental factor in obtaining really good comb is that it should *always be built over the brood chamber*. To put foundation into the brood-nest is to ask for poorly built comb.

Comb built over the brood-chamber will be even, remarkably free from drone-cells, and will be built right down to the bottom of the frame.

It is well worth taking care to have brood combs built under the right conditions.

—*The Scottish Beekeeper.*

Reflections

. . . from the Editor's Desk

Canadian Capers

The way they do it in Canada is mentioned in a recent letter from Mr George Toogood of Dawson Creek, British Columbia. Mr Toogood was a well-known beekeeper in the Gore district until he moved to Canada some months ago.

"We arrived safely in Canada and I am very busy working for the Peace River Honey Company, which runs 2000 hives of bees. There are five of us and we have just finished caging the queens in the hives and when the brood is all hatched out the bees will be gassed and the pollen combs and some honey put away for next spring to help the 2000 package bees along. We are taking off all the honey now; there are four girls and a man extracting the honey, and this company will get about 100 tons this season. The honey is all of sweet clover, Alsike clover and lucerne, and it is of very good quality; the honey is put into 70lb. drums and is sold to one of the large companies that handle liquid honey."

Apicultura Automatica

The search for an easy way of producing honey continues and we have to hand a brochure (in Spanish, unfortunately) describing a mechan-

ism which is incorporated in the hive and performs automatically the whole process of uncapping, extraction, filtration, bottling and replacement of empty combs. It is claimed that the system stops swarming fever and helps to produce queens and more honey, having 19 innovations and 39 extraordinary advantages. Patent rights are held by the author, Mr Genji Sugano, Pasaje Lagos 2964, Buenos Aires, Argentina, from whom full particulars are obtainable.

Some Figures

"My crop will be moderately good," said a Southland beekeeper the other day, "probably about four to four and a half." Had my elaboration been necessary he might have explained that his yield would be four to four and a half tons per hundred hives. A few beekeepers still measure their returns in pounds per hive, but this method seems to be on the wane; perhaps it is rather too explicit. The general practice is to resort to such general terms as "normal" and "average" or a proportion thereof.

Another interesting custom is to be found on the overseas market where prices for honey are quoted in terms of shillings per hundredweight. The capacity of the British peoples to take mathematical punishment is certainly remarkable.

The Weather

We recall our remarks in the November issue where we commented on the New Zealand weather in relation to that experienced in the Old Country. Last season's honey crop in the British Isles was a total failure; here it has been of normal dimensions. Inevitably there are a few districts where the yields are exceptionally good or very poor, but generally speaking, the crop is unusually well distributed. This proves nothing, but it seems to indicate that the British summer gives no reliable guide to what we may expect in this country.

Classified Advertisements

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Literary contributions and advertisements must be in the hands of the Editor, Mr J. McFadzien, 29 Nottingham Crescent, Calton Hill, Dunedin, S.W.1, not later than the first of month of publication.

Nom-de-plume letters must be signed by the writer and address given, not necessarily for publication, but as proof of good faith. Letters accepted for publication do not necessarily express the views of the Editor.

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