

ANNUAL REPORT OF COOPERATIVE REGIONAL
RESEARCH PROJECTS
January 1 to December 31,
1969

1. PROJECT: IR-4 Evaluation of Current Data and Needed Research to Determine Tolerance Limits of Chemicals for Minor Uses on Agricultural Products.
2. COOPERATING AGENCIES AND PRINCIPAL LEADERS:

TECHNICAL COMMITTEE

Technical Advisory Committee

Mr. J. E. Fahey, Chm., Indiana
Dr. C. H. VanMidlelem, Fla.
Dr. V. H. Freed, Ore.
Dr. B. B. Pepper, N. J.

Region

North Central
Southern
Western
North Eastern

Administrative Advisory Committee
(States)

Dr. J. P. Mahlstede, Iowa
Dr. H. H. Wilkowske, Chm., Fla.
Dr. K. W. Hill, Utah
Dr. W. C. Kennard, Conn.

North Central
Southern
Western
North Eastern

USDA

Dr. E. R. McGovran, CSRS
Dr. K. C. Walker, ARS

Consultants

Mr. H. G. Alford, USDA-PRD
Dr. F. H. Dale, USDI
Dr. W. D. McClellan, USDA-CRD
Dr. John E. Swift, Cal.
Dr. K. R. Hill - ARS
Mr. L. B. Reed - ARS

Project Leaders

Dr. C. C. Compton, Rutgers - N. J. - Coordinator
Mr. G. M. Markle, Rutgers - N. J. - Asst. Project Coordinator
(Recording Secretary)

In addition to the Technical Committee a State Experiment Station staff member appointed by the Experiment Station Director for each of the 50 states and Puerto Rico, serves as a liaison person for the IR-4 Project.

3. PROGRESS OF WORK AND PRINCIPAL ACCOMPLISHMENTS

As the close of the 1969 calendar year approaches, IR-4 along with state experiment station personnel and others interested in the use of pesticides is about to enter the last year of operations under pesticide label extensions. We have not materially reduced the number of pesticides and crops under extensions for 1970 for the reason that as we obtain tolerances and labels requested in the past we find it necessary to take on additional pesticides and crops at the request of experiment station personnel. These are pesticides and crops for which extensions have been obtained by industry in the past and which are no longer supported by industry. The race to obtain finite tolerances or exemptions and label registrations for those pesticides now "riding" on use label extensions, before the proposed cancellation date of December 31, 1970, approaches stampede proportions. Much has been accomplished during 1969 in reducing dependence on label extensions by obtaining tolerances and arranging for label registrations. Before the final deadline for obtaining tolerances and registered labels, IR-4 will have completed a significant number of clearances through the tolerance petition route. As the burden of obtaining label extensions draws to an end, IR-4 finds itself in a position of working to obtain clearances for substitute pesticides on minor crops. The demand for substitute pesticides has become intensified due to the precipitous action taken in eliminating or severely restricting the use of some of our more important pesticides.

IR-4 has taken advantage of every available provision in the pesticide regulations for extending the pesticide labels for which we have had requests. Requests for label extensions do not include pesticide uses for which petitions for tolerances have been submitted, such uses are automatically extended until the petitions receive final action. IR-4 has a problem of considerable proportions with clearing pesticides on many minor crops since they were not covered by registered uses when the "No-Residue" or "Zero Tolerance" cancellations were proposed in 1966. These crops are being covered through tolerance petitions as rapidly as the necessary data can be assembled. This phase of the IR-4 program is related to the development of the IR-4 "crop list" as will be noted in more detail in this report.

The label extension and tolerance problems in which IR-4 has been actively involved during 1969 cover a considerable range of pesticide uses. Among the more important problems are label extensions and detailed data procurement for the clearance of the milky disease bacteria, Bacillus sp. for Japanese beetle control in pastures; calcium cyanamid for the control of mummy disease on blueberries; a growth regulator (4-CPA) to be used to improve fruit set on tomatoes; smear EQ 335 for the control of screw-worm in livestock; sodium trichloroacetate as a herbicide in sugar beet and sugarcane plantings; sodium arsenite for the control of black measles, and dead arm on grapes in California; DNOC as a thinning agent for use on apples in the Pacific Northwest; 1-naphthaleneacetic acid on olives; pyrethrins and piperonyl butoxide for use on stored potatoes (white) used in the production of potato chips, for use on chickens and in chicken houses, and for the control of blow flies on fish and meat (dried) in Alaska; dichlone

for use as a fungicide on mint; 4-(2,4-DB) as a herbicide on canning peas, alsike clover, birdsfoot trefoil, ladino clover, red clover, and white clover; 4-MCPB as a herbicide on canning peas; copper arsenate for the control of fire blight on pears and sodium fluosilicate baits for the control of pests on strawberries, caneberries, and blueberries in the Northwest.

The foregoing covers pesticide uses for which we are close to tolerance petition disposition. It should also be noted that the loss of a use for a pesticide due to label cancellation does not mean the loss is irrevocable. Many uses can be reinstated by the establishment of a tolerance(s).

In addition, during 1969 a tolerance and registered labels were obtained to cover the use of methyl parathion on sunflowers to control the head moth. Petitions have been submitted to FDA and USDA-PRD for tolerances covering the use of malathion on hops; dichlorvos and calcium cyanide for use in controlling pests of cucumbers, lettuce, tomatoes, and radishes grown in greenhouses; commercial sulfuric acid for the control of weeds in onion and garlic plantings. Also IR-4 worked out label clearances for all soil-bait uses for metaldehyde for slug control on specified fruits and vegetables grown out-of-doors (7 fruits and 45 vegetables) and vegetables grown in the greenhouse (4).

For the past several years IR-4 has carried the responsibility of label extensions for certain pesticides where we continued to get limited additional residue data and/or toxicological data. The following represent the label extensions which we can no longer support for lack of sufficient progress in obtaining the required data. Zineb, ferbam, and folpet on potatoes (white); sodium arsenite as a vine killer on potatoes (white); 0-2,4-Dichlorophenyl 0,0-diethyl-phosphorothioate, VC-13, for the control of root maggots in onions and cole crops; 2,4-Dichlorophenyl benzene sulfonate (Genite) on almonds, apple, cherry, peach, pear, plum and prunes for the control of mites; hydrocyanic acid gas fumigation of citrus fruits; cryolite for all uses not covered by a tolerance; arsenate of lead on walnuts; and all uses for nicotine sulfate not covered by a tolerance.

During 1969 we again experienced an increase (50%) in correspondence and in time spent in outlining research programs, relating to pesticide residues, animal toxicological studies and pesticide petitions (100%).

Each year since 1966 we have reported on the work under way in the development of the IR-4 "crop list," a descriptive list of edible foods and feeds classified according to potentials for pesticide residues. This list has been reviewed by several crop authorities and edited by Dr. J. R. Magness. It is about ready to go to the printers. The full significance of the IR-4 "crop list" will not become apparent until the list has been published and the place of minor crops in the scheme of pesticide regulations has thereby been established in relation to the over-all consumer exposure to crop residues on foods and feeds. With the ever-changing requirements for pesticide clearances the "crop list" will provide perspective to the relation of minor crops and their pesticide residues to major crops and their pesticide residues.

4. USEFULNESS OF FINDINGS

Farmer-growers have been enabled to employ chemical pest control measures to the fullest extent permissible under the law through the activities of IR-4 in maintaining label extensions, tolerances, and label registrations. Major emphasis during 1969 has been placed on pesticide tolerances and label extensions.

While IR-4 can no longer support label extensions as enumerated under ACCOMPLISHMENTS, we have not found it necessary to drop any pesticide unless and until a suitable substitute has been cleared.

5. WORK PLANNED FOR NEXT YEAR (1970)

IR-4 must place major emphasis during 1970 on converting label extensions to clearances through establishment of finite tolerances. It will be a tight race against the final cancellation date for all remaining "No Residue" label registrations December 31, 1970. The publication of the IR-4 "crop list" will come at an appropriate time.

December 15, 1969

APPROVED:

C. C. Roughton
IR-4 Project Coordinator

December 22, 1969
Date

Jack E. Fahy
Chairman - Technical Committee

Dec 23, 1969
Date

H. H. Schowke
Administrative Advisor