

ANNUAL REPORT OF COOPERATIVE REGIONAL RESEARCH PROJECTS  
(REVISED)

January 1 to December 31, 1964

PROJECT: IR-4, Clearance of Pesticides as a Public Service

COOPERATING AGENCIES AND PRINCIPAL LEADERS:

<u>Areas</u>	<u>Technical Committee</u>	<u>Administrative Advisory Committee</u>
No. Central	Dr. R. L. Janes, Mich.	Dr. J. A. Callenbach, N. Dakota
Southern	Dr. C. H. Van Middeltem, Fla.	Dr. H. H. Wilkowske, Fla.
Western	Dr. V. H. Freed, Ore.	Dr. A. M. Boyce, Cal.
CSRS, USDA	Dr. E. R. McGovran	
ERD, USDA	Dr. K. C. Walker, Sec.	
No. Eastern	Dr. B. B. Pepper, Chm. N. J.	Dr. Ordway Starnes - Chm. N. J.
	Dr. J. E. Swift, Cal., Consultant to the IR-4 Project	

In addition the Experiment Station Director of each state has appointed a member of his staff to act as a liaison with the project leader.

PROGRESS OF WORK AND PRINCIPAL ACCOMPLISHMENTS

Under the IR-4 Program the following uses were cleared through the FDA and/or USDA-PRD.

1. For the control of weeds, including woody weeds, principally sweet fern, wild cherry, and poplar in low bush blueberry fields, five formulations of 2,4-D, 2,4,5-T and combinations of the two herbicides were cleared by registered labels with USDA-PRD.
2. A modification in the dairy animal feeding restrictions involving pea vines treated with DNBP was resolved with USDA-PRD to permit efficient use of the pea vines as dairy animal feed.
3. Benzaldehyde was cleared through the FDA and the USDA-PRD for use as a bee repellent in bee hives making possible the use of this repellent in the production of honey for all purposes.
4. Control of bacterial leaf spot on peaches has been limited by the failure of registered fungicides to perform in combination with the available registered insecticides. Dodine was cleared for the control of bacterial leaf spot through a temporary tolerance granted by the FDA. A full tolerance is awaiting decisions on the requirement for reproduction data on rats fed Dodine under prescribed conditions.

Details of the foregoing clearances are given in Appendix 1.

During 1964 thirty-seven states were contacted by correspondence regarding specific pesticide clearances. During that year thirty clearances were actively sought. Ten states were visited to discuss requested clearances, and visitors from nine states were received at the IR-4 office headquarters at Rutgers - The State University.

In addition thirty-eight days were spent with government agencies in Washington, D. C.

Contacts have been maintained with HEW-FDA, USDA-PRD, USDA-ARS, USPHS and Department of Interior - Fish and Wildlife Service. Complications have arisen during the past year which have had an adverse effect on the pursuit of important IR-4 project objectives. The more important hindrances are briefly stated in Appendix 2.

#### USEFULNESS OF CLEARANCES

Each of the clearances enumerated under PRINCIPAL ACCOMPLISHMENTS fill a need which has been under request from one or more states for the past two to four years. The uses for each clearance are detailed in Appendix 1.

#### WORK PLANNED FOR NEXT YEAR (1965)

The clearance of additional pesticide chemicals is to be continued and expanded. This time-consuming program is expected to yield a greater number of clearances in 1965 because of the number of items now in progress. Expected clarification of clearance restrictions are expected in early 1965.

Clearances to be processed will cover a wide range of problems that are now hampering farmer-grower control of important pests.

We will continue to develop with the FDA proposed procedures for the inclusion of an indefinite number of minor crops in existing categories and/or definitions under Food and Drug Regulations Part 3, subchapter B, subpart A-120.1 and subpart B 120.34.

#### MANUSCRIPTS PREPARED DURING THE YEAR

A manuscript - "Pesticide Residues" was prepared for publication and presented as a paper before the New England Agricultural Chemicals and Herbicide Workshop, Concord, N. H., December 9-10, 1964.

January 21, 1965.

APPROVED:

Date

Date

W. C. Clements  
IR-4 Project Leader

B. B. Raper  
Chairman - Technical Committee

J. L. Raper  
Administrative Advisor

## APPENDIX 1

### 1964 CLEARANCES OF PESTICIDES UNDER THE IR-4 PROJECT

Details of pesticide clearances for 1964 are detailed below.

2,4-D, 2,4,5-T and combinations for weed control in low bush blueberry fields. The following formulations have been registered by the USDA-PRD as provided in the registered labels.

Esteron Brush Killer - Registration No. 464-178  
Esteron 99 Concentrate - Registration No. 464-201  
Esteron Brush Killer - O.S. Registration No. 464-204  
Esteron 245 - O.S. Registration No. 464-205  
Esteron 245 Concentrate - Registration No. 464-302

The above will be published in the revised USDA Summary of Registered Agricultural Pesticide Uses.

DNBP - Herbicide - Post-emergence application in pea fields - acre dosage rate reduced from 4.5 pounds to 1.5 pounds actual 4,6-dinitro-o-sec-butylphenol (alkanol, ethanol, and isopropanol amine salts) and limitation statement changed from "Do not graze or cut for forage within 60 days after application" to "Do not graze or feed forage or hay within 60 days after application". This is a significant change in that any part of the 60 day waiting period before feeding to dairy animals may accumulate after the peas are cut. At this writing the limitation change has not appeared in the USDA Summary of Registered Agricultural Pesticide Uses but will be included in the revised summary.

Benzaldehyde as a honey bee repellent. The use of benzaldehyde as a honey bee repellent in the harvesting of honey has been cleared through an order by FDA ruling that benzaldehyde used for this purpose is generally recognized as safe. Reference: Federal Register, June 13, 1964, p. 7597. Following this clarification USDA-PRD accepted 98% technical grade benzaldehyde for registration as an insect repellent. Directions call for sprinkling lightly 2 tablespoons on pad of the Fume Pad Chamber - Limitations and/or Direction: Smoke bees slightly from above to get them running - then place treated fume pad over the top of the supers. Use in shade on a cool day. At the end of the day, flush fume pads with water to clean them. Odor disappears from supers in 24 hours. The foregoing will be published in the revised Summary of Registered Agricultural Pesticide Uses.

Dodine - Bactericide for control of bacterial leaf spot on peaches. A temporary tolerance and experimental labels for application of Dodine on peaches in selected counties in New Jersey. References: Federal Register, June 10, 1964, p. 7478 and Federal Register, July 17, 1964, p. 9677.

## APPENDIX 2

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The complications attendant to pesticide clearances are many and progress this first year has been necessarily slow. Some of the delays are of a temporary nature, particularly the delays due to a ruling by FDA that no tolerances or extension of tolerances to include additional crops can be determined until reproduction studies on rats have been completed. This ruling followed a "mandate" from the President's Advisory Committee Report, May 1963. The requirements for reproduction studies are so far reaching that they should be quoted here.

"Effects on reproduction through at least two generations in at least two species of warm-blooded animals. Observations should include effects on fertility, size and weight of litter, fetal mortality, teratogenicity, growth and development of sucklings and weanlings.

"Chronic effects on organs of both immature and adult animals with particular emphasis on tumorigenicity and other effects common to the class of compounds of which the test substance is a member.

"Possible synergism and potentiation of effects of commonly used pesticides with such commonly used drugs as sedatives, tranquilizers, analgesics, antihypertensive agents, and steroid hormones, which are administered over prolonged periods."

For some time exploratory reproduction studies for a significant number of pesticides have been under way. By the spring of 1965 FDA is expected to announce specific requirements for conducting reproduction studies and presumably some of the tests under way now will clear some pesticides for additional uses.

All pesticide labels that have been accepted in the past by USDA-PRD under zero tolerances and those labels registered on a "No Residue" basis, are now under review by a committee of the National Academy of Sciences. It is expected that the committee's recommendations will be handed down by late winter or early spring. These recommendations and subsequent rulings by the FDA will determine the status of labels presently labelled under zero tolerances and on the basis of "No Residue" and the future registration of additional use labels. All label specifications acceptable for registration as shown in the "USDA Summary of Registered Agricultural Pesticide Chemical Uses" for which an exemption from a tolerance, or where a finite tolerance is not shown, are suspect. Likewise, all uses in "Insecticide Recommendations," Agricultural Handbook No. 120 USDA-ARS where a zero tolerance or a blank is shown, are also suspect.

Over the longer run the greatest progress will result from the inclusion of minor crops in the present listing of crop categories and definitions established by the FDA for pesticide tolerance purposes.

December 4, 1964