

EXTENSION BIOLOGICAL & AGRICULTURAL ENGINEERING

Report for January 1, 1969 - June 30, 1969

The use of bulk fertilizer and lime is increasing in North Carolina, and most of this bulk material is applied by custom applicators. The use of nitrogen fertilizer showed severe streaking through the fields due to uneven application. The biological and agricultural engineering extension specialist in cooperation with the Soil Science Department and FCX (who own approximately 125 custom spreader trucks) started a program to test the uniformity of fertilizer application by this method. As a result, two manufacturers are re-designing this equipment to improve it, and many applicators are becoming aware of the necessity of proper driving and/or operation to achieve the best possible job.

Minimum tillage production concepts for cotton have been demonstrated in four counties.

Training and certification programs for 14-15 year old youth under the Hazardous Occupations in Agriculture Order of the U. S. Labor Department have been offered in all counties of the state. Over 1600 youths enrolled in this program of whom 1050 completed the training and 925 were certified.

Efforts of one specialist during the period January 1, 1969, through June 30, 1969, were directed primarily to State Purpose 033, Task Nos. 046 and 047. Educational efforts included TV programs, farmer meetings, and conferences with manufacturers. Research and development efforts included conferences with machinery experts and the production of tobacco for mechanical harvesting tests.

Major emphasis was placed by one specialist on irrigation during this period. From the state level three magazine articles, one news article, four television shows, and four mimeographed papers were prepared. Also irrigation was a topic at three in-service training schools for extension agents, the Modern Farming Short Course, the State Peach Growers Association annual meeting, the North Carolina Soil Science annual meeting, and the North Carolina Section of the American Society of Agricultural

Engineers' spring meeting. The counties' staffs were active in promotion of irrigation through demonstrations, news articles, county meetings, and radio programs.

In addition to irrigation, the Extension Service in cooperation with the Soil Conservation Service placed emphasis on water management through the medium of land forming demonstrations. Eight demonstrations were conducted in eight counties. These demonstrations were attended by more than 400 people. In addition, a mimeographed paper, news articles, radio programs, and a magazine article on land forming were prepared.

Numerous activities in the farm structures and environmental field were carried out with major emphasis on the swine industry. Three workshops for agri-business personnel and two for county extension chairmen were conducted, which provided added emphasis on good structural and environmental planning and design.

Because of intensification of production systems, many producers are requesting assistance in planning structures for complete environmental control; therefore this has been an area receiving major attention.

Promotion of better housing has been continued through training and assisting agents in county housing work, through county housing advisory councils, area development associations, and TV programs. Eleven extension agents and six vocational agriculture teachers were taught in a summer school housing course giving three hours of credit. Other activities in housing included three county housing fairs, one 3-day housing fair staged by the Coastal Plains Area Development Association. In addition, plans have been made and adopted by the Northwest Area Development Association to build this year a demonstration house for a low income family in each of its eleven counties.