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TEXTILES

"Electrocuted" Cotton More Absorbent

ELECTRICITY is being used in the laboratory to make cotton seed and fiber more water absorbent and cotton yarn stronger.

Exactly how the weak electric current acts on plant material has not yet been determined, U. S. Department of Agriculture scientists reported, but experiments are under way to compare the strength of irradiated yarn with that of commercial yarn chemically treated for this purpose.

Seed and fiber are placed in a large glass tube in which there is a partial vacuum and a current of between ten and 50 milliamperes is passed through the tube. As the current flows through the tube, the gases in the tube glow and act on the seed and fiber.

Examination of treated cotton fiber shows its normal wax coating has been pierced in many places; fiber surface is also roughened. This roughened surface influences the yarn's breaking strength, USDA scientists pointed out. There was more than a 20% improvement in strength over untreated yarn.

The increased absorption of water by the electricity-treated cotton seed may have some relation to seed germination, survival, growth and yield of cotton. A three-year test is now in progress in three states to evaluate the electrical treatment.

The glow-discharge treatment, as the process is also called, holds promise for killing weed seeds mixed with crop seeds since seeds differ in their radiation tolerance. Experiments with the apparatus showed corn seeds exposed to electrical radiation germinated somewhat faster and more uniformly than unexposed seed. Field trials of treated seed did not show significantly increased yields, however. Purple top turnip weed seed was fully inhibited.

The experimental treatment, developed by Russell B. Stone Jr., is being investigated by the USDA in cooperation with the Tennessee Agricultural Experiment Station.

Science News Letter, December 12, 1959

GENERAL SCIENCE

AAAS Science Meetings In Chicago Dec. 26-31

CHICAGO will be the scene of the annual science meetings of the American Association for the Advancement of Science between Christmas and New Year's Day.

Science educators will have sessions from Sunday, Dec. 27, through Wednesday, Dec. 30, at the Sherman Hotel.

SCIENCE SERVICE, three of whose trustees are nominated by the AAAS, will participate in the meetings, by reporting for newspapers served and the SCIENCE NEWS LETTER as it has since 1921 the several thousands of scientific reports presented. Its science youth program staff will also be in attendance at the meetings for elementary, junior and senior high school teachers and college teachers in science education.

Science Clubs of America, an activity of

SCIENCE SERVICE, is urging as many of the 25,000 Science Clubs of America sponsors as possible to attend the science sessions. It joins with the following science teaching societies in this invitation: American Nature Study Society, National Science Teachers Association, National Association of Biology Teachers, National Association for Research in Science Teaching, and the Central Association of Science and Mathematics Teachers.

SCIENCE SERVICE also joins with AAAS Section X7 in sponsoring an address on "Writing and Science" by Watson Davis, director of SCIENCE SERVICE, on Wednesday afternoon, Dec. 30, at 2:00 p.m. at the Hotel Morrison.

Science News Letter, December 12, 1959

SCIENCE NEWS LETTER

VOL. 76 DECEMBER, 12, 1959 NO. 24

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., North 7-2255. Cable Address: SCIENSERV.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7 1/2 cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

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Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member Audit Bureau of Circulation.



SCIENCE SERVICE

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