A REPORT ON EXPERIMENTS WITH COLCHICINE BY LAY SCIENTISTS, 1941

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The Cooperative Research Project was started in April 1940 at the University of Oklahoma under the direction of Professor O. J. Eigsti. Through this project colchicine and directions for applying colchicine were sent to laymen scientists who wished to experiment with this drug, and who were willing to send in a complete report of the results of their work. Each report included a description of the treated plants, and, if possible, seeds and pictures of treated and control plants. An article in Science Digest (1940) and a number of others which followed brought many inquiries. The project was limited to one hundred experimenters, who were soon selected.

The success of these preliminary experiments was encouraging and suggested possibilities in a continuation of this work. Therefore, in the spring of 1941 the second cooperative project was started. This time the project was planned to include more experimenters. A grant-in-aid was received from the Carnegie Corporation of New York to supplement the financial aid being given by the University of Oklahoma for the continuation of this project.

An exhibit presenting the method, scope, and results of this project was displayed at the A. A. S. meeting in Dallas, Texas, December 1941 (Leisen 1941).

The following summary of the results of the 1941 project was prepared early in December 1941. We have received reports from some experimenters since that date, but these reports have not been included in this summary. From others we have had letters explaining that the experiments are being carried on through the winter, and that reports will be submitted when the experiments are complete.

There was a total of 320 active participants representing 38 states, several provinces of Canada, South Africa, and the Philippines. Among this group there were 44 different occupations represented (97 of the 320 did not report occupation). Each experimenter chose the kind of plant with which he wished to carry on his experiment. There were 62 different kinds of plants chosen. In addition to those who enrolled in the project, we corresponded with 1100 persons in 47 states, five provinces of Canada, Mexico, South Africa, British East Africa, Southwest Africa, Philippines, Alaska, Hawaii, Venezuela, Puerto Rico, Sumatra, and Australia.

The results of the past two years seem to show that the use of colchicine by laymen is, in most cases, not of great economic value, but that it is a valuable method of education. Colchicine experiments form a good study project for garden clubs, nature study classes, and various science and nature clubs. By participating in this cooperative project, gardeners are learning the importance of scientific method, and the biological facts underlying the origin of new varieties of plants. The work stimulates the latent inquisitiveness of amateur gardeners and their desire to improve the plants they raise. Practically every participant has definitely expressed a de-

| | | No. of Experiments | Percent of total number | Percent of Percent of total completed number experiments |
|--|---|-----------------------|-------------------------|--|
| EXPERIMENTS | SUCCESSFUL noticeable change produced report turned in seed samples turned in | 26 | 7.1% | 19.4% |
| COMPLETED | PARTIALLY SUCCESSFUL changes produced | 41 | 11.1 | 30.6 |
| | UNSUCCESSFUL no changes produced | 67 | 18.1 | 50.0 |
| EXPERIMENTS REPORTED BUT IN seeds not mature at time of report | EXPERIMENTS REPORTED BUT INCOMPLETE seeds not mature at time of report | 24 | 6.5 | |
| EXPERIMENT NOT PERFORMED | PERFORMED | 23 | 6.2 | |
| NO REPORT RECEIVED at time of preparation of this summary | ED at time of ummary | 188 | 51.0 | |
| TOTAL NUMBER | | 369 | | |

sire to be included in the project next year, and has said that with the experience of one season's work behind him he hopes to achieve even more another year.

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LITERATURE CITED

Eigsti, O. J. 1941. Botanical research survey, University of Okla. Bull. 841.
Anon. 1940. Oklahoma botanist offers chemical for experiments. Sci. Dig. 8, Aug.: 48.

Leisen. 1941. Preview of the annual exhibition, University of Oklahoma Department of Botany. Science 94: Advertisements, Dec. 19: 12.