THE CANADIAN BEEKEEPERS COUNCIL

REPRESENTING ALL CANADIAN BEEKEEPERS

MINUTES AND PROCEEDINGS

Twenty Fourth Annual Meeting

THE CORNWALLIS INN, KENTVILLE, N.S.

NOVEMBER 30 - DECEMBER 2, 1964

OFFICES: 219 QUEEN ST.

OTTAWA 4. ONTARIO

TELEPHONE: 233-8941

The Canadian Beekeepers' Council

REPRESENTING ALL CANADIAN BEEKEEPERS IN MATTERS OF COMMON INTEREST

219 QUEEN STREET, OTTAWA 4, CANADA • AREA CODE 613 233-8491

TWENTY FOURTH

ANNUAL MEETING

MINUTES & PROCEEDINGS

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CORNWALLIS INN

KENTVILLE, N.S.

I N D E X

CANADIAN BEEKEEPERS' COUNCIL REPRESENTATIVES

MARITIME BEEKEEPERS' ASSOCIATION	M. Spencer Horsburgh Cambridge Station, N.S.
ASSOCIATION DES APICULTEURS PROFESSIONNELS DU QUEBEC	Jean Guilbault 745 St. Louis, Joliette, P.Q.
LA COOPERATIVE DES PRODUCTEURS DE MIEL DU QUEBEC	Jean A. Beaudry Montebello, Co. Papineau, P.Q.
ONTARIO BEEKEEPERS' ASSOCIATION	Victor Mesley Kemptville, Ontario
ONTARIO HONEY PRODUCERS CO-OPERATIVE LIMITED	Maurice W. Harvey Codrington, Ontario
MANITOBA BEEKEEPERS' ASSOCIATION	Earl J. Burnett Box 131, Roland, Manitoba
MANITOBA CO-OPERATIVE HONEY PRODUCERS LIMITED	Dan Isaac Sinclair, Manitoba
SASKATCHEWAN BEEKEEPERS' ASSOCIATION	Don Peer Nipawin, Saskatchewan
SASKATCHEWAN HONEY PRODUCERS CO-OPERATIVE LIMITED	Roy M. Pugh Tisdale, Saskatchewan

REPRESENTATIVES

ALBERTA BEEKEEPERS' ASSOCIATION	Robert Asher Brooks, Alberta
ALBERTA HONEY PRODUCERS CO-OPERATIVE LIMITED	Marcel Larocque Girouxville, Alberta
B.C. COMMERCIAL BEEKEEPERS' ASSOCIATION	John Chandler Lillooet, B.C.
B.C. HONEY PRODUCERS ASSOCIATION	George W.H. Reed R.R. #1, Glenmore Drive Kelowna, B.C.
CANADIAN HONEY PACKERS ASSOCIATION	Howard D. Bryans Alvinston, Ontario
EXECUTIVE SECRETARY	John E. King 219 Queen Street Ottawa 4, Ontario

CANADIAN BEEKEEPERS' COUNCIL

1965 OFFICERS

President	- Victor Mesley
Vice President	- Don F. Peer
Executive Member	- Robert Asher
Executive Secretary	- John E. King

PAST PRESIDENTS

1940 - 41	- W. R. Agar*
1942	- S. M. Deschenes*
1943	- J. W. Braithwaite
1944	- P. C. Colquhoun
1945	- A. T. Brown
1946	- W. E. Phillips
1947 - 49	- F. R. Garland
1950 - 51	- J. N. Dyment
1952	- P. Kowalski
1953 - 54	- W. H. Turnbull
1955 - 56	- H. C. Allen
1957 - 58	- S. J. Lye
1959 - 65	- V. Mesley

HONORARY LIFE MEMBERS

C. B. Gooderham
J. N. Dyment
Mrs. H. Grace
F. R. Armstrong
W. H. Turnbull
C. F. Pearcey
J. P. Hodgson
H. C. Allen

PAST EXECUTIVE SECRETARIES

1940 -	- W. T. Patterson
1941 - 48	- R. M. Pugh
1949	- W. G. Le Maistre *
1950 - 59	- R. M. Pugh
1960 - 62	- R. M. McKay
1962 -	- J. E. King

* Deceased

CONSULTANTS

Corner, J., Provincial Apiarist	Apiculture Branch Dept. of Agriculture Court House Vernon, B.C.
Oldershaw, D.H., Apiary Inspector	B.C. Dept. of Agriculture 406 - 6th Street New Westminster, B.C.
Edmunds, J.W. Supervisor of Apiculture Topping, R., Chief Apiary Inspector	Apiculture Branch Dept. of Agriculture Brock Building 10177 - 104th Street Edmonton, Alberta
McCutcheon, D.M., Provincial Apiarist Bland, S.E., Asst., Provincial Apiarist	Plant Industry Branch Apiary Division Dept. of Agriculture Administration Building Regina, Saskatchewan
Pankiw, P., Apiculturist	Research Branch Canada Dept. of Agriculture Research Station University Sub. P.O. Saskatoon, Saskatchewan
L'Arrivee, Dr. J.C.M., Apiculturist Geiger, J.	Research Branch Dept. of Agriculture Experimental Farm Brandon, Manitoba
Robertson, D.R., Provincial Apiarist and Entomologist Smith, D., Assistant Apiarist and Entomologist	Extension Service Dept. of Agriculture & Conservation 717 Norquay Building Winnipeg, Manitoba
Jay, Dr. S. Cameron, Asst. Professor	Dept. of Entomology University of Manitoba Winnipeg, Manitoba
Armstrong, F.R.	227 Carling Avenue Ottawa, Ontario

CONSULTANTS

Gochnauer, Dr. T.A. Head Boch, Dr. R., Apiculturist Furgala, Dr. B., Apiculturist	Apiculture Section Entomology Research Institute Research Branch Canada Dept. of Agriculture Central Experimental Farm Ottawa, Ontario
Townsend, Professor G.F., Provincial Apiarist & Head of Dept. Burke, P.W., Asst. Provincial Apiarist Shuel, Dr. R. Smith, Dr. M.V.	Apiculture Department Ontario Agricultural College Guelph, Ontario
Plourde, H.J., Provincial Apiarist	Bee Division Department of Agriculture Quebec City, P.Q.
Brasseur, R., Assistant Provincial Apiarist	Que. Dept. of Agriculture 201 Cremazie Blvd. East Montreal 11, P.Q.
Pinnock, D.F., Apiculture Fieldman	Horticultural Branch N.B. Dept. of Agriculture Fredericton, N.B.
Karmo, E.A. Apiarist	N.S. Dept. of Agriculture and Marketing Nova Scotia Agricultural College Truro, N.S.
Burns, W.A.	Research Branch P.E.I. Dept. of Agriculture Experimental Farm Charlottetown, P.E.I.
MacLean, D., Provincial Apiarist	P.E.I. Dept. of Agriculture Box 2,000 Charlottetown, P.E.I.

CANADIAN BEEKEEPERS' COUNCIL

Consultants in Attendance

R. BARIL, Ste. Luc Surmer, P.Q.

P.W. BURKE, University of Guelph, Guelph, Ontario

J. CORNER, B.C. Department of Agriculture, Vernon, B.C.

J.E. EDMUNDS, Apiculture Dept., Alta. Dept. of Agriculture, Edmonton, Alta.

F.R. GARLAND, Manitoba Coop. Honey Producers Ltd., Winnipeg, Manitoba

T.A. GOCHNAUER, Apiculture Section, Research Branch, C.D.A., Ottawa, Ont.

E.P. GRANT, Department of Agriculture, Ottawa, Ontario

J.M. GRAY, Dominion Bureau of Statistics, Ottawa, Ontario

L.A. INKSTER, Ontario Honey Producers Coop. Ltd., Toronto, Ontario

E.A. KARMO, Dept. of Agriculture & Mktg., N.S. Agricultural College, Truro, N.S.

W.R. PARKINSON, Department of Industry, Ottawa, Ontario

P.F. PAWLOWSKI, Alberta Honey Producers Coop., Edmonton, Alberta

D.F. PINNOCK, N.B. Dept. of Agriculture, Fredericton, N.B.

L.V. RICHMOND, Dominion Bureau of Statistics, Truro, N.S.

D.R. ROBERTSON, Manitoba Dept. of Agriculture & Conservation Div., Winnipeg, Man.

PROFESSOR G.F. TOWNSEND, University of Guelph, Guelph, Ontario

Associate Members in Attendance

K.P. BENSON, Metcalfe, Ontario

H. BIRD, New Westminster, B.C.

T.B. COOPER, Kraft Foods Limited, Montreal, P.Q.

J. GROSSMAN, Billy Bee Honey Products Ltd., Toronto, Ontario

J.P. HODGSON, Hodgson Bee Supplies Ltd., New Westminster, B.C.

K. KING, Continental Can Company of Canada Ltd., Halifax, N.S.

R.A. MUNRO, Kraft Foods Ltd., Montreal, P.Q.

Guests & Visitors

M. BALODIZ, Hopewell, N.S.

P. BISHOP, Manitoba Beekeepers' Association, Sackville, N.B.

MRS. J. CHANDLER, B.C. Commercial Beekeepers' Assn., Lillooet, B.C.

J. CRAIK, N.S. Beekeepers' Association, Bridgetown, N.S.

E. DUNCANSON, Wolfville, R.R. #3, King's County, N.S.

C. EMBRIE, Kentville, N.S.

R.L. HORSBURGH, Kentville, N.S.

A. LAPLANTE, Fredericton, N.B.

C.W. MANCHESTER, Riverview, N.B.

J.W. RICKETSON, Bridgetown, N.S.

O.J. SHOWELL, Ontario Beekeepers' Association, Plattsville, Ontario

G.G. SMELTZER, N.S. Beekeepers' Association, Kentville, N.S.

E.I. TURNER, Berwick, N.S.

R.G. WHITE, Fredericton, N.B.

J.B. YOUNG, N.B. Beekeepers' Association, Petitcodiac, N.B.

T.J. YOUNG, Toronto, Ontario

Invited Guests

A.E. CALKIN, Scotian Gold Co-operative Limited, Kentville, N.S.

A.D. PICKETT, Entomology Division, Research Branch, N.S. Department of Agriculture, Kentville, N.S.

DR. W.A. JENKINS, Principle, N.S. Agricultural College, Truro, N.S.

H.C. LINDSAY, Mayor of Kentville

Canadian Beekeepers' Council-1964

The Cornwallis Inn, Kentville, N.S.

Council delegates 1964

1965 Officers — V. Mesley, President; D. F. Peer, Vice-President; R. Asher, Executive Director

A. E. Calkin, General Manager, Scotian Gold Cooperative Limited, Kentville, N.S.

Dr. A. D. Pickett, Canada Department of Agriculture, Kentville, N.S.

A. E. Karmo, N.S. Department of Agriculture, Truro, N.S.

E. J. Burnett, Manitoba Beekeepers' Association, Raland, Man.

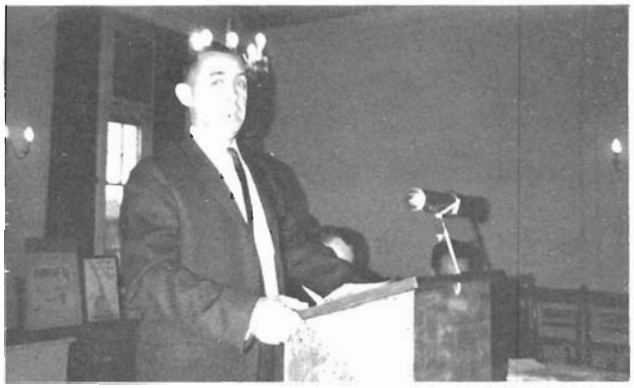
Professor G. F. Townsend, University of Guelph, Guelph, Ont.

Dr. T. A. Gochnauer, Canada Department of Agriculture, Ottawa, Ont.

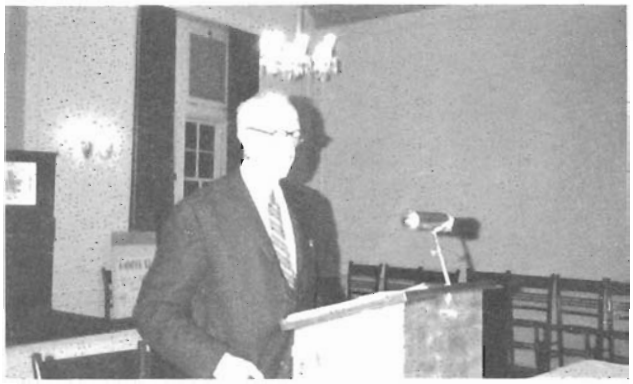
Canadian Beekeepers' Council-1964

The Cornwallis Inn, Kentville, N.S.

Victor Mesley, President, Canadian Beekeepers' Council



D. R. Robertson, President, Canadian Association of Apiculturists



F. R. Garland, Manitoba Cooperative Honey Producers Limited

R. M. Pugh, Chairman, Grading Committee

D. R. Robertson and J. Carner

J. E. King and D. Isaac

D. F. Peer, Vice-President, Canadian Beekeepers' Council

G. W. H. Reed, Chairman, Fairs and Exhibits

CANADIAN BEEKEEPERS' COUNCIL

24TH ANNUAL MEETING

CORNWALLIS INN

KENTVILLE, N.S.

NOVEMBER 30TH - DECEMBER 2ND, 1964

MINUTES

Those present were: Messrs. V. Mesley (c), E.J. Burnett, D.F. Peer, M.S. Horsburgh, J. Guilbault, J.A. Beaudry, M.W. Harvey, D. Isaac, R.M. Pugh, R. Asher, M. Larocque, J. Chandler, G.W.H. Reed, H.D. Bryans, J.E. King (s)

Notice

The Executive Secretary read the Notice of Meeting.

Scrutineers

J. Corner and D.R. Robertson were appointed scrutineers.

Minutes

On the motion of Messrs. M.S. Horsburgh and M. Harvey, the Minutes of the 23rd Annual Meeting, December 4 - 6, 1963 were approved as circularized

CARRIED

Resolution Committee

M. Harvey and J.W. Edmunds were appointed to form the Resolution Committee.

Introductions

President Victor Mesley introduced new Council delegates John Chandler, Jean Guilbault and Howard Bryans and welcomed them to the meeting.

Canadian Horticultural Council

A.E. Calkin, representing the Canadian Horticultural Council, the agency appointed to perform Council's secretarial duties, extended a cordial welcome to all delegates and described the working agreement established between the Horticultural Council and the Beekeepers in 1962.

Financial Report

The Executive Secretary read the audited financial report and statement for the year ending October 31st, 1964. A copy is attached. It was moved for adoption by Dan Isaac and Howard Bryans. CARRIED

Canadian Association of Apiculturists

Mr. D.R. Robertson, President, Canadian Association of Apiculturists addressed the meeting. In his remarks he extended greetings from his association, best wishes for successful deliberations and appreciation for the

Council's interest in the various research projects presently being conducted by members of his Association. A copy of his address is attached.

The Executive Secretary's Report

The Executive Secretary read his report outlining the activities of Council over the past year, and moved its adoption. A copy is attached. It was seconded by E.J. Burnett CARRIED

The President's Report

President Victor Mesley reported on the activities of the Executive outlining several recommendations being offered for consideration. A copy is attached. The report was adopted on the motion of D. Peer and R. Asher. CARRIED

Tabling of Resolutions

The Executive Secretary read all resolutions coming before the meeting. The delegates were requested to review these and be prepared to discuss them during the meeting.

Dr. A.D. Pickett

Dr. A.D. Pickett, Research Station, Canada Department of Agriculture, Kentville, N.S. presented his paper entitled "Pest Control Problems and the Beekeeper". A copy of his address is attached.

Amendments to By-Laws

The proposed changes to the By-Laws, Purposes and Objects as listed below, were approved on the motion of E.J. Burnett and H. Bryans CARRIED

Article I Interpretation

B) The word "Executive" shall mean the Executive of the Corporation, consisting of the President, the Vice President and the Executive Director and shall imply a majority decision of the members of the executive then in office;

Article II Name

The name of the Corporation shall be "The Canadian Beekeepers' Council", and in French, "Le Conseil des Apiculteurs Canadiens".

Article VI Members

3. Honorary Life Members

The members of the Corporation, at any general annual or special meeting may admit as Honorary Life Members any person they deem advisable - such Honorary Members shall have no right to vote but shall enjoy such privileges as are granted to them by the Corporation

Article VIII Termination of Membership

B) Such resignation shall not have the effect of omitting any fees or other moneys which might be payable to the Corporation by the resigning member.

Article IX Meetings of the Corporation

(1) General Annual Meeting

A) Place

The general annual meeting of the members of the Corporation shall be held on the date and at the place chosen by the members at the general annual meeting and failing this, the executive shall decide;

B) Agenda

2. Appointment of scrutineers;

(2) Special General Meetings

A. Calling

1. By the Secretary-Treasurer

The Secretary-Treasurer of the Corporation shall, when requested to do so by the President, majority of the Executive, or by resolution of the Executive, call a special general meeting of the members;

3. By the Executive

This section deleted.

E) Dismissal

Any officer may be dismissed at any special meeting by a majority of the members present at such meeting. At the same meeting, another person may be elected to replace the dismissed officer for the balance of the term of office of the dismissed officer.

Article XIII Voting at General Meetings

3. Voting Procedure

C) President's Casting Vote

The President may vote on any question at the time of voting, and in in the case of equality of votes, the motion shall be declared defeated.

Article XIV List of Members

A complete list of all members of the Corporation entitled to vote at all general annual or special meetings shall be prepared by the Secretary-Treasurer of the Corporation and made available at any time to any delegate or any member of the Corporation.

Article XVIII The Executive

(1) Composition

The affairs of the Corporation shall be administered by the Executive which shall be made up of the President, the Vice President and the Executive Director of the Corporation, who shall be elected at the annual general meeting. Only persons qualified to act as the delegate of any ordinary member may be elected.

(2) Quorum

At meetings of the Executive Committee, two of the members shall constitute a quorum but any business transacted at a meeting of the Executive at which all members are not present, shall, before becoming effective, have the written approval of the other member.

(3) Vote

The election of the officers of the Corporation shall be made by secret ballot unless the office is unopposed;

3. Term of Office

To be numbered section (4)

4. Dismissal

This section deleted

(5) Incapacity

F) Ceases to be a delegate of a duly qualified ordinary member.

Article XIII Meetings of the Executive

A) Time

The annual meeting of the Executive of the Corporation shall be held immediately prior to the general annual meeting of the members;

(2) Special Meetings

B) Notice

"five (5) clear days" to read "fourteen (14) days"

(5) Voting

This section deleted

subsequant sections 6,7,8,9 to become 5,6,7, 8.

Article XXIV Officers of the Corporation

(1) President & Vice President

B) Duties and Functions

(e) Voting

This section deleted

(2) The Secretary & The Treasurer

A. Appointment

An individual or business association may be appointed to the position of Secretary-Treasurer of the Corporation by the Executive and shall be referred to as the Executive Secretary.

Article XXV Dismissal of Officers

Except for the President, the Vice President and the Executive Director, any officer or employee of the Corporation may be dismissed and relieved of his duties with or without cause, by a unanimous resolution or the Executive.

Article XXVII Vacancies

If any vacancy occurs in any of the functions of President, Vice President, Executive Director, Secretary-Treasurer, or auditor by reason of the resignation, disqualification or other in capacity of the incumbent, the Executive may, by a unanimous vote, elect or appoint another person to fill such vacancy. Any member or person who is thus elected or appointed to fill any such vacancy shall remain in office for the balance of the term of office of the persons he replaces.

Article XXVIII Legal Proceedings

The President, the Vice President, the Executive Director, the Secretary Treasurer or any one of these same persons is authorized to appear for and on behalf of the Corporation in any legal proceedings taken by or against the Corporation or in which the Corporation has to intervene.

The following Purposes and Objects of the Canadian Beekeepers' Council were also approved under the same motion:

PURPOSES AND OBJECTS

To promote, develop and maintain good fellowship and cooperation among beekeepers.

To promote the interests of Canadian beekeepers.

To co-ordinate throughout Canada the work and efforts of all provincial beekeepers' associations and organizations having objects and purposes similar to those of the Corporation.

To propose, obtain and support Governmental legislation helpful to the beekeeping industry.

To promote the trade interests of its members through advertising, proper marketing, and good public relations;

To aid in the dissemination of reliable and practical information regarding the beekeeping industry.

To promote research in the broad field of apiculture.

To promote the use of honeybees as pollination agents.

To advocate caution in the use of insecticides.

To encourage and support the showing of honey at fairs & exhibitions.

To establish and maintain liaison with the Bee Research Association and Apimondia.

1965 Budget

The following budget for the coming year was approved on the motion of R.M. Pugh and seconded by R. Asher CARRIED

Canadian Horticultural Council	1965		1964	
Service Charge	$1,800		$1,800	
Council Membership	330		300	
Executive Secretary	2,000		2,000	
		$4,130		$4,100
Travel				
Executive Committee Meetings	1,000		600	
Committee Meetings	500			
Annual Meeting	3,500		3,500	
Executive Secretary	500		500	
		$5,500		$4,600
General				
American Honey Institute	500			
Research	500			
Contributions & Fees	250		250	
Publicity & Promotion	1,200		850	
Awards	400		400	
Annual Meeting	150		100	
Office Supplies, Telephone Etc.	500		500	
Miscellaneous	100			
		$3,600		$2,100
		$13,230		$10,800

Research Committee

Don Peer presented his report and moved its adoption. A copy is attached. It was seconded by H. Bryans CARRIED

Dr. T.A. Gochnauer reported on the research program at Ottawa and Federal Stations across Canada. A copy of his report is attached.

Professor G.F. Townsend reported on the research work being conducted at the University of Guelph. A copy is attached.

Fairs Exhibits

George W.H. Reed read his report and moved its adoption. A copy is attached. It was seconded by M. Harvey CARRIED

Posters

A selection of posters and emblems prepared by E.J. Burnett, E. Bland and J. Corner were presented to the meeting. A very lively and interesting discussion followed. Resolutions dealing with this matter will be found under resolutions arising from the Publicity Committee.

Election of Officers

Mr. Paul Pawlowski conducted the election of officers for the 1964-65 Council year.

For the office of President

E.J. Burnett nominated by D. Isaac

V. Mesley nominated by H. Bryans

Nominations closed - D.F. Peer and R. Asher

First ballot tied

Second ballot V. Mesley elected.

For the office of Vice President

D.F. Peer nominated by J. Chandler

E.J. Burnett nominated by M. Harvey

Nominations closed - R. Asher and G.W.H. Reed

D.F. Peer elected.

For the office of Executive Director

E.J. Burnett	nominated	by	M. Harvey -	declined
M. Harvey	nominated	by	E.J. Burnett -	"
M. Larocque	nominated	by	R. Asher -	"
R. Asher	nominated	by	D.F. Peer	
J. Chandler	nominated	by	J. Guilbault	

Nominations closed - M.S. Horsburgh and D. Isaac

R. Asher elected.

Representative to Canadian Horticultural Council

V. Mesley nominated by M. Harvey

Nominations closed - H. Bryans and D. Peer

V. Mesley elected.

Chairman Pawlowski instructed the scrutineers to destroy all ballots.

Grading Committee

The Grading Committee, under the chairmanship of Roy Pugh, met at an open meeting Monday afternoon December 1st. The Chairman brought forth the various points discussed at this meeting in order to obtain full approval of Council.

In reviewing the proposed regulations, the following changes were approved.

1. Definition of liquid honey to be deleted from regulations (Section 2 (1))

2. Definition of Pasteurized Honey to read

   "is extracted honey that has been treated in a registered pasteurized plant by the controlled application of heat to a point where it is free of viable sugar - tolerant yeasts" (section 2 (r))

3. Section 23 - the words "and liquid" to be deleted.

4. Section 25 (c) the words "product or the" to be inserted following "misrepresent the"

5. Part v to read "Imports and Exports"

6. Schedule A, Table 1, section 1

   The following to be added "including Pasteurized honey"

7. Table 3, Section 2 (a) (i) to read

   "having not more than 19.0 per cent moisture if declared pasteurized or 17.8 per cent moisture if not so declared"

8. Table 3, section 3 (a) (i) to read

   "having not more than 20.0 per cent moisture if declared pasteurized or 18.6 per cent moisture if not so declared."

9. Table 3, section 3 (b) (i)

   19.0 to read 18.6

10. Table 3, section 4 (b) (iii)

    The words "or the honey may be in its original liquid form" to be deleted.

11. Table 3, section 4 (a) (iii)

    The words "or very uneven" to be deleted

12. Table 3 - The word "seriously" used throughout Table 3 to be replaced by "materially"

13. Table 3, section 4 (b) (iv) to read

    "Color may be uneven, and surface froth or foam may not exceed 1/4 of an inch in depth;"

8 Oz. Size

RESOLVED that sizes under 8 ounces remain as outlined in the proposed regulations.

Moved by M.S. Horsburgh, seconded by E.J. Burnett DEFEATED

RESOLVED that the proposed regulations pertaining to sizes be amended to include any size up to and including 8 ounces net weight (section 24 (1) (a)).

Moved by J. Chandler, seconded by H. Bryans CARRIED

B.C. Resolution

The following resolution was presented by the B.C. Honey Packers Association:

WHEREAS over the years we have had a demand for unpasteurized honey with a greater return to the beekeeper; and

WHEREAS if pasteurization were enforced it would ruin our market for unpasteurized honey, and would curtail the valuable European market with its demand for unpasteurized honey; and

WHEREAS it is known that a pure properly ripened honey does not require pasteurization for its preservation, and no small operator would be able to afford installation of the expensive equipment,

RESOLVED that this association request that honey continue to be graded with the following values uppermost; flavour, aroma, density, color and purity, and that the customers be truefully informed by wording the label pasteurized or unpasteurized honey.

Chairman Pugh suggested that this would require a separate class in table 3 of the proposed regulations. It was then moved by J. Chandler, seconded by G.W.H. Reed and CARRIED that this suggestion be accepted in principle.

Council then proposed the following new class to be included in table 3 of the proposed regulations under Canada No. 1.

(c) if (terminology to be defined)

(i) having not more than 17.8 percent moisture;

(ii) free from any foreign material that would be retained on a United States standard 80 mesh screen, and presenting a clean appearance, free of stain;

(iii) it is uniform in color and free from surface froth or foam that is over 1/16 of an inch in depth;

(iv) its flavour is characteristic of honey of the same color class and is free from any objectionable flavour, aroma or taint from any source;

(v) it is packed in a transparent container that clearly shows the content, and

(vi) it is packed and marked in accordance with Parts II and III.

The following proposed for Canada No. 2

(c) if (terminology to be defined):

(i) having not more than 18.6 percent moisture;

(ii) free from any foreign material that would be retained on a U.S. standard 60 mesh screen and presents a generally attractive appearance;

(iii) it shall not be more than slightly uneven in color and shall be free of surface froth or foam exceeding 1/8 of an inch in depth at the edges;

(iv) its flavour may be non-descript or lacking in character, or it may be slightly over-pronounced or slightly "off" but it shall not be materially impaired from any cause;

(v) it is packed in a transparent container that clearly shows the content, and

(vi) it is packed and marked in accordance with Parts II and III.

The following proposed for Canada No. 3

(c) if (terminology to be defined):

(i) having not more than 20.0 per cent moisture

(ii) it may carry foreign material that would be retained on a United States standard 30 mesh screen and present an unattractive appearance but it shall carry no particles of which the greatest dimension exceed 1/4 of an inch;

(iii) Color may be uneven and surface froth or foam may not exceed 1/4 of an inch in depth;

(iv) its flavour may not be characteristic of honey of the same color class, or it may be over-pronounced or "off", but it shall not be materially impaired from any cause;

(v) it is packed in a transparent container that clearly shows the content, and

(vi) it is packed and marked in accordance with Parts II & III.

Class Definition

RESOLVED that the definition agreed upon defining this new class include "Honey that contains viable sugar tolerant yeasts."

Moved by J. Chandler, seconded by G.".H. Reed CARRIED

Proposed Titles

The following proposed titles were suggested for further consideration:

Producer Packed

Producer Extracted

The following titles were proposed and rejected:

Natural Pak	Quebec Pak
Unpasteurized	Primary Pak
Untreated	Cold Pak
Natural Honey	Cool Processed
Provincial Pak	Producer
Local Pak	Producer Processed
B.C. Pak	

RESOLVED that this matter be referred to Council's Grading Committee in consultation with Mr. E. Grant and the industry and the Producer Packed, Producer Extracted or similar name inferring this be adopted, and

THAT the proposed titles rejected not be included in selection.

Moved by V. Mesley, seconded by D.F. Peer CARRIED

Imported Honey

RESOLVED that Council re-afirm Resolution #39 of the 1963 Proceedings.

Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

RESOLVED that Council adopt the proposed regulations as amended to date subject to motions adopted at this Annual Meeting relating to the proposed grading regulations.

Moved by E.J. Burnett, seconded by D.F. Peer CARRIED

Moved by J. Chandler, seconded by G.W.H. Reed and CARRIED

THAT the B.C. delegates express their appreciation to Council for the cooperation and consideration given by this meeting to their request for a third grade of honey in the proposed grading regulations.

Executive Secretary

Moved by D.F. Peer and seconded by H. Bryans and CARRIED

THAT the Canadian Horticultural Council be retained to carry out the secretarial duties of Council

Resolution Committee

M. Harvey, Chairman of the Resolution Committee presented his report. These will be found under the section on resolutions.

Disappointment

Moved that Council record in its minutes, its disappointment in the action taken by the Saskatchewan Government in not authorizing Mr. D. McCutcheon, Provincial Apiarist to attend Council's Annual Meeting.

Moved by J. Chandler, seconded by M.S. Horsburgh

Committees

The President announced appointments to the committees for 1965 as follows:

Finance - The Executive

Terms of Reference:

To develop full support of the Canadian Beekeepers' Council in all provinces and payment of levy on all types of honey containers. To find equitable workable solutions to the financial problems of the corporation.

Research - D.F. Peer, T.A. Gochnauer, S.C. Jay, P.W. Burke, J. Edmunds, J. Chandler

Terms of Reference:

To initiate and co-ordinate research work with the Canadian Association of Apiculturists and the various government agencies.

Publicity - J. Guilbault, E.J. Burnett, J.E. King, M. Larocque

Terms of Reference:

To initiate and co-ordinate the Publicity and Public Relations program for the Council. Methods to include - information provided to Representatives for their presentations at meetings of beekeepers; news items for the Apiarist and others who issue Newsletters; articles for beekeeping publications; encouragement of press and broadcast publicity, direct publicity at the Annual Meeting.

Magazine - M.W. Harvey, H. Bryans, J. Chandler

Terms of Reference:

To investigate the possibility of promoting a Canadian Bee Magazine

Emblem - R. Asher, J. Corner, S.E. Bland, M.S. Horsburgh

Terms of Reference:

To prepare and have available, as soon as possible, a selection of proposed emblems or crests that could be adopted by Council.

Fairs & Exhibits - G.W.H. Reed, P.W. Burke, F.R. Armstrong

Terms of Reference:

To encourage displays of honey at all fairs and especially the national shows. To encourage honey competition and exhibitions. To publicize this work and to encourage Canadian beekeepers to participate. To encourage uniform judging, and entry requirements. To encourage and publicize 4H Honey Bee Clubs.

Grading - R.M. Pugh, E.J. Burnett, Council Delegates

Terms of Reference:

To survey the working of Dominion and Provincial Honey Grading Regulations, and to encourage uniformity of legislation. To prepare and recommend to the Council changes to grading regulations and to convey the opinion of the industry to government officials on Council's behalf.

Tariff - J.E. King, R.W. Craighead, K. Benson

Terms of Reference:

To work with the Departments of Finance and National Revenue to study and take whatever action is necessary to have all beekeepers' supplies and equipment concerned as agricultural items in an effort to obtain a reduction or completely eliminate all duty and sales tax.

Classifier - The Executive

Terms of Reference:

See Resolution No. 19.

E.J. Burnett

It was unanimously moved that Council extend a sincere vote of thanks to Mr. E.J. Burnett for his many years of active participation in Council's affairs as Vice President. CARRIED

Auditors

Moved by M.S. Horsburgh and seconded by J. Guilbault and CARRIED

THAT the firm of George A. Welch be retained to prepare the audited financial statement for 1965.

RESOLUTIONS ADOPTED AT THE 24TH ANNUAL MEETING

ARISING FROM EXECUTIVE COMMITTEE RECOMMENDATIONS

1. Amendments to By-Laws

   RESOLVED that the proposed changes to the By-Laws, Purposes and Objects be adopted.

   Moved by E.J. Burnett, seconded by H. Bryans CARRIED

2. Council Delegates

   RESOLVED that Council recommend to all Provincial Associations that representatives elected as delegates shall serve in this capacity from March 31st.

   Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

3. Term of Office

   RESOLVED that Council recommend to all Provincial Associations that their official representatives be elected to serve a two year term commencing March 31st.

   Moved by G.W.H. Reed, seconded by D. Isaac CARRIED

4. Council Stationery

RESOLVED that the names of member associations be removed from Council's letterhead when reordering next year's supply.

Moved by E.J. Burnett, seconded by J. Guilbault CARRIED

5. Research Committee

RESOLVED that the Research Committee be a committee of six consisting of two beekeepers, two provincial apiarists and two research men.

Moved by M.W. Harvey, seconded by H. Bryans CARRIED

6. Crop Reporting

RESOLVED that Council prepare a crop report for release early in August, to include first estimates of Honey Production (based on colony numbers) as well as Packers stocks as of June 30. The information to be obtained from Provincial Apiarists and Honey Packers. Information submitted per se will be confidential to the Executive Secretary. Reporting of production and stocks on hand will be on a national basis only. A second and final production report on the same basis will be compiled and released in the fall.

Moved by D.F. Peer, seconded by M. Larocque CARRIED

7. Communications

RESOLVED that Council, in an effort to improve communications with the Canadian Beekeepers, recommend that all bulletins, news releases and the like prepared and released by Provincial Apiarists, Provincial Associations, Co-Operatives, Packers and the like include a special section reporting Council activities.

Moved by E.J. Burnett, seconded by M.S. Horsburgh CARRIED

ARISING FROM GENERAL DISCUSSION

8. Honorary Life Members

RESOLVED that all Honorary members be elected Honorary Life members.

Moved by D.F. Peer, seconded by M.W. Harvey CARRIED

9. J. Percy Hodgson

RESOLVED that Mr. J. Hodgson be elected an Honorary Life Member of Council.

Moved by D.F. Peer, seconded by D. Isaac CARRIED UNANIMOUSLY

10. H. Clair Allen

RESOLVED that Mr. H.C. Allen be elected an Honorary Life Member of Council.

Moved by M.W. Harvey, seconded by R.M. Pugh CARRIED UNANIMOUSLY

11. Canadian Horticultural Council

RESOLVED that the President write to John King expressing Councils extreme pleasure on the work that he is doing on behalf of the Corporation and its members,

FURTHER RESOLVED that the President write Mr. L.F. Burrows expressing Councils extreme pleasure on the job that the Canadian Horticultural Council is doing for the Canadian Beekeepers' Council and its members and to express also to Mr. Burrows Councils extreme pleasure on the work of Mr. John King on behalf of the Canadian Beekeepers' Council.

Moved by D.F. Peer, seconded by M.S. Horsburgh CARRIED UNANIMOUSLY

12. 1965 Meeting

RESOLVED that Council hold its Annual Meeting in Saskatoon, December 1 through 3, 1965.

Moved by R. Asher, seconded by M. Larocque CARRIED

13. 1966 Meeting

RESOLVED that Council accept the invitation of the Ontario Beekeepers' Association to hold its 1966 Convention in Toronto or Guelph, November 30th through December 2nd, 1966.

Moved by R. Asher, seconded by M. Larocque CARRIED

14. 1967 Meeting

RESOLVED that Council accept the invitation of the Alberta Beekeepers' Association to hold its 1967 Convention in Calgary November 29 through December 1, 1967.

Moved by R. Asher, seconded by M. Larocque CARRIED

15. Maritime Delegate

RESOLVED that the Maritime Beekeepers' Association be accorded full membership on Council.

Moved by M.W. Harvey, seconded by E.J. Burnett CARRIED

16. E.J. Burnett

It was unanimously moved that Council extend a sincere vote of thanks to Earl J. Burnett for his many years of active participation in Council's affairs as Vice President.

RESOLUTIONS TABLED FROM 1963 MEETING

17. Change of Name (#20)

RESOLVED that the name of the Canadian Beekeepers' Council remain unchanged.

Moved by M.S. Horsburgh, seconded by M.W. Harvey CARRIED

18. Emblem (#21)

RESOLVED that a special committee be appointed to study this project.

Moved by J. Chandler, seconded by J. Guilbault CARRIED

19. Honey Classifier (#33)

RESOLVED that the executive proceed in having a reasonably priced honey classifier made available for sale in Canada.

Moved by M.W. Harvey, seconded by E.J. Burnett CARRIED

20. White Class (#37)

RESOLVED that the minimum reading for white honey remain at 30 MM

Moved by M.W. Harvey, seconded by H. Bryans CARRIED

21. Imported Honey (#39)

RESOLVED that Council re-affirm resolution #39 of the 1963 Proceedings which reads:

"RESOLVED that the word "Imported" on pure honey and " a blend of imported and Canadian honey" for blends be marked on all containers and cartons."

Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

ARISING FROM THE BUDGET

22. Bee Research Association

RESOLVED that Council send, in the form of a grant, $50.00 to the Bee Research Association.

Moved by D.F. Peer, seconded by J. Chandler CARRIED

23. Canadian Association of Apiculturists

RESOLVED that Council commend the action taken by the Canadian Association of Apiculturists in sponsoring a cross Canada tour for Dr. Eva Crane, Director, Bee Research Association, and

FURTHER RESOLVED that Council be prepared to loan the Canadian Association of Apiculturists up to $500.00 to finance said tour, and if necessary, to underwrite the tour in an amount up to $200.00.

Moved by E.J. Burnett, seconded by R. Asher CARRIED

24. Travel Expenses

RESOLVED that Council representatives be allowed up to and including an amount equivalent to the current economy plane fare to cover travelling expenses.

Moved by E.J. Burnett, seconded by H. Bryans CARRIED

25. Per Diem Allowance

RESOLVED that Council representatives be allowed four (4) days at seventeen dollars ($17.00) a day to cover all expenses not including travelling expenses.

Moved by E.J. Burnett, seconded by H. Bryans CARRIED

ARISING FROM RESEARCH COMMITTEE

26. Prairie Research

WHEREAS the Manitoba Beekeepers' Association deeply regret the decision of the Federal Department of Agriculture to remove the Apiary Division from the Brandon Experimental Farm, and that this Association keenly realizes the great loss it and the Prairies will sustain in no longer having research facilities at Brandon, and

WHEREAS the beekeepers of Manitoba having faith in the future development of the beekeeping industry which is contingent upon efficient and continuing research facilities in Western Canada,

RESOLVED that the Manitoba Beekeepers' Association go on record as opposing the closing of the Apiary Division at Brandon and that we solicit the aid of the Canadian Beekeepers' Council in requesting that the Bee Research facilities on the Prairies be expanded and not terminated which would deprive the Prairies of a vital phase of research for our industry.

Moved by H. Bryans, seconded by D. Isaac CARRIED

ARISING FROM PUBLICITY COMMITTEE

27. Bee Magazine

WHEREAS at present Canadian Beekeepers have to turn to foreign bee magazines for sufficient information and education in their profession or hobby, and

WHEREAS prominent bee research workers and experienced beekeepers have to send their articles to foreign bee magazines to find enough readers for their findings; and

WHEREAS there is a tremendous need for a good Canadian bee magazine that in contents and appearance could join ranks with the other international recognized bee magazines,

RESOLVED that a committee be appointed to investigate the possibility of promoting a Canadian bee magazine.

Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

28. Poster Awards

RESOLVED that $50.00 be made available to the Publicity Committee to be used as prize money for a poster contest or whatever manner they deem most advisable.

Moved by M. Harvey, seconded by D.F. Peer CARRIED

29. Promotional Material

RESOLVED that Council investigate the possibility of having decals, stickers and the like made available for distribution to the bee-keepers through member agencies.

Moved by M. Larocque, seconded by J. Guilbault CARRIED

30. Honey Promotion

RESOLVED that the Publicity Committee investigate all avenues in an effort to promote honey through crests, decals, emblems and like media.

Moved by D.F. Peer, seconded by R.M. Pugh CARRIED

31. Stickers

RESOLVED that the Publicity Committee obtain complete details, including costs of sticker material for promotional purposes and report to the Executive Committee as soon as possible in order to have this material available for summer use.

Moved by H. Bryans, seconded by M. Larocque CARRIED

32. Bilingual Name

RESOLVED that Council include in the amendments to the By-Laws the French translation of Council's name "Le Conseil des Apiculteurs Canadiens" and further that separate paper be printed with letter-head in French.

Moved by D.F. Peer, seconded by M.S. Horsburgh CARRIED

ARISING FROM GRADING COMMITTEE

33. 8 Oz. Size

RESOLVED that the purposed regulations pertaining to sizes be amended to include any size up to and including 8 ounces net weight (Section 24 (1) (a))

Moved by J. Chandler, seconded by H. Bryans CARRIED

34. B.C. Recommendations

RESOLVED that B.C. recommendations for a 3rd class of honey in table 3 of the proposed regulations be accepted in principle.

Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

35. New Class

RESOLVED that the definition agreed upon defining this new class include "Honey that contains viable sugar tolerant yeasts".

Moved by J. Chandler, seconded by G.W.H. Reed CARRIED

36. Title for New Class

RESOLVED that this matter be referred to Council's Grading Committee in consultation with Mr. E. Grant and the industry and the names "Producer Packed", "Producer Extracted" or similar name inferring this be adopted.

Moved by V. Mesley, seconded by D.F. Peer CARRIED

37. Proposed Regulations

RESOLVED that Council adopt the proposed grading regulations as amended to date subject to motions adopted at this annual meeting.

Moved by E.J. Burnett, seconded by D.F. Peer CARRIED

38. Ontario Food Council

WHEREAS the 1-1/2 lb. honey container is legal under the present Federal regulations, and

WHEREAS the Ontario Food Council has demanded the removal of this container size from the trade, and

WHEREAS Council does not think this is in the bests interests of the Canadian Honey Industry.

RESOLVED that the Ontario Food Council be requested to recind this order and allow this size of honey pack to be sold until such time as the federal grading regulations are finalized and a reasonable time has passed to allow provincial honey grading regulations to be revised to coincide with federal regulations.

Moved by D.F. Peer, seconded by R. Asher CARRIED

39. Provincial Regulations

RESOLVED that the Canadian Beekeepers' Council contact the Departments of Agriculture in all provinces requesting them to make every effort to have provincial honey grading regulations as uniform as possible with the federal honey grading regulations and that as changes are made in federal honey grading regulations that the provinces endeavour to incorporate them in the provincial regulations as soon as possible in the interests of uniformity.

Moved by H. Bryans, seconded by J. Chandler CARRIED

ARISING FROM RESOLUTION COMMITTEE

40. Appreciation

RESOLVED that the Secretary convey the appreciation of Council members, guests and ladies to:

1. His Worship Mayor H.C. Lindsay and the city of Kentville.
2. Mr. Spencer Horsburgh and members of his committee.
3. N.S. Department of Agriculture
4. N.S. & N.B. Beekeepers' Association.
5. Scotian Gold Co-Operative Ltd.
6. Ladies Committee
7. Dr. Pickett of the Canada Department of Agriculture
8. The Cornwallis Inn and Staff
9. Continental Can Co. Ltd.

Moved by M. Harvey, seconded by R. Asher CARRIED

41. Canadian Association of Apiculturists

RESOLVED that Council express appreciation to the Canadian Association of Apiculturists for work carried out on behalf of the beekeeping industry.

Moved by M. Harvey, seconded by M.S. Horsburgh CARRIED

42. Ottawa

RESOLVED that the Canadian Beekeepers' Council express its appreciation to the Canada Department of Agriculture Research Branch.

Moved by M. Harvey, seconded by J. Guilbault CARRIED

43. University of Guelph

RESOLVED that the Canadian Beekeepers' Council express its appreciation to the Department of Apiculture, University of Guelph for its contribution to the beekeeping industry.

Moved by M. Harvey, seconded by M. Larocque CARRIED

Adjournment

This being all the business, the meeting was adjourned on the motion of D.F. Peer and seconded by J. Beaudin. CARRIED

Time 5:15 P.M. December 2nd.

THE CANADIAN BEEKEEPERS' COUNCIL

STATEMENT OF ASSETS AND LIABILITIES

as at October 31, 1964

ASSETS

Cash in bank		$ 4,859.52
Account receivable		25.00
Government of Canada 4¼% bonds - due 1972 - par value and cost	10,000.00	
Accrued interest	69.00	
		10,069.00
Prepaid expense		41.15
		14,994.67

LIABILITIES AND SURPLUS

Account payable		385.50
Surplus		
Balance, October 31, 1963	11,816.09	
add:		
Excess of Income over Expenditure for year	2,793.08	
		14,609.17
		14,994.67

We have examined the books and records of your Council for the year ended October 31, 1964. As in similar organizations, it was not possible to verify the revenue from all sources.

The bonds are in bearer form and were in the custody of officials of the Canadian Horticultural Council.

Subject to the foregoing we report that, in our opinion, the above Statement of Assets and Liabilities and attached Statement of Income and Expenditure are properly drawn up as to show a true and correct view of the state of the Council's affairs at October 31, 1964, and the result of its operations for the year ended on that date, according to the best of our information and the explanations given to us and as shown by the books.

GEO. A. WELCH & COMPANY

Chartered Accountants.

Ottawa, November 16, 1964.

THE CANADIAN BEEKEEPERS' COUNCIL

STATEMENT OF INCOME AND EXPENDITURE

for year ended October 31, 1964

Income:			
Receipts from:			
Continental Can Company Limited		3,871.53	
Quebec beekeepers		1,050.00	
Ontario beekeepers		4,624.90	
Manitoba beekeepers		2,351.00	
Saskatchewan beekeepers		1,099.80	
Alberta beekeepers		572.20	
British Columbia beekeepers		94.21	
			$13,663.64
Bond interest			425.00
			14,088.64
Expenditure:			
Canadian Horticultural Council:			
Service charge	1,800.00		
Membership fee	330.00		
Secretary-treasurer	2,000.00		
		4,130.00	
Travelling expense:			
Secretary-treasurer	611.87		
Annual meeting	3,497.61		
Committee meetings	654.05		
Executive meeting	736.55		
		5,500.08	
Contributions and fees:			
Audubon Society of Canada	10.00		
Bee Research Association	20.00		
Apimondia	30.68		
		60.68	
Gift - F. R. Armstrong		100.00	
Awards		206.92	
Stationery and printing		125.60	
Postage		78.20	
Telephone and telegraph		162.54	
Publicity		825.00	
Miscellaneous		106.54	
			11,295.56
Excess of Income over Expenditure			2,793.08

REPORT OF THE PRESIDENT

Welcome to Members, Apiculturists, Friends and Visitors to the 24th Annual Meeting of the Canadian Beekeepers' Council, our first Council Meeting held in the Atlantic Provinces. We are very pleased to meet here in Kentville in the land of the Acadians, one of the oldest settled areas in Canada.

We come here to meet together as a Council. The men who named our organization, when it was formed twenty-four years ago, chose wisely a very suitable name. What is a Council? Webster's Dictionary states "Council - an assembly of men summoned or convened for consultation, deliberation and advice on matters of importance."

Consultation - notice this word- it comes first. It means "talking together with a view to elicite truth."

Deliberation comes next. It means careful consideration, mutual discussion and examination of the reasons for and against. A measure to weigh consequences or results in the mind previous to action.

Then advice - the dictionary states - an opinion recommended as worthy to be followed- what is judged proper - a careful opinion about any matter.

Our purpose here at these meetings is to follow this procedure and as much as possible to make good decisions on the matters brought before us.

Also, direction must be given so that throughout the year, the Executive understand your intent and your ideas on the general overall situation in our beekeeping industry so that they may be familiar with the situation and in a good position to make decisions and adequately represent the industry.

You can see from John's report that the Executive have had quite a busy year, and have been and are continuing to be concerned with many things.

We met with the Agricultural Stabilization Board in May. We reviewed with them the situation in the Canadian Beekeeping Industry as it existed at the present time. The price had firmed somewhat, enough that there was no payment due from the 1963 crop. It certainly appeared that the situation for the 1964 crop indicated that prices should remain approximately the same.

In reviewing the present situation, we informed the Board that support given the industry, amounting to $462,146 had greatly assisted in stabilizing our market. The support program had installed confidence in the beekeeper. Confidence that we recognized as a very valuable and necessary ingredient in the Canadian economy and an integral part of Canadian agriculture.

The situation as explained was much different three years ago. At that time, the Canadian honey industry found itself faced with a distressed situation brought about by several factors outside Canada over which we had little or no control. This emergency period was brought about

by the Canadian dollar being at a premium over the United States dollar, and overproduction of honey and a depressed world market. In an effort to relieve a declining price situation, Council requested assistance of the Canadian Government in the form of a support program. This was granted through the Stabilization Board.

During the interview, the Board and your Executive realizing that the emergency period had been corrected, agreed that a floor price would not be established this year. The Board assured the committee that they would review and discuss our situation at any time the industry felt assistance was required.

Report of the Executive Committee

During this year, your Executive Committee held meetings in Ottawa, Winnipeg and Kentville. The Grading and Research Committees held meetings in Ottawa to review problems associated with their activities. On a regular monthly basis, your President met with your Executive Secretary to review the affairs of Council.

Following these various meetings, it is my privilege to present the following recommendations for your consideration.

Amendments to By-Laws

Your Executive has reviewed and studied the Constitution and By-Laws of your Council. Several suggested changes will be introduced for your consideration and approval.

Council Delegates

Council delegates are elected by their provincial associations at the various Annual Meetings which are generally held just prior to Council's Annual Meeting. Your Executive would suggest that when these delegates are elected that they take office March 31st in order that they would have an opportunity to study and review Council activities, thus being in a better position to act as Council delegates.

Term of Office

The Executive Committee in reviewing past Council Meetings would suggest that Council delegates from the various regional associations be elected to serve a two year term. This would provide better background information for each delegate.

Research Committee

Your Executive recommends that the Research Committee consist of six and be represented by two beekeepers, two provincial apiarists and two research men be set up annually. A group of this nature would provide perfect co-ordination and be in a position to present realistic research problems.

Communications

In an effort to improve communications from Council to the beekeeper, your Executive recommends that news releases, bulletins and the like, prepared and released by provincial apiarists, provincial associations, co-ops., packers and the like carry a special section reporting Council's activities to the individual beekeeper.

Crop Reporting

Due to the difficulties encountered in providing a complete crop reporting system, your Executive recommends that this subject be reviewed in an effort to provide the most up-to-date information possible.

Respectfully submitted,

V. Mosley, President

REPORT OF THE SECRETARY

Mr. President, Delegates, Gentlemen:

The Council is a group of representatives of the various segments of the Beekeeping and Honey Industry across Canada. There are fourteen representatives, two from each province with the exception of the Maritimes which have one representative for the three provinces. The fourteenth member is a representative of the Canadian Honey Packers Association.

What the Council can do for the industry depends largely upon what the members of the industry do for their local associations. The Council brings before Federal Departments and agencies the wishes and requirements of the industry as presented to it through the local or regional associations.

During the past year, your Executive Committee held meetings in Ottawa, Winnipeg and Kentville. Special meetings of the Grading and Research Committees were held in Ottawa in June and November respectively. Recommendations arising from these meetings will be found in the President's Report.

Stabilization Board

Since 1960, Council has been instrumental in obtaining a Deficiency Payment to beekeepers through the Agricultural Stabilization Board. A floor price of 13.5 cents is 98% of the basic price or 10 year average was set during the last four years. To-date $462,146 was paid out to Canadian beekeepers. During the same period, the Beekeeping Industry contributed $31,400 towards the support of Council.

Tariff Board

In conjunction with the Canadian Horticultural Council, Council presented a special brief to the Federal Government concerning the present Kennedy Round negotiations with regards tariff reductions. The brief outlined the possible hazards that could result if any concessions were made and strongly requested no change in the import-export tariffs on Honey. Your Secretary represented your industry at this meeting.

Tariff & Sales Tax

Over the years, Council has been instrumental in obtaining tariff and sales tax exemptions and reductions for the beekeepers. Council is continually reviewing the various tariff classifications governing beekeepers' supplies in an effort to obtain further exemptions and for reductions. As a guide to beekeepers, Council prepared and circularized a special list showing what sales taxes were applicable to beekeepers supplies.

Farm Credit Corporation

Council was instrumental in having expanded farm efficiency loans available on a long term mortgage basis, from the Farm Credit Corporation to any beekeeper in any province. This was made possibly by having Beekeeping included in the definition of Farming and was passed by Parliament under Bill C-101 July 1964.

Farm Improvement Loan Act

Beekeepers are eligible for loans under the Farm Improvement Loan Act. Council has worked very closely with this government agency over the past years and was instrumental in 1959 in having beekeeping included in the definition of Farming. An Act to amend the Farm Improvement Loan Act was passed by Parliament under Bill C-119, September 1964 whereby the maximum of any loan was increased from $7,500 to $15,000.

Statistics

In 1963, D.B.S. reported 10,660 beekeepers having 360,060 colonies and producing 42,142,000 pounds of honey - 138 beekeepers have over 500 colonies, 203 beekeeper produce 10,000 pounds or more and 53 produce 100,000 pounds or more. The average production per colony was 117 pounds in 1963. The estimated production in 1964 was 34,000,000. A complete report providing details of Exports, Imports, Production and Stocks on Hand, Packaged Bees, Wax and Per Capita Consumption has been prepared by your Statistics Committee.

Exports

Exports have been increasing continually since 1960. Following President Vic Mesley's joining the Canadian Food Mission to the U.K., our exports increased from 87,000 pounds to 4.5 million in 1963. This year, up to and including July, 2.3 million pounds of Canadian honey has been exported.

Definition of Beekeeping

The Honorable Harry Hays provided the following reply concerning the place of commercial beekeeping as a part of Canadian Agriculture:

"The care of bees both for pollenization and for honey production has come under the jurisdiction of this Department for many years. Among the programs which this Department has for apiculture are an active research program, the administration of grades and grade standards, the avoidance of disease through regulation of imported stock and the administration of stabilization programs for honey as required.

From these programs, it may be seen that this Department has a very real interest in the welfare of the Canadian beekeepers and of others who depend on them for produce or service."

Awards and Trophies

In an effort to publicize honey, Council offers several awards and trophies annually at the C.N.E., P.N.E and Royal Winter Fair. The Fairs and Exhibits Committee will provide you with a complete report covering this subject.

Research Brief

A special brief requesting more beekeeping research in western Canada was prepared by the Research Committee and presented to the Federal Government in November. Chairman Don Peer will provide you with complete details when presenting his report.

Grading Regulations

Council has continually worked very closely with the Department of Agriculture to assure proper grading regulations for the industry. The Grading Committee has devoted its entire efforts to the proposed new federal honey regulations and obtained some helpful changes. These proposals will be reviewed again at this Annual Meeting when the committee presents its report.

Publicity Program

Council has always been concerned with promoting honey in an effort to increase its consumption. At last year's Annual Meeting, the Council agreed to launch its own publicity program and included $550 in its budget for this project. A qualified Home Economist prepared six special recipes which were sent out to the news media across Canada. Four of the six releases included photographs depicting the recipe. To-date the results have been most encouraging. A complete report of this project will be prepared and circularized in the near future.

Department of Industry

Recently the Canadian Government established a new department, the Department of Industry, whose main object is to assist the economic growth of processing and manufacturing industries. Council has been in contact with this department and is pleased to report that Mr. William Parkinson, Food Products Branch, has been authorized to work with Council in reviewing and studying the processing, packaging and marketing of honey This project is scheduled to commence in the spring of 1965.

Respectfully submitted,

J.E. King,
Executive Secretary

RAPPORT DU SECRETAIRE

M. le Président, Messieurs les Délégués et Messieurs,

J'aimerais bien vous exprimer mes sincères sentiments et au nom du Président, je vous souhaite la plus cordiale bienvenue à notre 24ème Assemblée Annuelle.

Cette année, votre Comité Exécutif s'est réuni dans les villes de Ottawa, Winnipeg et Kentville, aussi les Comités de Recherches et Grading se sont réunis à Ottawa aux mois de juin et novembre respectivement. Des recommendations résolues dans ces Assemblées seront présentées dans le rapport du Président.

Paiement d'Appoint Pour Le Miel

Depuis 1960 votre Conseil a commencé à obtenir un paiement d'appoint pour le miel du Ministère Fédéral de l'Agriculture. On a établi un prix de base de 13.5 cents qui représente 98% du prix de base moyenne durant les dix dernières années. A date nous avons reçu $462,146 pour les apiculteurs canadiens. Comme comparaison, les revenues du Conseil pour la même période s'élève à $31,400. Cette somme est moins de 1/10 payée aux apiculteurs canadiens.

Statistiques

Le rapport du Ministère du Bureau des Statistiques de 1963 a rapporté un total de 10,660 apiculteurs et 360,060 colonies avec une production de 42,142,000 livres de miel. Il dit aussi qu'il y a 138 apiculteurs avec plus de 500 colonies, 203 apiculteurs avec une production de 10,000 livres ou plus et 53 avec une production de 100,000 livres ou plus. La production moyenne par colonie pour l'année 1963 est estimée à 117 livres. La production totale pour 1964 est estimée à 35,148,000 livres avec une production moyenne par colonie de 92 livres.

La Société du Crédit Agricole

Le parlement a approuvé de l'augmentation des montants maximum des prêts agricoles, hypothécaires dispensés aux cultivateurs et aux apiculteurs par la Société du Crédit Agricole, c'est-à-dire que les apiculteurs canadiens peuvent obtenir un prêt de la Société, cette année, s'ils suivrent les règlements établis par le Ministère de l'Agriculture.

Prêts Destinés aux Améliorations Agricoles

Cette année les règlements sont aussi changés pour les Prêts Destinés aux Améliorations Agricoles. Le maximum de tout prêt est maintenant $15,000 l'intérêt chargé est de 5%, intérêt simple.

Taxe de Vente

A l'Assemblée Annuelle de l'année dernière, un comité spécial a été nommé afin d'étudier la question sur la Taxe de Vente. Ce Comité s'est réuni à Ottawa avec le Ministère du Revenue et ils ont préparé une liste spéciale dans laquelle toutes les questions sont répondues. La liste a été circularisée aux membres en juin dernier.

Les Exportations

Les apiculteurs canadiens en ont bien exporté le marché d'exportation. Dans le rapport des statistiques, vous en trouverez un rapport complet sur les exportations et les importations qui indiquent que notre marché d'exportation est maintenant rendu à plus de 4½ millions livres de miel en 1963.

Règlements

Le Ministère Fédéral de l'Agriculture a préparé les changements des règlements concernant le miel. Vous avez tous reçu des copies de ces propositions. Votre Comité a fait une revue générale de tous les suggestions reçues. Vous trouverez dans la section des résolutions les conclusions adoptées par votre Comité.

Promotion

A l'Assemblée Annuelle, le Conseil a décidé de commencer un programme de promotion. Votre secrétaire, avec l'assistance d'un économiste, a préparé des recettes qui ont été envoyées aux journaux canadiens. Comme ce programme vient tout juste de commencer, ce rapport sera complété et circularisé aux membres au mois de février prochain. On est très satisfait des résultats obtenus jusqu'à présent.

Votre tout dévoué,

JEK/md

J.E. King, Secrétaire

REPORT OF THE CANADIAN ASSOCIATION OF APICULTURISTS

Members of the Canadian Association of Apiculturists welcome this opportunity which has been given me to present their views to Council. As your consultants, we appreciate the recognition being given to us by your organization.

At a meeting of the Association held in Guelph, November 23rd, a number of matters were discussed that will be of interest to Council. You will be pleased to know that the Apiculturists Association have expressed satisfaction on the operations of Council during the past year, and, therefore, we do not have any constructive criticism to make at this time.

The 1964-65 executive of the Canadian Association of Apiculturists will be:

President - D.R. Robertson

Secretary - C. Jay

Treasurer - G.F. Townsend

At the recent meeting, a membership system was established whereby any person professionally employed in Canadian Apiculture or anyone who is a college graduate and is engaged in the Apiculture field may become a member by paying a fee of $5.00 annually.

The Association is sponsoring, in 1965, a Canadian tour for Dr. E. Crane, Director of the Bee Research Association. The tour will take place during the month of June commencing in Nova Scotia approximately June 6th. The Association hopes to derive all finances required for this trip from the various Provincial Beekeepers Associations. It is also our hope that Council will endorse the Canadian tour of Dr. Crane and be prepared to give financial assistance to the Association if required on a temporary basis of upwards to $775.00 and on a permanent basis an amount not exceeding $200.00.

Members of the Association discussed the proposal made by your executive that a member be appointed to Council. It was decided that in our opinion, it would be in the best interest of both organizations if the Canadian Association of Apiculturists did not accept membership in the Canadian Beekeepers' Council.

We wish to give Council our assurance that Association members will support Council activities to the utmost. In turn, we expect that Council will co-operate and assist members who are your consultants and advisors.

Respectfully submitted,

D.R. Robertson,
President

PEST CONTROL PROGRAMS AND THE BEEKEEPER

BY A. D. PICKETT

RESEARCH STATION, CANADA DEPARTMENT OF AGRICULTURE

KENTVILLE, NOVA SCOTIA

Members and Friends of the Canadian Beekeepers Council:

I appreciate very much the opportunity you have afforded me in asking me to address this Beekeepers Council. I think I can truly say that I know and understand more about beekeepers than I do about bees. Frequently I am able to escape from beekeepers without being stung, but I can rarely elude a hive of bees if there is one nearby. My one attempt to hive a swarm of bees was almost tragic.

Now, in spite of the fact bees don't like me I do claim that I am one of their best friends. My beekeeping friends appear to ascribe to their six-legged proteges almost superhuman intelligence, but it seems certain to me that so far they have been unable to detect my hand working behind the scenes.

It may be of some interest to the members of the Beekeepers Council to learn something about the marked renewal of interest in beekeeping in the Annapolis Valley and some of the reasons for it. When I first started to work in this area in 1925 quite a number of people were keeping bees. It was largely a losing proposition. There were probably three times as many apple trees in those days compared to the present and because of a big export market most farmers in the valley area depended largely on apples for their main source of income. Practically all orchards were sprayed anywhere from four to seven times each year and either lead or calcium arsenate was used in most applications. Growers were advised not to use the arsenates around the time of the bloom. Many followed these recommendations but many ignored them. In any case there was plenty of other bloom in and around orchards from which bees picked up toxic doses of arsenic and this was particularly true where dusts were used. During the period from 1925 to 1945 the amount of insecticides used in orchards gradually increased and bee populations, both hive and solitary forms, gradually decreased. At first beekeepers attempted to protect their bees by moving the hives out of the fruit-growing areas for a month or so around bloom time but this was either inadequate or too bothersome. A few either through magic or some secret formula which they have not divulged continued to keep a few hives year after year.

During the years 1928 - 1932 what was probably the most extensive study on apple pollination made anywhere in the world was carried out here under the direction of Dr. W. H. Brittain. This study fully established the importance of cross-pollination in most varieties of apples and the role of insect pollinators in bringing this about. It also showed up the detrimental effects of some of the pesticides then in common use, not the arsenicals and sulphur.

In 1943 the staff of the federal Entomology Laboratory in the Annapolis Valley, in co-operation with officers of the Nova Scotia Department of Agriculture and Marketing, started investigations on what we now call "integrated" insect control programs. This in effect has developed into a system of management of arthropod faunal populations. This is based on ecological studies on the inter-relations and inter-actions of the pest species and their natural enemies which tend to limit the numbers of various pest species.

Almost everyone is aware, of course, that biological control alone, even under the most favourable conditions, usually does not provide adequate protection from all pests and pesticides can usually be used to advantage.

It has always appeared unscientific to me to ruthlessly destroy all of those natural benefactors of mankind which nature has provided in the shape of parasites and predators in the process of destroying the few pest species which sometimes get out of hand. If this is done then we must depend entirely on pesticides for crop protection. Because the intensive use of broad spectrum pesticides triggers the buildup of new pests by releasing otherwise innocuous species from attacks of their natural enemies, and also because some of the pest species often develop resistance to the chemicals used for their control, this policy may become a self-defeating one. Our solution to the problem is the selection, where possible, of narrow spectrum pesticide, i. e., those that will kill a very few species. Our objective is to use those pesticides which will kill the pest species and leave the beneficial species largely unharmed. If a highly selective pesticide cannot be found, and there are too few of them, we attempt to use the more broadly toxic chemicals at such high dilutions or at such times that the more important beneficial species are not substantially harmed.

As an example of the type of study we have made I might mention briefly what we have done in the control of the codling moth. From the time spraying with arsenicals became common in the early part of the century until about 1930, the codling moth was a pest of minor importance here. In the latter part of this period the chief pesticides used were lead arsenate and sulphur. These were very detrimental to bees and other pollinators. Furthermore, this combination was highly destructive to many species of parasites and predators, not only those which attacked the codling moth, but those affecting other insect pests and mites. This increased the problems that had to be met and necessitated an increased number of sprays and greater thoroughness of application. Eventually it became obvious that the codling moth had become resistant to lead arsenate and by 1948 30 per cent of the apples going into packing plants showed codling moth damage.

In 1949 we swung heavily to the use of DDT which achieved almost miraculous results against the codling moth, but provided us with a magnificent outbreak of the European red and other mite species as well as destructive populations of mealy bugs and lecanium scales and sharply increased damage from the eye-spotted bud moth, some of the leaf rollers and probably other species. All this was caused by the destructive action of the DDT on beneficial species. In 1949 we added parathion to the DDT sprays to control mites, scale insects, bud moths, and leaf rollers. This combination looked promising for control but it was highly dangerous to apply and it was not long before resistance in mites to the parathion became apparent. During this period we had been carrying out tests on the integrated program and although we had achieved some success we were still not able to keep codling moth damage in many orchards below the economic

tolerance level. A break came in 1952 when an orchard research worker in West Virginia used ryania, a botanical insecticide made from the ground stems of a tropical plant, against codling moth on a few trees. The results were very encouraging and in 1953 we treated a five acre block of orchard with this insecticide. It was highly successful and had the advantage of not killing many of the beneficial species. Starting in 1954, Annapolis Valley growers have since relied largely on ryania for codling moth control with the result that this insect has gradually subsided in importance as shown by Table 1. This year there was a marked increase in damage from codling moth but we have very good reasons, which I need not go into here, for thinking that this is only a temporary fluctuation and not the beginning of a new upward trend.

Because wide-spectrum pesticides such as DDT, parathion, sulphur and so forth, are not in general use parasites and predators are very much greater factors in keeping populations of many pests below the economic tolerance level. As a consequence of this insecticides are not used nearly so frequently as heretofore.

A few growers apply two ryania sprays for codling moth, many use only one, and some apply no codling moth sprays. Many growers use one application of DDT or Guthion for winter moth control around bloom time, but because these are used only at the rate of 2 ounces per 100 gallons, parasites, predators, and pollinating insects are largely unharmed.

Lead arsenate is used in July for apple maggot control but at this time there is little bloom in or around orchards. As a rough estimation, I would say that on the average Annapolis Valley apple growers use about two insecticidal sprays each year.

A comparison of costs of spray chemicals shows that the total cost for insecticides and fungicides is 2.5 cents per bushel for the former and 5.5 cents per bushel for the latter, making a total of 8 cents per bushel. These figures are for the years 1961 and 1962 and may be compared to an average of 18 cents per bushel in 1947-48-49 when a full insecticide program was being followed. The saving to growers in following the integrated program comes more clearly into perspective when we figure out the total on the basis of a three million bushel crop.

Furthermore, I might point out that the saving on spray costs is not the only saving. The spray chemicals as we use them are, by and large, at least quite safe to apply. No one has to use a respirator or special clothing. They do not contribute to pollution to any appreciable extent. There is little danger to wildlife and chemical residues on crops is kept to a minimum. Also we can add as almost a pure gain the apiary products that are produced in the area and the bee rentals that accrue to some of our beekeepers each year.

I can claim none of the credit for building up the beekeeping industry in this area; most of you know who the men are who have spear-headed this work. I do think, however, that the entomologists at our Research Station and the provincial extension officers who have been responsible for selling the integrated control program to the fruit growers can take some satisfaction in having cleaned up the environment so that bees can thrive in this area. (Table 2) I still don't think that your bees are half as intelligent as you apparently credit them with being, or those in this area at least would have found out that I am on their side.

TABLE NO. 2.

Counts of pollinating insects on apple bloom in the Annapolis Valley, Nova Scotia — 6 orchards. *

YEAR	INSECTS PER TREE / 15 MINUTES			
	Solitary bees	Bumble bees	Honey bees	TOTAL POLLINATORS
1951	8.5	2.6	1.9	13.0
1952	4.9	2.3	0.5	7.7
1953	1.7	1.2	0.4	3.3
1954	2.7	3.4	25.4	31.5
1955	4.8	1.8	13.2	19.8
1956	5.8	1.9	10.8	18.5
1957	10.6	3.4	13.3	27.3
1958	16.6	1.2	17.9	35.7
1959	19.0	9.6	34.3	62.9
1960	11.5	1.7	9.2	22.4
1961	22.4	3.0	25.4	50.8
1962	39.9	4.8	76.8	121.5
1963	14.9	2.5	23.7	41.1
1964	25.7	2.1	11.7	39.5

* These data through the courtesy E. A. Karmo, Nova Scotia Department of Agriculture and Marketing, Truro, Nova Scotia.

TABLE NO.1

DAMAGE FROM THE MORE IMPORTANT INSECTS IN ANNAPOLIS VALLEY ORCHARDS

AVERAGES FOR 60 ORCHARDS

YEAR	CODLING MOTH	EYE-SPOTTED BUD MOTH	LEAF ROLLER	FRUIT WORM	CANKERWORM	DAMAGE FREE APPLES
1948	30.8	4.0	No record	1.1		73.1
1949	8.1	5.4	" "	1.9		76.3
1950	11.2	7.3	0.8	1.8		75.0
1951	13.9	6.4	0.4	2.8		81.1
1952	13.4	3.1	1.2	3.6		76.0
1953	14.9	0.5	0.3	3.5		79.0
1954	5.5	0.1	0.6	2.0		91.1
1955	6.5	0.02	0.3	1.4		91.8
1956	6.9	0.03	0.4	0.9		90.4
1957	3.3	0.08	0.9	1.2		92.1
1958	4.1	0.6	0.1	0.4		93,3
1959	2.6	1.4	0.2	0.1		93.9
1960	2.2	1.6	0.3	0.03		93.2
1961	1.7	1.0	0.1	0.01		94.1
1962	1.9	0.1	0.1		1.3*	95.6
1963	1.2	0.1	0.1		1.2*	96.2
1964	4.1	0.1	0.0		2.8*	90.8

* Cankerworm, Winter Moth and Fruitworm combined.

POLLINATION

We the members of the Canadian Beekeepers' Council realize that more educational work should be done by the Provincial Departments of Agriculture and their extension workers with regards the value of bees as pollinators. We recommend to all provincial associations they they urge the Provincial Departments of Agriculture to make their extension workers aware of the work and we request apiculturists to support this recommendation.

POLLINATION IN BRITISH COLUMBIA

By J. Corner

With the object of educating both fruit growers and beekeepers in all phases of pollination, a one-day Pollination Workshop was held in Vernon on February 13, 1964. Topics dealt with were as follows:

1. Fundamental principles of pollination
2. Colony standards and management of honeybees for pollination.
3. Tree fruit varieties in B.C. and their pollination requirements.
4. Questions and summary.

Finally more emphasis should be placed on better beekeeper - grower relationship and understanding of their respective problems.

Apiary Circular # 14 was written and published. Two copies are attached for information.

Tree Fruit Pollination

A beekeeper pollination association was set up. All beekeepers in the Okanagan who are planning to rent bees for pollination are members. Rental fees and colony standards were agreed upon as well as standards of service and advice by beekeepers to fruit growers. A meeting of this pollination group will be held each year in conjunction with a one day pollination workshop.

Small Fruits - High Bush Blueberry

Under supervision of Mr. D.H. Oldershaw, Chief, Apiary Inspector, and Mr. G. Thorpe, District Horticulturist, further work has been done using honeybees for pollination under controlled conditions.

The year of 1964 has been so cold, wet and dull on the coast that it has seriously influenced the crops in many ways with pollination being one of them.

Western Peat plantations were decided upon for the particular arrangement of the plantings of various varieties. A large block of Jerseys with no cross pollinators interplanted had previously been low in their production. This large block was interspaced with strong colonies of bees with further concentrations of colonies in nearest areas of other varieties in the

hope that bees would be likely to mix the pollens. The resulting crop this fall was 140 tons of berries which was 20 tons light of 1963, but the Jerseys were the major producers accounting for the greater part of the 1964 crop. The pollination was near perfect.

Screens of 2 types were erected over branches of blossom buds and sealed. At the end of the flowering season and when all outside fruit had reached maturity, the cages were removed to expose the following. One branch which had 137 flowers produced 17 small (1/6 normal size) 1 large berry and 119 barren flowers. The control outside branch with 145 flowers produced 141 large fruit.

The continued placement of colonies on the 25 acres of Mr. Bissett's No. 4 Road Richmond, produced roughly the same as that of 1963 + or - 2 tons.

It is interesting to note that the crop as a whole in Richmond is away down on 1963.

1963 crop harvested 1,175 tons.
1964 crop on bushes estimated at 1,300 tons.
1964 crop harvested 1,070 tons.

The number of colonies placed on the plantations in Richmond was approximately 300 with a further 200 in the Pitt Meadows and White Rock areas. The prospect of twice this number for the 1965 crop will not by any means fill the full requirements of the plantations.

Legume Pollination

In the Kamloops, Ashcroft area work is continuing on the use of wild bees and honeybees in economic production of foundation and certified varieties of alfalfa seed.

The Alkali bee (Nomia melanderi)

During 1963, 12 soil cores were introduced into the Ashcroft area and successfully survived the winter. During 1964, 450 soil cores containing an average of 110 larvae were brought into th. Kamloops area during June. These were planted in a pre-constructed bee bed 45' x 65' in size. Thermostatically, controlled soil cables were used to control emergence. Emergence was very good in spite of cool weather and matings occurred with females digging tunnels and collecting alfalfa pollen and nectar. Observations next summer will provide valuable information on reproduction and winter survival under our conditions.

The Leafcutter bee (Megachile rotundata)

Cartons of soda straws were stored under condition of between 38° to 40°F. Three high school students were employed to open all straws and remove any predators or injurious insects. Approximately 60,000 good cells were incubated and then placed in trays under shelters located in the alfalfa fields. About 40,000 cells hatched in spite of terrible weather conditions, females mated and provisioned holes in the shelters. Twelve shelters were

constructed of water proof plywood and similar in design to the recommendations in Dr. Hobbs publication #1209. "Importing and Managing The Alfalfa Leaf Cutter Bee". Occupation of holes was better than expected in view of poor weather. Occupied shelters are presently stored under controlled temperature conditions.

Alfalfa

In Kamloops our co-operator has planted 40 acres of foundation Beaver alfalfa in 36" rows. Twenty acres without companion crop and twenty acres with maple peas. The acreage without peas is far superior and in the future, fields will be seeded without companion crop. Both the alkali bee and the leafcutter (Megachile rotundata) will be employed next year to aid in pollination of the alfalfa. Careful observations and yield data will be carried out in 1965.

In Ashcroft 1½ acres of Vernal Foundation alfalfa was planted during 1963. The first crop was clipped early in June and the leafcutter shelters scattered at intervals through the field when second growth had reached blooming state. Blooms were pollinated very quickly and seed formed evenly. Shelters had to be moved to fresh bloom within a weeks time. Lygus bug infestation was very severe and seriously affected seed set. Because of weather, difficulty in ripening was experienced. Harvesting figures are not yet available.

White Dutch Clover

In the Creston valley area Mr. L. Truscott, Apiary Inspector, conducted some excellent work on pollination of 1,000 acres of White Dutch Clover and 136 acres of Ladino Clover using honeybees. His report follows.

Due to weather conditions, the 1964 season posed many problems in pollination, insect control and harvesting on approximately 1,000 acres of white clover and 136 acres of ladino.

Package colonies of varying strength and wintered units were used at the rate of one to one and a half per acre, and placed in yards of five to fifteen and spaced so as to allow a flight of no more than one hundred and fifty yards.

The late spring delayed bloom approximately two weeks and units were not moved into the fields until after June 12th.

Lack of nectar secretion caused severe drifting and some heads were noted that showed a lack of pollination. Due to this situation, colonies situated five to six miles from the orchard area suffered slightly from spray poisoning, and practically all colonies showed a shortage of thirty to forty pounds for wintering, compared to a surplus of approximately ten pounds in past years.

Insects and Control

The migration of the Clover Seed Weevil was delayed in several cold wet spells through late June and early July, making it very difficult to determine time of control.

Spraying was carried out between June 28 and July 17 using aircraft application of 25% DDT liquid at the rate of 1½ lb. actual or 3 quarts per acre applied with 5 gallons of water per acre.

The 5 gallon application proved to be 100% effective due possibly to the heavy dew in this area.

Two weevil per sweep, using a 40 inch sweep, was determined as being the point at which cost of damage would balance cost of control or approximately $2.50 per acre, at a seed value of $ .30 per pound.

It was anticipated and records would indicate that control may, and should be delayed, for approximately ten days following a major buildup to allow for full migration. As this delay allows for a feeding period prior to egg laying, little or no damage is caused.

Second year fields showed serious defoliation by insects, including Clover Leaf Weevil, Slugs and other unidentified species.

Seed yields in these fields were seriously affected and therefore control will have to be considered in future years, three to four weeks prior to bloom.

Pollination to Maturity Experiment

An insect cage measuring six feet by ten feet and covered with eight mesh hardware cloths, was placed on a section of average growth, and all bloom within cage was removed.

The cage was removed June 24 when heavy blossom showed and was replaced June 26 to allow controlled pollination. Samples were taken on July 10, 13, 16 and 19 being the 15th, 18th, 21st and 24th days.

Results were most conclusive that approximately twenty days are required following pollination to produce mature seed.

15 days	-	1/16 ounce.	(questionable viability)
18 days	-	1/2 ounce.	
21 days	-	3/4 ounce.	
24 days	-	1 ounce.	

This would indicate that colonies may be removed 15 to 18 days prior to harvest. It is also possible, based on samples, that a full seed crop could be set in a shorter time than previously believed.

Harvesting

Harvesting dates were determined by a survey of all fields on July 13 when time required to complete pollination was established and twenty additional days allowed for full maturity.

In this manner, weather and degree of pollination can be considered, rather than the accepted method of estimating when bloom is reduced to 10% with no consideration for conditions.

Estimated yields were determined on the basis of 100 blooms per square foot equals 1,200 lbs. per acre and all yields reduced by approximately 1/3 to allow for loss incidental to normal harvesting.

Results of this years operation would indicate, but not prove due to multiple unknown factors being involved, that harvesting with regard to equipment used and timing is of far greater importance than strength, placement and number of pollination units.

In this regard, the following points should be considered in evaluating this years operation.

1. Season two weeks late
2. Harvesting started at approximately same time as in normal years.
3. Allowing for 20 days for maturity, all pollinizing was done between June 12th and July 18th.
4. Records show that between June 19th and July 13th eleven days were suitable for full bee flight.

Ladino

Of the 136 acres only 90 acres were harvested. Bloom was light showing approximately 60 to 70 per square foot of high ridges and far less in low areas.

Heavy growth proved to be very difficult to swath, dry and combine.

Seed yield was very light and harvesting approximately two weeks later than white clover.

Clipping of field considered on approximately 30 acres next year to reduce growth and increase blooms.

☆ ☆ ☆ ☆ ☆

Red Clover

In the lower mainland area, 300 hives of bees were moved (3rd week in June) from the blueberries to Ladner where fields of red clover were pollinated with excellent results taking to consideration the weather conditions. The resulting seed heads produced on an average 78 seeds of good quality, while the bees harvested 40 lbs. of surplus honey plus stores for winter supplies. A water white honey from this supply as well as ample pollen for winter and spring build up.

Cucumbers

In the Victoria district 75 colonies were used to pollinate greenhouse cucumbers.

There was also small pollination projects at Haney on cucumbers in greenhouses, and at Abbotsford, Chilliwack and Sardis on raspberries. No figures for these are to hand.

VALUE OF HONEY BEES USED IN POLLINATING CROPS - 1964
British Columbia

Area	No. of Colonies Rented	Average Charge per Colony	Total Charge	No. of Colonies No Charge	Crops Pollinated
Okanagan	1620	$ 6.80	$ 11,016.00	Many colonies maintained by growers for pollination only on a no charge basis.	Red Delicious Sweet Cherries McIntosh Pears
Kootenays	700	$ 10.00	$ 7,000.00		White Dutch clover Ladino clover
Lower Mainland				513	Blueberry Strawberry Raspberry
Vancouver Island				80	Greenhouse Cucumbers Tree Fruits
Peace River				100	Clover

1964

Field	Acres	Units Per Acre	Strength	Bloom Per Sq. Ft.	Estimated Yield	Actual Yield App.	Estimated Harvest	Actual Harvest (Start)	Harvesting Methods	Conditions
1.	350	1	Mixed	60 - 120	650	575	Aug.5-15	July 25	Good	120 acres second year.
2.	70	1	Weak Pkgs.	110	800	600	Aug.5-8	Aug. 12	Good	First cut very dry.
3.	175	1	Strong Mixed	100	750-800	640	Aug.8-13	July 26	Good	Widespread in harvest.
4.	175	1½	Strong Mixed	140	1000	575	Aug.15	July 27	Massey 190	
5.	30	1	Strong	100	750	750	Aug. 8	Aug.5	Good	
6.	50	Less than 1	Strong	80-85	600-650	200 Est.	Aug.10-12	Aug.16	?	Seed N.Z. Stock
7.	15	1	Weak	90-100	700-750	600	Aug.10-12	Aug.3	Good	Super phos. 20% Potash 60% 150# per Acre.

POLLINATION IN ALBERTA

By J.W. Edmunds

At the beginning of this report, I wish to make clear that I am speaking of conditions primarily in Alberta - these situations are the ones I am familiar with. Some of my ideas and thoughts may be of use to other provinces and to the Council. Many of the things I say will be opinions of my own and should be assessed carefully to determine their value and validity. you will realize also that in my position as Provincial Apiarist, I may at times have to decide, on slightly different grounds than a beekeeper, whether I am for or against an issue. It is understandable that a beekeeper may make a decision on how he standa on an issue for personal and/or selfish reasons. I not only have to take an impartial attitude towards things and be concerned about the way they affect the apiculture industry provincially and in the Canadian scene, but also how it affects the agricultural industry as a whole - perhaps even broader than this, the effects it has on the general economy of our country. I shall list my points under A,B, C, D, etc., and shall try to give an illustration of each point.

A. Beekeepers, seed growers, and others involved, in many cases either do not understand or refuse to accept the facts and research reports on pollination. I use as one example only, the situation concerned with the pollination of alfalfa in our area. While research has indicated that honey bees do NOT do a significant job of pollination on alfalfa, it is agreed that on certain years they may effect some cross-pollination. From an economic standpoint, they do not do a significant job of cross-pollination. How much is understood about the population per square yard on various legume seed crops? How much is known about competition of other crops in the area and the isolation requirements of certain crops? I do not wish to indicate that I am pointing out beekeepers as the only ones who do not understand or refuse to accept the story of pollination. In my opinion this is too true of many seed growers and perhaps even government officials.

B. I can't help wondering if there is adequate research being carried out with regard to pollination. Do we have adequate research reports on the new varieties of legumes such as the tetraploids, la salle, red clover, trefoil, etc?

C. I believe community planning of the growing of legumes for seed is desirable. Somewhere along the line there should be a determination made of the acreages of legumes grown for seed, the type of legumes grown, the desirability of isolation or lack of competing crops. What is the population of pollinators available for the area. What are the needs for pollinators of an area? I think that in such areas where it is desirable, and almost necessary to grow legumes for the satisfactory production of cereal crops, that we should be able to plan a program for such areas. For instance, supposing a County has 50,000 acres of grey-wooded soil that needs legumes on it, we could perhaps decide that one-third or about 17,000 acres of it should be in legumes in any given year. Of the 17,000 acres of legumes, what percentage will be cut for hay and what percentage would be grown for seed? What legumes would be grown? How many colonies of bees would be required to pollinate this acreage left for seed? Is this number of colonies available? If not,

how do we get them? Perhaps we might even get away from talking about colonies of bees and start talking about population per square yard.

D. I suggest that we need to do some practical, down-to-earth calculations of the economics of pollination of legume seed production. Are our District Agriculturists or agricultural representatives able to tell us what production of alsike seed, sweet clover seed, Altaswede, La salle, or tetraphloids, etc., can be expected on an acreage with a half a colony of bees per acre and one colony of bees per acre. Under their soil and temperature conditions, what could be expected with only the wild bee population in the area or with a catch as catch can attitude towards pollination.

E. In my opinion, the whole field of the integration of the various aspects of specialized agricultural practices, and how these pieces of the jigsaw fit into the agricultural industry as a whole, must be studied.

F. What are our thoughts or do we have any on the expansion of our industry? What potential markets have we for say, 20, 30, 50 100% increase production of honey? If we found, in our province for example, that we required twice the number of colonies we have to provide a reasonable population of honeybees per square yard to do a reasonable pollinating job, would our industry be prepared to accept the challenge of providing twice the number of colonies we have? What plans would we have for increasing our markets for honey or would we accept our responsibility for trying to plan an organized program?

G. Has a beekeeper and/or Council any responsibility or do they accept any responsibility for the general welfare of the agricultural industry provincially? federally? Example: In Alberta, if we discovered we only had half the colonies of bees we needed to do a pollination job, what would be our attitude towards this problem? If it was decided it was desirable to have this acreage of legumes that we have now, or perhaps if we sat and studied the whole program, we decided that in the interests of the general economy of the agricultural industry in Alberta we needed an additional 50% increase in the acreage of legumes, would we accept the responsibility of attempting to provide pollinators for this increased acreage of legumes or would we take the attitude that, no, this would likely create a surplus of honey and we cannot go along with it? Are we going to accept the attitude that we are concerned only in a practical way about pollination where it does not affect honey production?

POLLINATION IN SASKATCHEWAN

By D.M. McCutcheon

There are no new developments in Saskatchewan with regard the use of honeybees for pollination purposes. Many individual seed growers are convinced of the need for honeybees to pollinate their crops. However, the Seed Growers Organization as a whole does not appear to recognize the importance of honeybees as pollinators.

The big push now is research on wild bees for alfalfa pollination At least three research stations are working with Megachile rotundata (the

leaf cutter from Oregon). Results have not been promising under climatic conditions of Saskatchewan. Weather during the summer of 1964 for the most part was not ideal weather for rotundata's activities.

It will be some time yet before recommendations on the use of rotundata can be released. It may be that the use of rotundata will be discouraged in Saskatchewan.

The Saskatchewan Beekeepers' Association, at their 1964 Annual Meeting held a panel on the use of wild bees in alfalfa pollination. Research workers appeared on the panel, and agricultural officials and Seed Growers representatives were present. The purpose of the panel was to present sound actual information to leaders in the agricultural industry.

POLLINATION IN ONTARIO

By M.V. Smith

Wild Pollination Studies

This spring approximately 6,000 nest cells of the alfalfa leaf cutter bee Megachile rotundata were imported from Idaho. A project was undertaken to study their behaviour and relationship to alfalfa and other crops under Ontario conditions.

Our preliminary studies have led us to the following conclusion:

1. There was considerable drifting and loss of population from the nesting sites. More information is necessary on the nesting behavior and preference in order to encourage the bees to remain at the provided nesting sites.

2. Nesting activity is greatly increased at temperatures above 75 to 80 degrees F.

3. Even relatively small populations (less than 1 bee per square yard) had a very noticeable effect on increasing the alfalfa seed yield.

4. Crops other than alfalfa were readily worked - e.g. Birdsfoot trefoil, sweet clover, goldenrod.

These studies will be continued next year.

Movement of Bees for Pollination

Permits were issued for moving the following numbers of colonies for pollination:

Greenhouse Pollination (cucumbers)	110
Orchard and Fruit Pollination	2,050
Legume and Field Cucumber Pollination	90
Total	2,250

REPORT OF THE STATISTICS COMMITTEE

CHAIRMAN: J.E. King

COMMITTEE: M. Gray

TERMS OF REFERENCE: 1961 Minutes

BEEKEEPING STATISTICS FOR CANADA

	Bee-Keepers No.	Colonies No.	Production Per Colony (Lbs.)	Total Production (000 lbs.)
1957	15,040	325,700	98	32,051
1958	13,150	332,700	93	27,509
1959	14,180	330,700	95	31,527
1960	12,570	327,340	98	32,224
1961	11,660	336,910	104	35,058
1962	10,370	340,470	90	30,713
1963	10,660	360,060	117	42,142
1964	10,760	382,240	92	35,148

BEESWAX

	Production (000 lbs.)	Average Farm Price $ per lb.	Total Farm Value ($000)
1957	473	.53	253
1958	408	.46	187
1959	459	.48	222
1960	479	.45	214
1961	520	.44	231
1962	462	.44	228
1963	634	.45	285
1964	573	.45	258

HONEY EXPORTS

	1962		1963	
	Lbs.	$	Lbs.	$
United Kingdom	2,781,254	567,098	3,504,569	822,001
Bahamas	10,814	2,556	8,504	2,815
Barbados	600	192	624	166
Belgium	132,190	24,571	199,795	40,031
Bermuda	2,241	536	8,925	2,532
British Guiana	750	120		
Denmark	1,440	463		
France	1,800	379	5,660	1,400
Germany, West	163,730	27,254	84,936	17,257
Ireland	313,600	46,432	7,000	1,400
Japan			113,400	21,546
Netherlands	121,050	22,074	255,070	46,597
Norway			17,125	3,609
St. Pierre	980	310	1,210	280
Sweden	12,000	3,360		
Switzerland			6,661	1,874
United States	86,513	13,133	136,899	20,685
Totals	3,628,963	708,478	4,350,378	982,193

HONEY IMPORTS

	1962		1963	
	Lbs.	$	Lbs.	$
United Kingdom	15,210	9,854	13,000	8,619
Argentina			396,674	51,661
Australia	3,908	855	158,088	42,094
Denmark	6,000	2,806	5,528	2,344
France			1,510	1,010
Germany, West	4,508	2,453	5,727	3,570
Greece	11,739	5,170	31,885	14,275
Hungary			3,599	1,271
Ireland	1,272	681		
Jamaica	90	50	960	256
Mexico	1,620	265	51,062	8,025
Netherlands	19,692	6,735	21,843	8,151
New Zealand	3,444	1,032	1,440	508
Poland	24,333	6,062	22,000	6,327
Spain	1,962	696	4,795	1,073
Yugoslavia	1,764	359		
United States	526,666	98,682	2,909,527	521,807
Totals	622,208	135,700	3,627,638	670,991

BEESWAX IMPORTS

	Quantity Lbs.	Value $
1957	307,021	197,884
1958	246,176	148,376
1959	322,352	172,311
1960	290,005	160,337
1961	246,500	146,149
1962	281,200	172,323
1963	285,100	176,812

IMPORTATION OF PACKAGE BEES

	No. of Packages	Value $
1957	138,589	507,661
1958	139,728	525,017
1959	142,832	541,623
1960	145,980	553,177
1961	145,601	591,444
1962	152,666	661,719
1963	163,423	713,873

BEEKEEPING STATISTICS FOR U.S.A.

	Colonies No. (000)	Production Per Colony (Lbs.)	Total Production (000 Lbs.)	Stocks on Hand For Sale by Producers (000 Lbs.)
1959	5,438	45.5	247,523	Dec. 15 - 62,979
1960	5,430	47.9	260,128	Sept.15 - 93,575
1961	5,511	49.7	273,942	Sept.15 - 104,457
1962	5,500	49.5	272,486	Sept.15 - 104,447
1963 (Prel.)	5,530	54.2	299,450	Sept.15 - 104,443
1964 (Prel.)	5,645	51.9	292,899	Sept.15 - 106,762

STOCKS ON HAND

Held by Packers & Wholesalers

(Million Lbs.)

	1960	1961	1962	1963	1964
March 31	12.6	11.9	10.4	9.0	13.0
June 30	9.3	9.7	8.9	6.4	8.3
September 30	14.6	17.3	12.3	17.2	14.4
December 31	14.0	15.6	12.0	16.9	----

APPARENT PER CAPITA DOMESTIC DISAPPEARANCE OF HONEY IN CANADA

Year	Pounds Per Year
1953	1.9
1954	1.6
1955	1.7
1956	1.6
1957	2.0
1958	1.8
1959	2.0
1960	1.8
1961	1.7
1962	1.6
1963	1.8

N.B. Production plus Imports less Exports

REPORT OF THE FAIRS & EXHIBITIONS COMMITTEE

Chairman: G.W.H. Reed

Members: T. Shield, S.E. Bland, G. Wilkinson

Terms of Reference: 1963 Proceedings

The Fairs & Exhibitions Committee has very little to report as far as progress is concerned.

First, the industry lost a real friend in the passing of Tom Shields which was especially felt by this committee. While Tom was interested in all phases of our industry, I'm sure that latterly the two main honey shows in Ontario were his first love. I've greatly missed his guidance and suggestions.

It was suggested that the interest in honey shows, especially in the prairie provinces, had gradually fallen off over the years. This has probably come about due to the fact that a large percentage of the honey in these provinces is sold through packing plants. This has brought about larger producers with less time and interest in honey shows since they are not marketing their own product and therefore are not too interested in its promotion. While this is possibly shouldn't be the case, I believe it to be a fair assessment of the situation.

Another suggestion was that our honey shows are no different than they were 20 or 30 years ago, which is hardly progress. It was thought that our honey shows are .25¢ affairs and that we need a new approach or else forget them.

Possibly our terms of reference need to be given a second look.

Resolution - No. 15 Resolutions from our 1963 meeting.

Resolved that the Fairs & Exhibition Committee investigate and study the present comb honey schedule with regards to the section, "completeness of fill" appropriate to section used and "completeness of cappings" and the feasibility of reversing the present schedule of points.

Moved by E.J. Burnett, seconded by P.F. Pawlowski

It was felt by the committee that there would be no real value in changing the two point scoring value. Completeness of fill is more important than completeness of capping. Unless the cells are properly filled first, the bees naturally will not cap them. Also when selecting sections for exhibition, a few cells filled but not capped are to be preferred to a number of empty cells.

Since the present score cards have been used for a number of years, it was felt that any changes would cause a certain amount of confusion. We need the judging across the country to be uniform. One of the terms of reference is to encourage uniform judging and entry requirements.

At both the C.N.E. and the Western Fair in London, Ontario, an exhibit of comb honey was received in the round plastic type of holder rather than the wooden section. At the present time, the catalogue calls for wooden sections. We will have to determine at this meeting whether or not this type of comb honey equipment would be included in the general judging along with wooden sections.

In keeping with the terms of reference to encourage uniform judging, I'm pleased to report that Mr. J. Corner organized a school to train honey judges, a report of which follows.

"For some time, it has been obvious that there was a serious lack of trained honey judges in the province of British Columbia. In order to provide an adequate supply of judges for future fairs and competitions, the B.C. Department of Agriculture, Apiary Branch, organized a one day school for the purpose of training honey judges. Each division of the B.C. Honey Producers Association was requested to submit the names of two candidates to attend this school. The first school was held in the lower mainland area with candidates from that area and Vancouver Island attending. Lecturers consisted of Mr. Howard Edwards from the Food and Drugs Division; Mr. G.V. Wilkinson, a highly trained and well qualified judge; and Mr. J. Corner, Provincial Apiarist.

Over 20 candidates attended this school and at the conclusion of the school, it was unanimously agreed that the course was successful and obtained its objectives. A copy of the program is attached for your information. I might add that each candidate was given a mimeograph copy of all lectures.

It is anticipated that a similar school will be held in the interior of the province next year after which it is believed we should have a good source of honey judges.

It is planned that candidates attending this school will be given an opportunity to work with trained honey judges for one to two years and it is hoped that the B.C. Honey Producers Association will set up a standing committee whose purpose it would be to consider the names of honey judges, recommend those who should work with trained honey judges, and also to issue small certificates indicating that the candidate has attended a school and has qualified. It is suggested that honey judges judge a certain number of honey shows at least every second year in order to retain their certificate in good standing."

Introduction of Problem

Judges' schools have, and will be, held at the Coast and Interior points, and candidates from these schools will form a group from which judges may be chosen for fairs.

As a body responsible for the organization of honey judging and problems arising, some method of certification will be required for candidates;

A committee composed of Mr. G. Wilkinson and the Executive of the B.C.H.P.A. and the Commercial Beekeepers' Association wish to recommend the following:

Recommendations:

1) A permanent Committee of one member of each organization should be appointed at this meeting.

2) Examination of candidates should be held at the P.N.E. and the Armstrong Fair.

Terms of Reference:

1) To be responsible for examination of candidates after attendance at Judging School.

2) Application for certification to be submitted to the Secretary of either organization and a fee of $1.00 to accompany application.

3) Successful candidates shall receive certificate signed on behalf of each organization by the Committee member.

4) Shall be responsible to furnish the Department with a list of certified honey judges.

5) Also to furnish Department with a recommended rate of pay in accordance with classification of Fair, and suitable travelling expenses.

6) The opportunity should be allowed for certified candidates to carry out practical work with trained judges.

7) Opportunity should be given certified candidates to judge at least one show every two years.

HONEY SHOWS

In this report, I wish to give you information of the three main honey shows. To report on many of the smaller shows would be of little interest to most. It wouldn't be too instructive and would serve no useful purpose.

There were only fifty entries in the Honey Section of the Pacific National Exhibition as the crop in the southern half of B.C. was very poor. The spring flow was average, but the usual warm summer weather that we expect did not come.

The main interest always centers around the trophies given by the Canadian Beekeepers' Council, F.W. Jones & Son of Bedford, P.Q., and the commercial awards of from $50.00 to $100.00.

This may be the first time that Manitoba honey has been entered, the first prize for liquid honey and the Council Shield were awarded to Mr. Earl Burnett of Roland. Also, it is the first time that the Council Shield has been won by a member of the Executive of the Council.

The Council Silver Cup (and it is really silver) was awarded to Mr. A.C. Jaenen of Fairlight, Saskatchewan, who had the best granulated honey in the show.

The Jones Rose Bowl for the best Beeswax went to Mrs. James Fraser of Pambrun, Saskatchewan. Mrs. Fraser was the winner last year too.

The $25.00 cash prize awarded by Council for the best honey shown by a Division of the B.C. Honey Producers' Association was divided into two, $15.00 going to the Vancouver Division and $10.00 to the Fraser Valley Division which is located in New Westminster.

In the Commercial Class, the $100.00 prize went to Tyrone Oldershaw who has been a consistant winner. The $75.00 prize to Cliff Cousins. Displays by Honey Packers contribute to the overall attractiveness and gives each a lot of free advertising. They are barred from the prize-winning because the exhibitors are not the producers.

Respectfully submitted,

G.W.H. Reed

REPORT OF RESEARCH COMMITTEE

CHAIRMAN: D.F. Peer

COMMITTEE: C. Jay, T.A. Gochnauer, J. Edmunds, H. Bryans

TERMS OF REFERENCE: 1963 Minutes

Gentlemen:

The national office of the Canadian Beekeepers' Council, upon learning of the transfer of Dr. J.C.M. L'Arrivee from the Brandon Experimental Farm to the Apiculture Section, Entomology Research Institute, Ottawa, called a special meeting for July 4th in Tisdale, Saskatchewan, of the members of the Research Committee in western Canada plus other interested parties. In attendance were Messrs. V. Mesley, J. Corner, J. Edmunds, D. McCutcheon, E. Bland, R. Pugh, M. Larocque, C. Ciphery, G. McAdoo, Prof. S. Nelson and D.F. Peer. During the meeting, the general state of beekeeping research in Canada was discussed and it became evident that long-range plans for apicultural research be considered. The meeting ended with the decision that the Council Research Committee of Dr. D. Peer, Chairman, Dr. C. Jay and J. Edmunds, should prepare a report together with recommendations regarding the future of bee research, especially in western Canada.

Subsequent such a report was prepared in the form of a brief with recommendations for the establishment of an "Apicultural Research Centre" in western Canada.

The introduction of the brief is as follows:

"During the past decade, the growth of the Canadian beekeeping industry has been centered in western Canada while during the same period a decline in colony numbers and only a slight gain in production has been recorded in eastern Canada. Table 1 shows that the number of colonies in western Canada has increased annually for each of the past ten years from 108,000 in 1955 to 191,000 in 1964. Furthermore, the provincial apiarists of the four western provinces indicate that the industry will continue to grow in the west for many years to come. In eastern Canada, growth has levelled off and, in point of fact, shown a decline from 211,000 colonies in 1955 to 175,000 colonies in 1964. Significant future growth is not anticipated in eastern Canada. The production figures in Table 1 show that western Canada is now outproducing eastern Canada by over one and one-half times and the gap continues to widen.

"In western Canada, package bees are used almost exclusively while in eastern Canada overwintered colonies are used almost exclusively. Thus, this great difference in fundamental management practice presents problems in one area that are not relative to the other, and it is to be expected that many research problems of one area would not be significant to the other area.

"The Canadian Beekeepers' Council is concerned with the recent transfer of Apiculturist, Dr. J.C.M. L'Arrivee, from the Brandon Experimental Farm to the Apiculture Section, Entomology Research Institute, Ottawa. The Council feels that with this transfer the East-West Bee Culture Research imbalance becomes

even greater. Apicultural research in western Canada will now be conducted by two researchers, namely Dr. Pete Pankiw at Beaverlodge Experimental Station and Professor Cam. Jay working less than half time on apiculture at the University of Manitoba. In eastern Canada, on the other hand, there will be nine apiculture researchers including Drs. Gochnauer, Boch, Furgala and L'Arrivee (when he reports) at the Apiculture Section, C.D.A., Ottawa, plus Dr. Siddiqui Food Research, C.D.A., Ottawa, plus Professor Townsend, Shuel, Smith and Burke at the University of Guelph (O.A.C.)

"Because of this East-West research imbalance and bearing in mind the size and growth potential of the industry in the West, and, more important, bearing in mind that the amount of bee research in western Canada leaves much to be desired the Canadian Beekeepers' Council recommends to the Canada Department of Agriculture and the University of Alberta that an Apicultural Research Centre be established under joint sponsorship at the University of Alberta."

The brief was presented to Dr. J.A. Anderson, Director General of Research, Canada Department of Agriculture, Ottawa, by Mr. Victor Mesley, Mr. John King and Dr. D.F. Peer on November 19th. At the same time, Mr. Jack Edmunds presented the brief to Mr. C.F. Bentley, Dean of Agriculture, and Dr. B. Hocking, Chairman, Entomology Department, at the University of Alberta.

It would appear that while Council has not been successful in the establishment of a new Apicultural Research Centre at this time, nevertheless the proper authorities have been alerted to the problems of this industry. Increased research help is being considered for the not too distant future through increased support of present University and Federal laboratories rather than the establishment of a new centre. It is felt that due to this submission, there has been a very considerable meeting of minds and that it should be possible to develop, over the next year or so, plans that will meet with wide approval.

Respectfully submitted D.F. Peer

Seconded by H.D. Bryans

CARRIED

Table 1. Comparisons of Colony Numbers and Productions ✱

Eastern vis Western Canada

Year	Ontario and Quebec		Prairies and British Columbia	
	Colonies	Production (Lbs)	Colonies	Production (Lbs)
1955	211,000	10,836,000	108,000	13,909,000
1956	193,000	9,313,000	132,000	14,605,000
1957	185,200	14,839,000	136,000	16,897,000
1958	190,000	8,085,000	138,000	19,099,000
1959	176,000	15,077,000	149,000	16,147,000
5 yrs. average	191,040	11,630,000	132,600	16,131,400
1960	171,000	11,516,000	150,000	20,411,000
1961	174,000	12,295,000	157,000	22,322,000
1962	174,000	14,858,000	162,000	15,616,000
1963	180,000	15,484,000	176,000	26,557,000
1964	175,000	1)	191,000	1)
5 yr. average	174,800		167,200	
4 yr. average		13,438,250		21,226,500

✱ Dominion Bureau of Statistics

1) 1964 production figures not available yet.

RESEARCH REPORT 1964

Research at Ottawa

Pollination

No actual experimental work was done in the field of pollination this season. However, raw nectar from red clover, alfalfa and wild snapdragon blooms were painstakingly collected. Primary separation of the sugars into groups were accomplished, preliminary to the isolation and identification of the constituent oligosaccharides.

Facilities for studies on pollination of certain legume crops at the Apiculture Section, Ottawa, are improving. In addition to the flight room available in the new processing building, a small tract of good land adjacent to the building will be available this coming fall. Tentative plans have been drawn for work on the two problem legumes, red clover and alfalfa.

Nosema

Studies during the past two years corroborate previous conclusions that fumagillin is most effective when fed to wintering colonies in syrup. Dust applications of fumagillin and the use of medicated candy patties did not control nosema infection in such colonies.

The feeding of 200 mg (equals 10 grams Fumidil B) in 2½ gallons of 2:1 sugars syrup has consistently repressed infection in our wintering colonies and the treated colonies were in excellent condition in the spring.

Sacbrood and chronic bee paralysis

With the competent aid of Dr. P.E. Lee in preparing electron microscopic studies, we have been able to locate the site of infection of both sacbrook and chronic bee paralysis virus. We hope the program will continue and expand our knowledge of the epidemiology of these two virus diseases. The research so far forms an excellent basic for developing a field test for positive diagnosis of the infections.

Pheromones

Studies have continued on attractant and alarm odors that affect bee foraging and defensive behaviour. In addition to iso-amyl acetate from the sting, another alarm-releasing odor, 2-heptanone was identified from the mandibular glands of worker bees. Freshly emerged worker bees, as well as drones and queens of undetermined ago, contained no 2-heptanone, but 15-23 micrograms per bee were extracted from the heads of foraging bees.

Outside Wintering

Last winter's trials of two types of protection for wintering colonies indicated that, under Ottawa conditions, cardboard boxes were equal to conventional wooden boxes with wood shaving insulation. The cardboard cases consisted of a sleeve, stapled on one seam with heavy duty staples and four upper flaps. The sleeve fits the standard 10-frame hive, and the four flaps

folds over the inner cover. The case is made from 500 pound test, double fluted corrugated cardboard, manufactured with waterproof glue. The outer surface is coated black to absorb the radiant heat from the sun.

Details of the 1963-1964 trial have been published in the October issue of the Canadian Bee Journal.

Field test for sulfa resistant AFB

From time to time, reports are received of diseased colonies which fail to improve under drug treatment, suggesting the appearance of drug resistant infection. Laboratory tests for sulfa resistance in Bacillus larvae from AFB are not completely dependable. Single comb samples from an Alberta outbreak reported to resist sulfathiazole treatment were inserted into healthy nuclei, and one each given sulfa, in syrup terramycin, or syrup alone. Heavy disease developed in the untreated nucleus, while none appeared throughout the season in the sulfa or terramycin treated nuclei. The conclusions the particular infection was not resistant to sulfathiazole, and some other factor must have been the cause of failure.

Gamma radiation studies

Further tests were made in 1964 on effect of gamma radiation from cobalt 60 on infectivity of AFB combs. A series of heavily contaminated combs provided by western provincial apiarists were treated in the room sized chamber of Atomic Energy of Canada, Ltd., Ottawa and were inserted in to healthy package colonies without further treatment. The combs were radiated in supers at levels 0, 100,000, 200,000, 300,000, 500,000 and 1,000,000 rads (radiation absorbed dose: equals about the same in roentgens). No infection developed in any of the radiated combs. The bacteriological examination of the scale samples showed about the same degree of kill of spores found in the 1963 series, in which infection did develop at the 100,000 rad level and in half the colonies at 200,000 rad level. In the 1964 series, insertion of the combs was delayed under near the flow, and it is felt the better result could have resulted from better cell cleaning by hive bees. Rothenbuhler has published on the stimulatory effect of the honey flow on cell cleaning activity in his disease resistance studies.

The new Apiculture Building, C.E.F.

The Apiculture Section has been nearly completely relocated at the Central Experimental Farm, Ottawa, on McCooey Road, near the intersection of Base Line and Merivale Roads. In this move, a new processing building was required, and included in it are further laboratory space and a flight room. The latter, when completed and "broken in" will aid in studies on odor production and attractiveness; on nosema control tests under controlled conditions; on the attractiveness to bees of the blooms of various strains of legumes of interest to plant breeders. Studies previously limited to favourable summer days may now be studied the year round.

The sugars of honey and royal jelly

Modern methods of paper chromatography and paper electrophoresis have been applied to studies on the sugars of honey and royal jelly. A large number of Canadian honey samples have been examined by the former method, and

a wide variation found in the glucose-fructose or glucose-water content in the samples. Since these indices have been used in the past as an index of stability or granulation rate, a comparison was made between observed granulation and the indices observed. While a statistical analysis has not been completed, the indications are that, in the samples studied, glucose content was not a dependable indicator of granulation rate.

Royal Jelly

A new sugar-containing compound has been found in royal jelly. It is apparently a protein with a side chain of three units of mannose combined in some way to the protein. Detailed studies on the probable structure of the mannose trisaccharide are being published.

T.A. Gochnauer

RESEARCH AT BEAVERLODGE

1. European foulbrood control - transmission of EFB by packages bees (in cooperation with Apiary Division, B.C. Department of Agriculture); control and prevention of EFB antibiotics.

2. Wintering - in temperature controlled chambers to determine effect of temperature on food consumption, colony mortality and strength and on incidence of nosema.

3. Spring management - effect of exclusion of light on brook rearing in package bee colonies;
   - effect of photoperiod on build-up of package bee colonies.

4. Comparison of honey production of package bees from California and southern B.C.

5. Relative preference of honey bees and legume crops and evaluation of honeybees and native wild bees for seed production.

6. Evaluation of Megachile rotundata for alfalfa seed production.

7. Breeding of alfalfa for honey bee pollination.

P. Pankiw

RESEARCH AT BRANDON

Sources of Nosema Resistance in Queen Bees

In 1963, a study was started at the Brandon Experimental Farm, to determine if queen bees from various sources possess inherent tolerance to nosema. This study was continued during 1964. More than 200 queens from eight geographical areas of North America were subjected to one of three concentrations of nosema spores. Lifespan, measured in days following inoculations, was the basis used to evaluate tolerance to this disease.

In 1964, it was again established that queen bees from various sources have different tolerances to infection. Results from this study show that the more tolerant stock had 31.3% greater lifespan than the more susceptible queens.

Since genetic variability for nosema tolerance has been established both in 1963 and 1964, it now appears possible to develop a strain of bees highly tolerant to nosema. Such a strain of bees would have considerable economic value to beekeepers throughout the world.

Effect of Nosema on Honey Yield

A study was initiated at the Brandon Experimental Farm to evaluate the effect of nosema disease on the yield pntention of bee colonies. In April 1964, 36 disease-free packages of bees were installed in hive equipment previously fumigated with acetic acid. Four groups of nine-colonies received one of the following treatments: Sugar syrup (untreated), syrup with 40,000 spores per ml., syrup with 200,000 spores per ml., and syrup containing 1,000,000 spores per ml. All colonies were managed in a uniform manner. Samples of bees were collected from each colony at regular intervals to determine the progress of the epidemic. These samples are now awaiting analysis.

Yield of honey recorded in early August was 76 pounds for the untreated group. The infected groups yielded 71 pounds, 69 pounds and 53 pounds respectively. Two colonies in the group that received 1,000,000 spores experienced supersedure difficulties, whereas colonies in the other groups developed normally.

From these results, it appears that the use of fumagillin is warranted whenever a light infection of nosema is present. Beekeepers are advised either to treat all package bees upon installation or to have a sample of bees from each colony diagnosed for nosema.

Survey of Nosema in Package Bees

The incidence of nosema disease in package bees is of great concern to Canadian beekeepers. A survey carried out in 1962 showed 76.6% of a shipment of 60 packages were infected upon arrival. In 1963, a similar survey on 44 packages showed a 29.5% infection. Most of the nosema infection in package bees was of a low intensity. However, in adverse weather conditions, this light infection can build up rapidly and become quite serious.

A number of colonies in the package bee producer's apiary in southern U.S.A. was sampled in 1964. Among the 28 colonies sampled, 18 showed a light infection. This southern apiary produced 56 packages of bees of which 50% were lightly infected upon arrival.

Since a large percentage of package bees imported from the United States have nosema, beekeepers are advised to treat all colonies with fumagillin, particularly during a backward spring.

Economics of Package Bees

Some beekeepers, in an attempt to obtain greater profit, have divided 3 pound package bees into two hives and introduced a new queen to the queenless half. On the basis of an economic study carried out by the Experimental Farm, Brandon, this practice does not appear advantageous for the Prairie beekeeper.

In 1964, a field study, involving four commercial apiaries, was set up to evaluate the standard 2 pound package bees versus divided 3,4, and 5 pound packages. The costs for the different sized units were $5.25, $7,65, $8.90 and $9.80 respectively. These charges included transportation as well as the price of the extra queen in the three larger size packages.

The average yeild of honey was 90.? pounds, 76.3 pounds, 90.9 pounds and 100.4 pounds respectively. At 15¢ per pound, this gave a net return per colony of $8.28 for the 2 pound package, $7.61 per colony for the divided 3 pound package, $9.19 per colony for the divided 4 pound package and $10.16 per colony for the divided 5 pound package.

Although yield differences were non-significant, from the standpoint of trucking logistics and net returns, the 4 pound package with 2 queens appears to be the most economical size of package bees for Canadian beekeepers.

Inexpensive Flight Room For Bees

A low cost flight room for honeybee colonies was recently installed at the Brandon Experimental Farm. It will permit winter rearing of queens and drones and thereby accelerate research in disease and bee genetics.

The flight room was erected in a windowless room of the bee house. It consists of a large cage (6' x 6' x 10') made of nylon screen over a tubular frame of aluminum. A zipper at the corner permits entrance of the beekeeper and necessary equipment. Light is provided by one incandescent lamp and six banks of fluorescent tubes (8 ft.). Both types of lighting are individually operated by two electrical time clocks. The incandescent lamp is set to come on one half hour before the fluorescent lights, to stimulate daybreak, and to stay on one half hour after the fluorescent lights are turned off, to simulate dusk. Room temperature is controlled by a thermostat attached to a small portable heater fan. Humidity is provided by a shallow pan of water placed in front of the fan. All materials used for the construction of this flight room were readily available at the experimental Farm with the exception of a time clock. The cost of all the components described above was estimated at about $200.00.

The honey bee colony is fed at weekly intervals with fresh pollen, preserved in a deep freeze from last summer's collection. Adequate water and syrup is provided at weekly intervals by Boardman feeders placed at colony entrances. Bee response to this artificial day and controlled conditions has been very encouraging.

Flight rooms are of recent origin and are now considered as important to apiculture research as growth chambers are to the plant breeder. Their costs may range from $6,000 to $30,000 depending upon their size and sophistication of climate control.

Dr. J.C.M. L'Arrivee

RESEARCH AT UNIVERSITY OF GUELPH

Ethylene Dibromide for the Control of Wax Moths -
G.F. Townsend and Der-I Wang

To use apply eight teaspoons or one volume ounce to ten standard supers of comb. The material should be placed above the boxes on an absorbent pad and tightly covered. Leave for 24 hours then air completely, avoiding inhalation of the fumes.

For larger areas, use eleven pounds or 1/2 gallon per 1,000 cubic feet which is equal to six hundred supers.

The above concentrations will kill all stages of wax moth.

One-half this amount will kill all stages except the eggs.

Toxicity of Fumigants Expressed as Percentage Mortality to Eggs, Larvae and Pupae of the Greater Wax Moth Galleria mellonella L. (x = 100% Mortality)

cc/21312 cm^3	Killmoth			Pure Ethylene Dibromide			Control
	Eggs	Larvae	Pupae	Eggs	Larvae	Pupae	Eggs
15	89%(187)	x(36)	x(87)	92%(142)	x(35)	x(42)	0
30	x(98)	x(51)	x(29)	x(79)	x(86)	x(43)	0
60	x(121)	x(61)	x(153)	x(134)	x(94)	x(58)	0

( ): Number of eggs, larvae, and pupae used for experiment.
Eggs in the control treatment hatched at 6th day after fumigation.

Caste Establishment
R.W. Shuel & S.E. Dixon (Dept. of Zoology, O.A.C.)

A. A study of the interrelations between diet, endocrine system, and ovary development in honeybee larvae revealed the following:

1. In the colony, no appreciable differences in ovary development between castes appear during the first 72 hours. Thereafter, ovary development proceeds very rapidly in the queen.

2. Ovary growth is not proportional to overall body growth. Two diverse strains had ovaries similar in size, though the body size differed by 100 per cent.

3. Worker larvae grow much faster than queen larvae between 0 and 90 hours.

4. Alterations in the diet of worker larvae in the laboratory in the direction of the royal jelly diet, achieved by adding certain components present in higher concentration in royal jelly, changed growth and development patterns with respect to body size, corpus allatum volume and ovary

development. The changes were not fully co-ordinated in the direction of queen larval growth, however.

5. During the 3-day bipotent period, the influence of diet on reproductive development is physiological; morphological expression of the influence does not appear until later.

(Mr. Der-I Wang M.S.A. Thesis)

B. Blood protein patterns in young worker and queen larvae were studied by starch gel electropheresis.

Patterns differ between the two castes and by 60 - 72 hours there is a well-marked difference. Patterns also change progressively with larval age. By 72 hours, the total blood protein content is much lower in the queen.

These results were confirmed using a gel-diffusion technique.

Alterations in the diet are reflected in changes in the blood protein pattern.

(Mr. Stephen Liu, M.S.A. Thesis)

C. A chemically defined diet for rearing honeybee larvae is under study. A diet resembling the natural diets in appearance and consistency has been obtained. Larval growth is excellent for about 2 days, but sustained growth has not yet been obtained.

Queen Rearing and Stock Improvement -
M.V. Smith

Pelee Island

Virgin queens reared at Guelph were again shipped to Pelee Island for mating. Our co-operative hybrid queen project with the U.S. Department of Agriculture Bee Breeding Investigations at Madison, Wis., was continued, but an increasing emphasis was placed on the rearing and distribution of the stocks that we imported from Europe last year.

Large flocks of migratory purple martins, coupled with unseasonably cool and windy weather, almost brought queen mating to a standstill in August and resulted in exceptionally heavy mating losses.

The following queens were shipped from the Pelee Island Mating Station during 1964:

203 Hybrid queens (of the lines ZX, 6 ZX, ZX.ZX and AZ)

236 Queens of the imported stocks (of the Carniolan, Anatolian, Caucasian and Greek races)

Imported Stock Distribution

Breeding stock was made available for purchase by interested queen breeders and beekeepers. In addition, breeding stock was supplied free of charge to bee research stations and universities in Canada and the

United States where work was being done on bee breeding and genetics.

The following stock was distributed:

Inseminated breeder queens	-	31
Outcrossed naturally mated queens	-	20
Virgin queens	-	152
		203

In addition, approximately 100 queens of the Greek and Caucasian lines were distributed free of charge to selected Ontario beekeepers for testing and evaluation.

Preliminary Observations on Imported Stocks

Anatolian - Excellent brood pattern, quick spring build-up, tends to cease brood rearing in early September and goes into winter with a much smaller cluster than other races.

Carniolan - Quick build-up. Has to be watched for swarming.

Greek - Excellent brook pattern and build-up. Appears most promising on production basis.

Caucasian - Good in most characteristics, but does propolize heavily especially in late summer and fall.

All stocks are good-tempered and easy to handle and all appear to be up to the general average or above as far as honey production is concerned.

Disease -
M.V. Smith

Twenty-one samples of adult bees were received during the season for disease diagnosis. Of these 9 showed some incidence of Nosema, but in most cases, the infection did not appear severe enough to have resulted in the death of the bees. Poisoning or paralysis was suspected in many cases.

Honey -
M.V. Smith

Mr. Jean Guilbault completed his thesis "A Study of the Crystallization of Honey" and was granted his M.S.A. degree in the spring of 1964. A brief summary of his thesis indicates that the firmness of set is influenced by the following factors:

1. Amount of Seed

Firmness decreases as per cent seed increases.

2. Temperature

An increase in temperature during crystallization results in a softer set. Honey held at 77°F. for 7 days will be 50 per cent softer, and

for 14 days 100 per cent softer than the control.

If glass jars of processed honey are held for 3 days or less at 57°F., raised to 86°F. for 1 - 2 days, then returned to 57°F., the tendency of the honey to pull away from the glass will be greatly reduced.

3. Source of Honey

The amount of seed required will vary with the source of the honey.

4. Crystal Nuclei

The number of crystal nuclei actually added in the seed honey can only be determined accurately by a microscopic count.

5. Stirring

If partially set honey is stirred the set will be softer.

6. Crystal Growth

Under the microscope an interlacing of the dextrose crystals can be observed. When crystal growth is slow, there is more interlacing with a harder coarser honey.