ent in experimental hybrids, has shown good combining ability for sucrose content as well as for disease resistance.

These lines are intended for use as parents of hybrids to be developed for genes for combined resistance to leaf spot and curly top.

Registration of Parental Lines

REGISTRATION OF ND100 AND ND300
PARENTAL LINES OF MAIZE

(H. Z. Cross)

ND100 and ND300 are yellow dent (Zea mays L.) inbred lines developed at the North Dakota State University Agriculture Experiment Station. The lines were evaluated for yield and agronomic performance and in hybrid combinations. ND100 was released for potential use to produce hybrids for areas with extremely short growing seasons and for use in breeding programs as a source of early maturity. ND300 was released for potential use in producing high yielding hybrids adapted to eastern North Dakota.

ND100 (Reg. No. PL 48) was selected from (W129 × W128), a cross of two early Wisconsin experimental inbreds. This line was developed by self-pollination and selection for early silking and agronomic type for six generations. At Fargo, N. Dak., ND100 silks about 15 days earlier than ND408 and 10 days earlier than ND300. ND100 typically produces a medium short plant with ears borne on the lower third of the stalk. Plants have long, wide leaves and relatively small tassels. Ears are borne singly on medium length shanks. Ears are of medium length with 12 to 14 rows of rather shallow kernels. In 1977 North Central Corn Breeding Research Committee (NCR-2) tests, ND100 was rated resistant to wheat streak mosaic virus (WSMV), tolerant to bacterial leaf blight (Erwinia stewartii (E. F. Smith) Dye); moderately susceptible to anthracnose stalk rot (Colletotrichum graminicola (Ces.) G. W. Wils.), diplodia stalk rot (Diplodia maydis (Berk.) Sacc.), and maize dwarf mosaic virus (MDMV); and susceptible to northern leaf blight (Helminthosporium turcicum Pass.), anthracnose leaf blight (Colletotrichum graminicola (Ces.) G. W. Wils.), maize chlorotic dwarf virus (MCDV) and European corn borer (Ostrinia nubilalis Hbn.). In diallel tests in eastern North Dakota, ND100 has demonstrated good general combining ability for test weight, low ear moisture, and low root lodging. General combining ability for yield was good for an inbred with a maturity classification of AES 100.

ND300 (Reg. No. PL 49) is a selection from (W739 × W845), a hybrid of early maturing Wisconsin inbreds. ND300 resulted from six generations of self-pollination and selection for agronomic type. ND300 produces medium tall plants with relatively low ear placement, above average tassel size, and average leaf length and width. Plants are semi-prolific with long, slender ears borne on medium long shanks. Ears normally have 14 to 19 rows of rather shallow kernels. In diallel tests in eastern North Dakota, ND300 showed resistance to maize streak virus (MVM), low susceptibility to maize vein stunt virus (MVT), and resistance to anthracnose (Cercospora zeae-maydis), with moderate resistance to northern leaf blight (Helminthosporium turcicum Pass.), anthracnose leaf blight (Colletotrichum graminicola (Ces.) G. W. Wils.), maize chlorotic dwarf virus (MCDV) and European corn borer (Ostrinia nubilalis Hbn.). In diallel tests in eastern North Dakota, ND300 has demonstrated generally good combining ability for test weight, low ear moisture, and low root lodging. General combining ability for yield was good for an inbred with a maturity classification of AES 300.

REGISTRATION OF JENKINS JUMBO
PEANUT

(Ray O. Hammons and A. J. Norden)

'Jenkins Jumbo' (Arachis hypogaea L. ssp. hypogaea) peanut was named and released in February 1978 by the Georgia and the Florida Agric. Exp. Stns., and the FR-SEA-USDA.

Jenkins Jumbo traces to seed obtained from Jenkins, Sumner, Georgia. Plant mainstems produce only lateral branches which produce an alternation of vegetative and reproductive branches, usually in pairs. Fully developed leaves are generally two-segmented, average 43 x 19 mm, and have a thick pericarp (seed/hull ratio = 1.4 or more). Jenkins Jumbo has a characteristic small pod, with a mean pod length of 1.4 in. (3.6 cm) and a mean pod diameter of 0.5 in. (1.3 cm). In 1977 and 1978, Jenkins Jumbo had quality control characteristics similar to those of AES 100.

Biochemical attributes of Jenkins Jumbo seed are unusual. Samples from several years' field trials at Tifton, GA, produced an oil content of 49.8% and an oleic acid content of 69%. The oil consists of 49.8% oleic, 14.2% linoleic, and 8.3% palmitic acids. The mean autoxidation induction period for the freshly expressed oil, 18.6 days at 60°C, is longer than that for most other peanut genotypes.

Widely used as a parental line in U.S. peanut breeding investigations, Jenkins Jumbo occurs in the pedigrees of cultivars released in the years indicated: 'Shulamith' (1968), 'NC 17' (1969), 'Arizona 14' (1973), 'GK 19' (1976), 'Tifrun' (1977), and 'Early Bunch' (1977). Jenkins Jumbo has been cultivated primarily as a parental line for breeding for oil content and quality for boiling or as a novelty item. However, the seed is extremely unattractive for commercial production. Small quantities of breeder seed of Jenkins Jumbo are available for the freshly expressed oil, 18.6 days at 60°C, is longer than that for most other peanut genotypes.