REGISTRATION OF TAM2567 AND TAM2568 GREENBUG RESISTANT SORGHUM GERMPLASM LINES

(Reg. Nos. GP76 and 77)

J.W. Johnson, G.L. Teetes, and D.T. Rosenow

Two sorghum [Sorghum bicolor (L.) Moench] germplasm lines, TAM2567 and TAM2568, were released in 1974 by the Texas Agricultural Experiment Station. TAM2567 and TAM2568 are agronomically desirable grain types that are resistant to biotype C greenbug, Schizaphis graminum (Rondani). The lines were selected in the F1 generation following a second backcross to Tx2536 (Table 1). TAM2567 and TAM2568 were released before extensive agronomic evaluation to expedite developing greenbug resistant sorghum hybrids. They are susceptible to downy mildew caused by Peronosclerospora sorghi (Weston and Uppal) Shaw, head smut caused by Sphacelotheca reiliana (Kuhn) Clinton and, maize dwarf mosaic virus. They are similar to Tx2536 in maturity, height, head type, and seed size. Both lines restore fertility to hybrids in A1 cytoplasm and are similar in greenbug resistance to SA7536-1, the nonrecurrent parent. The seed of TAM2567 and TAM2568 will be distributed by the Texas Agric. Exp. Stn., Route 3, Lubbock, TX 79401.

Table 1. Pedigrees of TAM2567 and TAM2568.

<table>
<thead>
<tr>
<th>Reg. no.</th>
<th>Line</th>
<th>Pedigree</th>
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<tbody>
<tr>
<td>GP 76</td>
<td>TAM2567</td>
<td>[Tx2536, × (4dw Tx7000 × SA7536-1)]-6-3-6-bk</td>
</tr>
<tr>
<td>GP 77</td>
<td>TAM2568</td>
<td>[Tx2536, × (4dw Tx7000 × SA7536-1)]-6-3-7-bk</td>
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</tbody>
</table>

source of resistance for SA7536-1 is Sorghum virgatum (Hack.) Stapf. (TS1636).

Seed will be maintained and distributed by the Texas Agric. Exp. Stn., Route 3, Lubbock, TX 79401.

REGISTRATION OF ISRI SORGHUM GERMPLASM LINE

(Reg. No. GP 78)

J.W. Johnson, R.E. Schaffert, and G. L. Teetes

The midge [Contarinia sorghicola (Coquillet)] resistant sorghum [Sorghum bicolor (L.) Moench] line, International Sorghum Germplasm Line 1, was developed cooperatively, through the Sorghum Conversion Program, by personnel of the Texas Agricultural Experiment Station and the USDA-ARS from the cross SA3105 × IS12666. Midge resistance was derived from IS12666. TAM2568 was released in 1974 as a source of resistance to the midge, Contarinia sorghicola. TAM2568 is a restorer in A1 cytoplasm, resistant to downy mildew caused by Peronosclerospora sorghi (Weston and Uppal) Shaw and susceptible to leaf burn by most commonly used insecticides.

In tests at Corpus Christi, Beeville, and Lubbock, TX in 1973 and 1974, TAM2566 averaged 10% seed loss from midge feeding compared to 34% for SGIRL-MR-1 and 75% to Tx7000. TAM2568 has been identified as midge resistant in Argentina, Australia, Brazil, India, Guatemala, Mexico, and Uruguay.

Seed will be maintained and distributed by the Texas Agric. Exp. Stn., Route 3, Lubbock, TX 79401.

TARGET REGISTRATION OF GERMPLASMS

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1 and 2, B. maydis, and C. graminicola leaf blight. The inbred is intermediate in resistance to E. steariae. Under certain conditions, the incidence of kernel rot incited by Fusarium moniliforme Sheld. was high in Oh514, but it was less severe in H110.

At West Lafayette, H110 is morphologically similar to Oh514, but it matures about 4 days earlier and is 10 cm taller. Oh514 is a full season inbred. The leaves of H110 are more upright and the ears are slightly larger than those of Oh514. The plant produces abundant pollen. Maturity classification is AES 600.

Inbred H111 (Reg. No. GP122) is a yellow-kernel dent maize developed from the cross of B37 × PI 209135 selection Mb.2. The inbred was developed by pedigree selection after a backcross to B37 in the second generation to add stalk quality and root strength. It was self pollinated for eight generations with improved resistance to diseases, H110 and H111 are expected to be desirable breeding sources for resistance to MDMV, MCDV, leaf blights and stalk rots. Limited yield trials indicate that both inbreds have satisfactory combining ability.

H111 is morphologically similar to B37, but matures about 4 days earlier and the plant is about 15 cm taller than B37. The leaves have 12 to 14 rows of kernels of medium depth. TAM2568 has been identified as midge resistant in Argentina, Australia, Brazil, India, Guatemala, Mexico, and Uruguay.

Seed will be maintained and distributed by the Texas Agric. Exp. Stn., Route 3, Lubbock, TX 79401.