Annual Report February 1, 1950-January 31, 1951

Southern Regional Project S9

New Plants and Preservation of Germplasm

Cooperating Agencies

STATE AGRICULTURAL EXPERIMENT STATIONS	PROJECT LEADER
Supporting Projects Approved	
Georgia	O. E. Sell
Texas	R. G. Reeves
Oklahoma	L. L. Ligon
South Carolina	J. A. Martin
Project Submitted-Approval Pending	
Arkansas	W. J. Wiser
Other Participants	
Louisiana	J. C. Miller
Mississippi	W. W. Bennett
Alabama	C. F. Simmons
North Carolina	F. Cochran
Virginia	T. J. Smith
Florida	F. H. Hull
Kentucky	L. M. Josephson
Tennessee	J. K. Underwood
Puerto Rico	J. Velez Fortuno
U. S. DEPARTMENT OF AGRICULTURE	
Div. P.E.I.	
B.P.I.S. & A.E.	C. O. Erlanson
Primary Station	
Georgia Experiment Station Coordinator	Edwin James
Regional Adviser	
R. D. Lewis, Texas	

NATURE OF WORK AND PRINCIPAL RESULTS OF THE YEAR

Development of the Primary Station

During the first full year of operation, marked improvement has been made in facilities for the Primary Station at Experiment, Georgia. A greenhouse section, 21.5' x 43', has been erected and equipped, attached to a building, 26.5' x 84.5', of which the larger portion, 26.5' x 61.75', has been developed and equipped for the activities of the Primary Station.

Two fields of approximately 12 acres have been put under tillage for the work of introduction, evaluation, and seed increase. The full acreage to date has been located so that irrigation can be practiced.

Two small dams have been erected and two old dams repaired so that a plentiful supply of water is assured during dry periods.

A total of 938 feet of irrigation pipe with appropriate fittings and sprinklers have been obtained. Two portable pumps have been acquired which permit extending irrigation facilities with a minimum of labor.

Additional seed storage facilities have been incorporated into the new building. Provision has been made to maintain a relative humidity of 55 to 60 degrees which should serve to preserve viability for a number of years.

Activities of the Primary Station

During the period February 1, 1950 to January 30, 1951, 2220 accessions have been received at the Primary Station. Shipment to cooperating states and agencies have been made on 2815 accessions as follows:

State	Number Sent
Alabama	95
Arkansas	253
Florida	159
Georgia	91
Kentucky	6
Louisiana	47
Mississippi	4
North Carolina	91
Oklahoma	153
Puerto Rico	50
South Carolina	463
Tennessee	125

State (cont'd.)	Number Sent
Texas	1129
Virginia	41
Inter-Regional	108
Total	2815

Approximately eight acres were used in the nursery of the Primary Station during the past year in the evaluation or partial evaluation of 1333 accessions. About 1200 of these are also being tested by cooperating individuals in the state experiment stations of the region. Their observations combined with those of the Primary Station will be included in seed lists now in preparation.

Initial seed increases have been obtained on 540 accessions. The balance of the accessions on hand are being planted for increase or additional increase.

Regional Activities

Most of the states in the region are actively cooperating in the evaluation of plant introductions as shown by the accessions received by each.

The aim at the initiation of Project S9 was to have each state formally cooperate through the organization of state projects in support of Project S9. Such projects have not yet been developed in all states but several are in the process of initiation. Since the last report, a project from Oklahoma, entitled "Introduction and Evaluation of New Plants for Oklahoma", has been approved. A project, "Investigations with New Crops", has been submitted for approval by the Arkansas Station. Projects from Louisiana, Florida, Kentucky, Tennessee, Virginia, and South Carolina are now in the process of development and are expected in the near future.

Further activities leading toward closer cooperation between the Primary Station and the region is the arrangement of contractual agreements between several of the states and the Primary Station for the testing and increasing of certain introductions adapted to their particular areas. Under agreement, the Texas Station has taken the responsibility for sorghums; Oklahoma for sunflowers, safflower, and castor beans plus others which might fit into their State project. South Carolina will arrange for the increase and evaluation of okra, sesame, and peppers. Arrangements for other crops will be made as soon as feasible.

Application of Results and Benefits Realized

The scope of the project is such that little in the way of results can be realized in one year. Certain valuable breeding lines have been obtained, however, which may add valuable genes for the improvement or development of commercial varieties. Four lettuce, two cucumber, one melon, and one onion introductions have been found to be highly resistant to mildew. One snap bean was found to be resistant to an unidentified virus disease, and the Louisiana Experiment Station has selected one bean introduction as a variety, identified as Louisiana No. 1. Indehiscence, a desirable characteristic of sesame, has been observed in four introductions of sesame. If the indehiscent character can be bred into otherwise desirable sesame, a new cash crop that can be machine harvested will be available to help increase farm incomes in the South. Two sorghums, one a grain type and the other a broom corn have been selected as promising parents at the Oklahoma Experiment Station.

Work Planned for Next Year

During the coming year efforts will be directed toward accomplishing the following:

1. Further development of greenhouse facilities.
2. Improvement of land areas suitable for nursery work.
3. Additional screening on present and new introductions.
4. Additional contractual arrangements for seed increases in adapted areas.
5. Development of supporting projects in states which are now cooperating informally.

Publications Issued or Manuscripts Prepared During the Year

The nature of Project S9 is such that it does not conform to the requirements necessary for the preparation of scientific papers. Seed increase lists are being prepared for distribution in the southern region, and one on vetches has already been distributed.

Approved:

C. E. Bell
Chairman, Technical Committee

C. D. Smith
Regional Administrative Adviser

Edwin Ramser
Regional Coordinator