REGISTRATION OF GERMLASM

IOWA STIFF STALK SYNTHETIC No. 2 (REG. No. GP 10)—Derived from a cross of two strains of Iowa Stiff Stalk Synthetic, each developed after several cycles of recurrent selection for yield. The one strain resulted after four cycles in a reciprocal recurrent selection program, and the second strain after six cycles in a recurrent selection program for general combining ability. This synthetic was developed for studies of the effects of recurrent selection on mean yields and genetic variability.

IOWA SUPER STIFF STALK SYNTHETIC (REG. No. GP 11)—Developed by recombining 10 inbred lines selected from the original Iowa Stiff Stalk Synthetic. These inbred lines are: B10, B14, B37, B39, B40, B43, B44, R101, (B11 × B19)-1-8, and SS312-3. They have among them germplasm for high general combining ability and good root and stalk strength.

IOWA TWO-EAR SYNTHETIC No. 1 (REG. No. GP 12)—A 10-line synthetic developed to provide a heterogeneous population that would be a source of two-car lines with good combining ability. All lines used in this synthetic had average ear length. The lines are: B50, B55, B56, B217 (B217—waxy endosperm), C103, N22A, N25, Oh29, W-17R-B, (B15 × B18)-16, (Lanc. Comp.)-34, and (L317 × 187-2)-1-9.

IOWA SYNTHETIC AA (REG. No. GP 14)—This synthetic includes a large number of lines selected to represent a sampling of the best material available from Corn Belt breeding programs. It was developed to provide a broad genetic base of improved germplasm to be used in quantitative genetic studies. The lines are: A223, A227, A264, A265, A295, B6, B7, B9A, B42, B49, B51, B54, B55, B56, B57, B60, B67, C103, C113A, C1187-2, H19, H49, H51, K148, K150, M50, M60, M11, M4582, M59-1, Ms109, Ms116, N6, N9, N15, N22A, N25, N29, N30, N38, Oh4C, Oh41, Oh43, Oh45, Pa70, Pa83, R61, R71, R109B, R134, R151, R154, R181, W64A, L317, Os420, and W9F.

IOWA SYNTHETIC BB (REG. No. GP 15)—This synthetic also includes a large number of lines selected to represent a sampling of the best lines available from Corn Belt breeding programs. It was developed to provide a broad genetic base of improved germplasm to be used in quantitative genetic studies. The lines are: A223, A227, A264, A265, A295, B6, B7, B9A, B42, B49, B51, B54, B55, B56, B57, B60, B67, C103, C113A, C1187-2, H19, H49, H51, K148, K150, M50, M60, M11, M4582, M59-1, Ms109, Ms116, N6, N9, N15, N22A, N25, N29, N30, N38, Oh4C, Oh41, Oh43, Oh45, Pa70, Pa83, R61, R71, R109B, R134, R151, R154, R181, W64A, L317, Os420, and W9F.

IOWA CORN BORER SYNTHETIC No. 3 (REG. No. GP 16)—A 16-line synthetic developed to provide a source of germplasm for resistance to first brood of the European corn borer, Ostrinia nubilalis (Hubner). All parent lines have intermediate-to-excellent resistance to first brood of O. nubilalis. The lines are: B49, B53, B55, C131A, M51, W22, (B33 × Oh43)-67-3, (Pa. Int. Syn.)-22-4-1, (Synthetic A)-97-1-2, (Midland)-1-2, (M14 × A206) × Oh4C)-33-1-2, P-33-2-2 (selection from multiple cross), (WF9 × 458-1) sel., (Pa. Sel.)-755-228, HD225 (selection from multiple cross), and (Minn. Syn. No. 1)-24.

IOWA CORN BORER SYNTHETIC No. 4 (REG. No. GP 17)—This synthetic was developed after three cycles of recurrent selection for resistance to first brood of O. nubilalis. They have among them germplasm to be used in quantitative genetic studies. The lines are: A223, A227, A264, A265, A295, B6, B7, B9A, B42, B49, B51, B54, B55, B56, B57, B60, B67, C103, C113A, C1187-2, H19, H49, H51, K148, K150, M50, M60, M11, M4582, M59-1, Ms109, Ms116, N6, N9, N15, N22A, N25, N29, N30, N38, Oh4C, Oh41, Oh43, Oh45, Pa70, Pa83, R61, R71, R109B, R134, R151, R154, R181, W64A, L317, Os420, and W9F.

REGISTRATION OF THREE GEneric LINEs OF SOYBEANs°

(R. L. Bernard2, A. H. Probst2, K. L. Atchley3, and F. A. Laviolette3)

The following lines of soybeans (Glycine max) originated as selections from the indicated backcrosses. They are homogenous for the transferred genes and will be available for selection in the following lines: 'Kent,' 'Lindarin,' and 'Shelby,' for other traits.

<table>
<thead>
<tr>
<th>Reg. no.</th>
<th>Identifying designation</th>
<th>Parenting</th>
</tr>
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<tbody>
<tr>
<td>GP 9</td>
<td>Kent-Rps rps-SL5</td>
<td>(Kent × CNS) × (Korn)</td>
</tr>
<tr>
<td>GP 10</td>
<td>Lindarin-Rps rps-SL6</td>
<td>(Lindarin × Mulden)</td>
</tr>
<tr>
<td>GP 11</td>
<td>Shelby-Rps rps-SL4</td>
<td>(Shelby × CNS) × (Korn)</td>
</tr>
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* Consisting of recurrent parent, genes transferred, and exper 库存品种

These lines were developed in a cooperative program of the U.S. Regional Soybean Laboratory and the Illinois University Agricultural Experiment Stations by transferring the following genes: Rps: resistance to phytophthora rot, caused by Phytophthora sojae; var. sojae A. A. Hildebr., from the resistant variety CNS (CNS is a cultivar of variety Mukden).

One of these lines was transferred to the three synthetics. Information on the pedigrees of these lines is not complete, but the following lines were included: K155, NC34, Oh04, Oh26, Oh28, Oh40B, W64A, Os420, WF9, and M14.

REGISTRATION OF HIGH PROTEIN WHEAT GERMLASM°

(R. L. Bernard2, A. H. Probst2, K. L. Atchley3, and F. A. Laviolette3)

The following lines of wheat (Triticum aestivum L.) originated as selections from the indicated backcrosses. They are homogenous for the transferred genes and will be available for selection in the following lines: 'Kent,' 'Lindarin,' and 'Shelby,' for other traits.

<table>
<thead>
<tr>
<th>Reg. no.</th>
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<th>Parenting</th>
</tr>
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<tbody>
<tr>
<td>CP 9</td>
<td>Kent-Rps rps-SL5</td>
<td>(Kent × CNS) × (Korn)</td>
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<td>Lindarin-Rps rps-SL6</td>
<td>(Lindarin × Mulden)</td>
</tr>
<tr>
<td>GP 11</td>
<td>Shelby-Rps rps-SL4</td>
<td>(Shelby × CNS) × (Korn)</td>
</tr>
</tbody>
</table>

* Consisting of recurrent parent, genes transferred, and exper 库存品种

These lines were developed in a cooperative program of the U.S. Regional Soybean Laboratory and the Illinois University Agricultural Experiment Stations by transferring the following genes: Rps: resistance to phytophthora rot, caused by Phytophthora sojae; var. sojae A. A. Hildebr., from the resistant variety CNS (CNS is a cultivar of variety Mukden).

One of these lines was transferred to the three synthetics. Information on the pedigrees of these lines is not complete, but the following lines were included: K155, NC34, Oh04, Oh26, Oh28, Oh40B, W64A, Os420, WF9, and M14.

These lines were developed in a cooperative program of the U.S. Regional Soybean Laboratory and the Illinois University Agricultural Experiment Stations by transferring the following genes: Rps: resistance to phytophthora rot, caused by Phytophthora sojae; var. sojae A. A. Hildebr., from the resistant variety CNS (CNS is a cultivar of variety Mukden).

One of these lines was transferred to the three synthetics. Information on the pedigrees of these lines is not complete, but the following lines were included: K155, NC34, Oh04, Oh26, Oh28, Oh40B, W64A, Os420, WF9, and M14.

These lines were developed in a cooperative program of the U.S. Regional Soybean Laboratory and the Illinois University Agricultural Experiment Stations by transferring the following genes: Rps: resistance to phytophthora rot, caused by Phytophthora sojae; var. sojae A. A. Hildebr., from the resistant variety CNS (CNS is a cultivar of variety Mukden).

One of these lines was transferred to the three synthetics. Information on the pedigrees of these lines is not complete, but the following lines were included: K155, NC34, Oh04, Oh26, Oh28, Oh40B, W64A, Os420, WF9, and M14.