

1970 - 1971

PROGRESS REPORT - WATER MANAGEMENT

Programs in water management during 1970-71 have been quite varied as attempts have been made to develop a more complete water management program for North Carolina growers.

Land forming demonstrations were conducted in Martin, Northampton, Pitt, Duplin, Craven and Jones Counties, bringing to a conclusion a very successful program. From September 1968 through October 1970 32 demonstrations were conducted in 29 Coastal Plains counties. These demonstrations were a cooperative effort involving the Agricultural Extension Service, the Soil Conservation Service, the Biological and Agricultural Engineering and Soil Science Departments at North Carolina State University, the Agricultural Research Service, and Reynolds Research & Manufacturing Company of McAllen, Texas, who furnished pans and a land plane for the demonstrations.

A one-day in-service training meeting on water management for extension agents in portions of the East Central, Southeastern and Southwestern Districts and personnel of the Soil Conservation Service was held at Fayetteville in November 1970. Attendance was approximately 60 persons.

Assistance on land forming has been given to individual farmers in Halifax, Northampton, Bertie, Jones and Johnston Counties. Halifax County was assisted in a State Fair exhibit on water management.

Studies on subsurface irrigation and water table control were continued in Washington and Beaufort Counties. Studies were conducted in Bladen County to determine the feasibility of surface irrigation for blueberries. These studies will continue into 1971-72.

A study entitled "Projected Irrigation Water Requirements for Northeast North Carolina above Cape Lookout for the Year 2020" for the Wilmington District United States Army Corps of Engineers was completed in February 1971 by the water management specialist.

An extension agricultural engineer is continuing as a cooperater with the Horticultural Science Department on a grape irrigation cultural practices study, a horticultural crops irrigation-environmental control study, an apple irrigation-environmental control study, and a crop response to irrigation study involving tomatoes, cucumbers, pepper, okra, and southern peas.

Four drip-irrigation demonstrations on trellised tomatoes were installed in Macon, Haywood, Madison and Yancey Counties. These are cooperative demonstrations with TVA.

A study entitled "Agricultural Water Needs in North Carolina, Phase I" funded by the Office of Water Resources Research and the North Carolina Water Resources Research Institute has been initiated. The water management specialist is one of the co-investigators.

A statewide North Carolina Water Management Field Days is being planned for September 1 and 2, 1971, at the Horticultural Crops Research Station at Clinton. The water management specialist is serving as chairman of the Field Days.

The North Carolina Irrigation Society, to which the water management specialist acts as technical advisor and secretary has been quite active. It is one of the major co-sponsors of the North Carolina Water Management Field Days. The Seventh Annual Conference was held in December 1970 in Greensboro with approximately 70 in attendance. The program theme was labor-saving irrigation and multiple uses of irrigation.

Four magazine articles, two television programs, and one radio program have been prepared during FY 1970-71.

Committees Served On

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| (1) ASAE - Soil and Water Division Steering Committee | SW-02 |
| (2) ASAE - Paper Award Committee | SW-06 |
| (3) ASAE - Irrigation Group (Junior Vice-Chairman) | SW-24 |
| (4) ASAE - Water Treatment and Use Committee | SW-214 |
| (5) ASAE - Sprinkler Irrigation Committee | SW-241 |
| (6) North Carolina Agricultural Extension Service Long Range Planning Committee on Systems of Farming and Marketing | |

Meetings Attended and Papers Presented

- (1) Attended workshop on Drainage of the Coastal Plains conducted by SWC-ARS in Florence, S. C., during early April.
- (2) On program of the Research Committee of North Carolina Soil Conservation Districts meeting held in Raleigh during December. Topic was water supplies in the Coastal Plain, North Carolina
- (3) Presented paper at Seventh Annual Conference of North Carolina Irrigation Society entitled "Solid Set and Permanent Irrigation Systems for Agriculture"

OTHER

- (1) Conducted well driller-pump installer national test prepared by the National Water Well Association. Tests conducted in Raleigh during September and in Newton during February.