Table 1. Fatty acid composition of A6 and its parent FA 8077.

<table>
<thead>
<tr>
<th>Fatty acid</th>
<th>Line</th>
<th>Palmitic</th>
<th>Stearic</th>
<th>Oleic</th>
<th>Linoleic</th>
<th>Linolenic</th>
<th>Arachidic</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6</td>
<td>8.0</td>
<td>28.1</td>
<td>19.8</td>
<td>35.5</td>
<td>6.6</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>FA 8077</td>
<td>8.4</td>
<td>4.4</td>
<td>42.8</td>
<td>36.7</td>
<td>7.6</td>
<td>&lt;1.0</td>
<td></td>
</tr>
</tbody>
</table>

Two random pods were harvested from each M1 plant, and the seeds were bulked. The M2 population was grown in Puerto Rico, and plants were harvested individually. Each M2 plant was progeny tested at Ames in two replications. Twelve seeds were planted in hills spaced 1 x 1 m. A 20-seed sample from each plot was analyzed for fatty acid composition at Ames by Lynne A. Miller with gas-liquid chromatography.

The fatty acid composition of A6 and its parent are shown in Table 1. The percentage of stearic acid in A6 was substantially higher than in FA 8077. No genotype of soybean has previously been identified with such a high stearic acid percentage. High stearic acid in A6 was associated with a marked reduction in oleic acid, but palmitic, linoleic, and linolenic acid did not seem to be affected. A6 had about 2.0% of arachidic acid (20:0), which is higher than that usually found in soybean oil.

A6 and FA 8077 were planted in Puerto Rico during January, 1982. Individual plants of A6 were harvested and analyzed for fatty acid composition. High stearic acid was observed in all of the plants of A6.

A6 is of Group O maturity, averaging about 6 days earlier than 'Weber,' a cultivar of Group I maturity. It has purple flowers, brown pubescence, brown pods at maturity, and shiny yellow seeds with black hila. The visual appearance of A6 for agronomic characters is inferior to soybean cultivars grown commercially.

Seed of A6 will be distributed by the Committee for Agricultural Development, Iowa State Univ., Ames, IA 50011. Seed will be maintained by the Iowa Agriculture and Home Economics Experiment Station.

REGISTRATION OF OK 78828
TRITICALE GERMPLASM
(Reg. No. GP 5)


OK 78828 triticale (X Triticosecale Wittmack) was released Jan. 1982 jointly by the Oklahoma and Arkansas Experiment Stations as germplasm material for use in grain breeding programs. The line resulted from 'Wichita' hard red winter wheat (Triticum aestivum) X 'Bonel' rye (Secale cereale) made in the greenhouse, Okla. during the winter of 1970. Wichita was grown on a small acreage in western Oklahoma. It was developed by the Noble Foundation in Oklahoma and the Oklahoma Agricultural Experiment Station.

The Wichita/Bonel F1 was planted in the field in 1971. No attempt was made to double the chromosome plants were somewhat wheat-like but exhibited a high level of sterility. The F1 plants were likely other triticale lines in the nursery and were harvested.

The F2 through F7 generations were grown at Stillwater, Okla., using a modified pedigree method. Individual spike or plant selections were made in the F2, F3, and F5 generations. Selections only among progeny rows in the F4 and F6 generations was grown in an observation nursery and the line with yield in this nursery was assigned selection number.

The F8 was grown in a preliminary yield nursery in 1979. ‘Scout 66’ wheat and OK 78828 yielded 4,738 and 4,533 kg/ha, respectively. OK 78828 had a test weight of 77.2 kg/hl, a heading date of 4 May and a plant height of 102 cm; Scout had a test weight of 77.2 kg/hl, a heading date of 4 May and a plant height of 104 cm. Seeds of OK 78828 were distributed to cooperators in the Southern U.S. on a limited basis; it was included in several tests of the Uniform Winter Triticale Tests conducted in 1979-1980. OK 78828 was grown in Oklahoma Advanced Performance Nursery in 1979-1980. Wheat has been widely grown in Oklahoma and has been used as a “standard” winter triticale entry in Uniform Triticale Tests. Grain yield of OK 78828 exceeded Scout by 7% and Scout by 9%.

In Arkansas, OK 78828 is classed as a facultative habit, erect, mid-tall line that has produced more

REGISTRATION OF F1003 SUGARBEET GERMPLASM
FOR LOW INTERNAL CO2
(Reg. No. GP 85)

D. F. Cole

A SUGARBEET (Beta vulgaris L.) breeding line (F1003) was developed by ARS-USDA in cooperation with the Agric. Experiment Station, North Dakota State Univ., Fargo, N.D. Breeder seed will be maintained by ARS-USDA and will be distributed in 5 g quantities to sugarbeet breeders upon written request to ARS-USDA, Sugarbeet Research, Waldron Hall, North Dakota State Univ., Fargo, ND 58105.

Initially, a single root from each of five introductions from the USSR, L’govsk 078, Mezhhotnensk 104, Ramonsk 036, Uladovsk 20, and VNIS-FS05, was selected for low internal CO2 after 80 days storage at 5°C. The roots were induced to flower and the pollen source. The second cycle was produced by interpollinating 20, and VNIS-FS05, was selected for low internal CO2 after 80 days storage at 5°C. The roots were induced to flower and the pollen source. The second cycle was produced by interpollinating.