

W. C. Elder

THIRD PROCEEDINGS
OF THE
SOUTHERN WEED
CONFERENCE

BUENA VISTA HOTEL
BILOXI, MISSISSIPPI
FEBRUARY 7 AND 8, 1950

It was suggested by President Tullis that men in the regulatory field of weed control be encouraged to attend and participate in our weed conference.

Paul J. Talley, Chairman of the Research Committee announced a meeting of his committee that night at 7:00 o'clock and suggested that everyone interested should attend. Dr. Talley pointed out the need for uniform type experiments on some of our most important weed control problems in several states so that more definite recommendations for weed control could be made for the region or at least for a group of states. Uniform experiments were suggested for control of weeds in cotton, corn, peanuts, truck crops, tobacco, small grains and pastures; for the control of aquatic plants, Johnson grass, wild garlic, curled dock and brush; and 2,4D effects on cotton.

Meeting adjourned at 5:15 P.M.

II. BUSINESS MEETING - February 8, 1950, 3:30 P. M.

Buena Vista Hotel - Biloxi Mississippi

President Edgar C. Tullis presiding

1. Report and recommendations of Executive Board meeting February 6, 1950, 7:00 P. M., Buena Vista Hotel, Biloxi, Mississippi. President Edgar C. Tullis asked for and Secretary O. E. Sell read the following report:

a. That a new committee be appointed to draw up recommendations for weed control. The name for this new committee is to be "Control Recommendations Committee". Sub-committees shall be designated by the chairman. These sub-committees are to draw up recommendations for the control of the respective crops or specific weeds, that they are concerned with, and submit these recom-

mendations to the main committee chairman in time so that a report can be given at the next conference meeting. Only such sub-committees are to be appointed each year as information available justifies.

b. In order that the above recommendations can be carried out, or to implement this recommendation, the Research Committee shall draw up suggestions for uniform herbicide application experiments - with a limited number of crops and, or, weed species. (This was done last night at a meeting of the Research Committee and others interested).

c. Policy recommendations on presentation of papers at Conference meetings and publication of the Proceedings.

- (1) No senior author can present more than 2 papers.
- (2) Authors may submit either abstracts (of about 400 words) of full length papers for publication in the Proceedings.
- (3) Published papers shall be limited to a maximum of 12 pages for two papers (or 1 paper if only one is given).
- (4) A charge of \$5.00 will be made (payable before publication) for each page above the limit set above, if the author wishes to have a longer paper printed.
- (5) Authors are to submit a first or clean copy of their paper(s) to the secretary who will then be able to mimeograph all papers uniformly. The papers will be labeled as being either a "manuscript" or an "abstract", depending upon which the author prefers.
- (6) Titles of papers should be in not later than December 15 and full papers or abstracts must be in the hands of the secretary

not later than the time the paper is given, otherwise the paper cannot be presented.

(7) These recommendations will apply starting with next year's conference affairs.

E. C. Tullis made a motion, seconded by W. B. Albert, that the recommendations of the Executive Board be accepted. The motion was passed.

SOUTHERN WEED CONFERENCE

Treasurer's Report, 1949-1950

O. E. Sell

Cash received:

Balance, previous, from Clair A. Brown -----	\$ 86.92
Proceedings, sent by Brown, cash received by Sell -----	136.02
Proceedings, 47, sent out by Sell -----	70.50
Contribution, cash -----	25.00
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	\$ 318.44

Expenses:

Stationery, paper, stamps, mimeo. ink -----	\$ 51.55
Expenses, E. C. Tullis, (attending Natl. Weed Assc.) -----	61.13
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	\$ 116.68
Bank balance, February 7, 1950 -----	\$ 201.76
Cash received, Biloxi, for dues and Proceedings -----	193.50
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Balance, March 6, 1950 -----	\$ 395.26
Income and expenditures, distribution, 1949-'50	
Contributions (four industrial concerns) -----	\$ 95.00
Sale of Proceedings -----	422.52
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	\$ 517.52
Cost of Baton Rouge Meetings and Proceedings -----	\$ 199.08
Stationery, paper, stamps, mimeo, ink -----	51.55
Expenses, E. C. Tullis, Natl. Weed Assc. -----	65.13
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	\$ 315.76
Balance, February 7, 1950 -----	201.76

Second Proceedings, Publication:

Number copies printed first edition -----	325
Number copies printed second edition -----	75

2. Report of the Research Committee, made by Chairman Paul J. Talley, follows:

Eleven sub-committees are to draw up recommendations for uniform testing in three or more states, except in the case of the peanut and curled dock sub-committees where two states only have signified interest. These recommendations should be completed as far as possible before committee members leave Biloxi. Chairman of the sub-committees should immediately send copies of the recommendations to Paul J. Talley at the Delta Branch Experiment Station, Stoneville, Mississippi and to R. L. Lowvorn, Plant Industry Station, Beltsville Maryland. Dr. Lowvorn will send mimeographed copies to all technical weed control workers in all southern states so they can use them or offer suggestions if they so wish.

Members of the Technical Committee for the Southern Regional Weed Control Project S-18 in each state will be asked to make a list of all technical weed workers in their state and send this in to Dr. Lowvorn. The men on this list, along with those on the Conference registration list, will receive the uniform testing recommendations.

Sub-committee chairmen will summarize the year's data obtained and will work up a report on control recommendations to submit at next year's Conference meeting.

While the Control Recommendation Committee was developed by the Research Committee it is to be a separate Committee with sub-committees, which may vary from year to year. Organization of this committee is as follows:

Control Recommendation Committee

Paul J. Talley, General Chairman

- (1) Peanut Weed Control Sub-Committee
States Cooperating - Alabama, Georgia
Committee - Searcy (Chairman), Sell
- (2) Johnson Grass Control Sub-Committee
States Cooperating - Texas, Louisiana, Mississippi
Committee - Chilton (Chairman), Porter, Stiver
- (3) Cotton Reaction to 2,4-D Sub-Committee
States Cooperating - Texas, Arkansas, Georgia, Mississippi
Committee - Tullis (Chairman), Hinkle, Porter, Lett
- (4) Nut Grass Control Sub-Committee
States Cooperating - U. S. Engineers, Mississippi, Puerto Rico, Alabama,
Tennessee, North Carolina
Committee - Loustalot (Chairman), Albert, Cary, Harris
- (5) Brush Control Sub-Committee
States Cooperating - T.V.A., Texas, Alabama, South Carolina
Committee - White of T.V.A. (Chairman), Fisher, Young, Albert
- (6) Aquatic Weed Control Sub-Committee
States Cooperating - U. S. Engineers, Texas, T.V.A.
Committee - Carey (Chairman), Tullis, Hull
- (7) Pasture Weed Control Sub-Committee
States Cooperating - Virginia, Mississippi, Georgia, Texas
Committee - Harris (Chairman), Sell, Young
- (8) Wild Onion and Garlic Control Sub-Committee
States Cooperating - Georgia, Mississippi, Alabama
Committee - Sell (Chairman), Harris, Searcy
- (9) Cotton Weed Control Sub-Committee
States Cooperating - Arkansas, Louisiana, Georgia, Tennessee, Mississippi,
Texas
Committee - Talley (Chairman), McMurray, Cowart, Albert, Duncan
- (10) Curled Dock Control Sub-Committee
States Cooperating -
Committee - Porter, Sell
- (11) Corn Weed Control Sub-Committee
States Cooperating - Georgia, Virginia, Mississippi, South Carolina,
Tennessee, Louisiana
Committee - Shear (Chairman), Stamper, Duncan

3. National Association of Regional Weed Control Conferences.

A motion was made by S.P.J. Chilton, seconded by L. E. Cowart and passed by the assembly that the Southern Weed Conference favor and approve the proposed National organization.

The question came up as to who would be delegated to represent the Southern Weed Conference at the National Conference. A motion was made by G. M. Shear, seconded by H. E. Rea and O. A. Leonard, and passed by the assembly that the Executive Board be empowered to decide who should represent the Southern Weed Conference at the National Committee.

4. Nominations Committee. Report was made by Chairman G. M. Shear as follows:

Recommended for President - Otto E. Sell

Vice-President - Hoyt A. Nation

Secretary-Treasurer - Arnaud J. Loustalot

A motion was made, seconded and passed that nominations be closed. The above officers were then elected.

Meeting was adjourned at 4:15 P.M. to continue presentation of papers.

III. Short business meeting following presentation of last papers.

The assembly approved the continuance of Paul J. Talley and T. C. Ryker as members of the Executive Board.

REPORT OF THE LEGISLATIVE COMMITTEE

Submitted by Chairman T. C. Ryker

Prior to 1949 Louisiana was the only Southern State having regulations governing the use of herbicides. The initial regulations were changed in 1949. These regulations have worked out satisfactorily for all concerned.

In 1949, Texas passed regulations governing the use of herbicides. This legislation leaves much to be desired.

Legislation is believed to be a last resort. In the event that legislation is needed by any state, consideration should be given to a draft of a bill prepared by the Council of State Governments. This bill provides for regulations of custom application of insecticides, fungicides and herbicides.

AN ACT RELATING TO CUSTOM APPLICATION OF
INSECTICIDES, FUNGICIDES, AND HERBICIDES

Organization which cooperated in the preparation of this Act:

Council of State Governments
Association of Economic Poisons Control Officials
National Association of State Aviation Officials
National Association of Commissioners, Secretaries, and
Directors of Agriculture
Civil Aeronautics Administration
United States Public Health Service
United States Department of the Interior
United States Department of Agriculture

Interpretive Statement

Purpose

This bill has been prepared in order to assist States which find it necessary to adopt or revise legislation regulating the application of insecticides, fungicides, and herbicides (weed killers) for hire.

In view of widely differing conditions of agricultural production in different parts of the country, the provisions of the bill should be carefully considered and, when necessary, modified to meet local needs.

While this bill has been confined to custom application of insecticides, fungicides, and herbicides, it may be found in some States that regulation of other than custom application, particularly by aircraft, is necessary.

It should be noted that this bill deals only with the application and use of insecticides, fungicides, and herbicides. It thus covers an entirely different area than the State Insecticides, Fungicide, and Rodenticide Act, which deals with the sale of these economic poisons. The latter bill was first carried as suggested State Legislation in the Program for 1947. The definitions of terms used in both bills, except for the definitions of "person," are identical.

Problem

Section 1 of the bill points out that in recent years there has been very rapid advance in the discovery and synthesis of insecticides, fungicides, and herbicides. The most spectacular of these in many ways, is 2,4-D (2,4-Dichlorophenoxyacetic acid), synthesized in 1941 and first used as a weed killer in 1944. This is a selective weed killer which, generally speaking, will kill broad-leaved plants but not grasses when applied in proper quantities. It is extremely valuable in killing weeds in grains, including wheat, rice, and corn, and in grass used for hay or pastures. However, it drifts very easily and, in some cases, has been known to drift

as far as twenty miles when applied in windy weather by aircraft. Considerable drift may occur even when 2,4-D is applied by means of ground equipment. Damage to broad-leaved crops, such as cotton, tomatoes, and other vegetables, has resulted from drift. 2,4-D in dust form is particularly likely to drift, and application in this form by aircraft is at present disapproved by the United States Department of Agriculture. While 2,4-D may cause damage, it is, when properly applied, a valuable aid to agricultural production. Obviously, however, its use requires great care.

DDT (Dichloro-diphenyl-trichlorethane) is another synthetic compound which has been found to be extremely valuable for control of certain insects. Recently it has been learned that DDT applied to dairy cattle, in dairy barns, or to fodder intended to be fed to dairy cattle or animals being finished for slaughter may be absorbed into the fat of the cattle or may appear in milk, and for this reason, the United States Department of Agriculture has recommended that DDT should not be used in these ways. Instead, the Department has recommended that Methoxychlor, a still newer synthetic compound be used. When DDT is used to spray forest areas or shade trees in cities to control insects, care must be taken to see that wildlife is not injured.

Among other new insecticides are benzene hexachloride, chlorodane, toxapheno (chlorinated camphene), TDE, parathion, tetraethyl pyrophosphate, and lindane. Each of these has its proper uses and dangers. Many of these new materials have not been tested under all conditions and their effects are not fully known.

Concurrently with the discovery of new and highly potent insecticides, fungicides, and herbicides, the business of custom spraying and dusting, including spraying and dusting by airplane, has greatly expanded. As these chemicals and the practices for applying them properly become more numerous and complex, custom spraying and dusting will undoubtedly continue to increase because of the need for specialized training and equipment. Insecticides, fungicides, and herbicides, along with modern machinery, improved varieties and practices, hybridization, etc., are becoming increasingly important factors in greater agricultural production.

The growth of custom spraying and dusting, the rapidity of new discoveries, the possibility of injury to health and to plants and animals, including wildlife, on lands or in waters adjacent to these being sprayed or dusted, and the possibility of fraudulent practices make public regulation increasingly necessary.

One difficult problem in connection with application of insecticides, fungicides, and herbicides is the question of liability for damage to crops or animals resulting from drift of the materials. This problem is particularly serious in the case of 2,4-D where damage may be very substantial and, at the same time, difficult to prove. No provision relating to liability has been included in the bill. It is felt that it is best to leave this question, at least until further experience accumulates, to existing laws relating to liability. However, the matter is under study.

The requirements for licensing after examination intended to show that the operator is qualified (section 4(b)) and for reports regarding particular applications of insecticides, fungicides, and herbicides (section 7) should help to minimize damage from improper application and to fix responsibility when damage does occur.

Provisions of the Bill

The bill requires that persons engaged in custom application of insecticides, fungicides, or herbicides be licensed. A license would be issued by the Commissioner of Agriculture after the applicant had shown, on examination, that he possessed adequate knowledge concerning the use and application of insecticides, fungicides, and herbicides and upon consideration of other pertinent information. The licensee may be restricted to the use of certain types of equipment or materials if he is found qualified to use only these types. For example, a custom operator might be found qualified to use ground equipment but not aircraft or to use insecticides and fungicides but not herbicides. The license may be revoked or modified for cause. The grant, denial, or revocation of a license is subject to court review on petition of the aggrieved person. (Section 3).

Under Section 3(e) a bond may be required from custom operators to secure performance of obligations. The amount of the bond is not specified, as it may be found desirable to fix, by regulation, a larger amount for large operators than for small operators.

Section 4 authorizes inspection of equipment used for application of insecticides, fungicides, or herbicides.

Section 5 authorizes the Commissioner of Agriculture to prescribe materials or methods to be used and to prohibit the use of materials or methods in custom application of insecticides, fungicides, and herbicides. Alternative provisions regarding the scope of such regulations are included. In issuing such regulations, consideration is to be given to pertinent research findings and recommendations of State and Federal agencies, such as the State Agricultural Experiment Station and the United States Department of Agriculture.

Under Section 6 licensees may be required to maintain records and submit reports giving specific information with respect to particular spraying or dusting jobs and other information. Reports relating to the time of application, wind velocity, other weather conditions, kind of material applied, and so on, could be required under this provision. Such information may be especially needed in the case of 2,4-D and other materials likely to cause damage because of drift.

Section 7 authorizes the Commissioner of Agriculture to make rules and regulations but provides that such regulations shall not be inconsistent with other regulations issued by the State or Federal Government with respect to safety in air navigation or operation of aircraft. In general, the State official responsible for regulation of aircraft would continue to regulate flying from the standpoint of safety and other general aspects. This section also requires the

Commissioner to consult with other officials of the State before issuing regulations relating to matters within the jurisdiction of these officials. Application of insecticides, fungicides, and herbicides may concern not only agriculture but also health, forestry, fish and wildlife, etc., as well as regulation of aircraft, and consultation among the officials concerned will frequently be desirable.

Section 8 authorizes the Commissioner of Agriculture, in cooperation with the State Agricultural College, to publish information regarding injury which may result from improper application or handling of insecticides, fungicides, or herbicides and precautions which will help prevent such injury. Much of the damage, caused by 2,4-D and other materials results from lack of information as to the effects of the materials and the conditions under which they should be applied. While the act relates principally to custom application, this section will authorize the distribution of information to farmers generally.

Section 10 exempts pest control operators, that is, persons engaged in destroying insects or fungi in or under buildings or in vehicles of transportation, such as termite eradication, fumigation of buildings, ships, etc. Outdoor custom application of insecticides, fungicides, and herbicides in cities, e. g., to trees, gardens, lawns, etc., is not exempted. However, consideration should be given to avoiding dual licensing of operators by both the Commissioner of Agriculture and municipalities.

Sections 3(f) and 13 authorize cooperation with other agencies of the State and with agencies of other States and of the Federal Government.