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UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

PROJECT NO. 1686

REPORTED BY A. B. Carlton

Davis, Soils and P. N.
Campus and Division or Department

DATE January 19, 1960

Annual Summary Statement of Progress for year ending Dec. 31, 1959
This Summary is in addition to, not in place of, more complete reports of progress prepared periodically and at least once a year with a deadline of Feb. 1.

Title: Peat Land Conservation and Peat Dust Abatement

Personnel: Alan B. Carlton and cooperating research and extension staff

Principal results of year: Dust storms were again monitored and compared with distribution of storms in the four previous years. Despite an exceptionally dry winter and spring and the dustiest year since this project began, distribution of dust storms throughout the year was remarkably similar to previous years. As in previous years, a very sharp rise in dust storm activity occurred in mid May. This supports previous observations of the importance of wind erosion control methods geared to the critical period of mid May to the end of June.

Wind velocity-dust storm correlation studies indicate that a reduction of all wind velocities by 10% or 15% would materially reduce the number and intensity of dust storms. A reduction of all wind velocities by 25% would eliminate all but a few relatively minor dust storms.

Inter-row planting was accomplished by three cooperators on a total of 427 acres. Only 288 acres could be considered to have any degree of success. These trials emphasized the importance of interplanting not later than mid April. In barley interplantings 13"-16" high, considered a bare minimum, dust collected from inter-rowed fields was 40% to 79% of that from control fields.

A variety-time of planting trial to test the suitability of new varieties and techniques was carried out. The principle of mixing certain grains for inter-row planting purposes stood out as having considerable merit.

Bamboo windbreak experimentation indicated that spread into adjacent cropland could be effectively controlled by timely use of disk or chisel.

Clear plastic film mulch increased soil temperatures at 12" depth as much as 7°F. in three weeks during late winter.

Publications: INTER-ROW PLANTING - A ONE SHEET ANSWER by Alan B. Carlton and John P. Underhill.

Field Windbreaks for Row Crops. Herbert B. Schultz and Alan B. Carlton. California Agriculture Vol. 13, No. 11, 1959.

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