tural experiment stations in Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, Ohio, South Dakota, Wisconsin, U.S.A., and Ontario, Canada. Magna was increased and released in the spring of 1967 in Illinois, Iowa, Minnesota, and Ohio.

Prize was developed because other large-seeded soybean varieties of this maturity were agronomically poor. Large-seeded varieties are used in foreign export, in home gardens, and by canners and frozen food processors. The increased interest in the production of large-seeded soybeans prompted Magna's release. Presently, 'Kanrich' is the only agronomically acceptable, completely yellow, large-seeded soybean variety available.

In Magna's area of best adaptation, it yields over 14% more than Kanrich and is 8 days earlier in maturity. Magna yields 5% above 'Hawkeye,' is 6 days earlier in maturity, has nearly 60% larger seed, is 2 inches shorter, lodges less, is slightly lower in protein content, and is equal in oil content. Magna has satisfactory seed holding and seed quality at maturity. Field reaction to diseases appears similar to Hawkeye.

Magna has purple flowers, gray pubescence, brown pods at maturity, and yellow seeds with yellow hila and dull luster, weighing approximately 27 grams per 100. Its growth habit is upright and rather broad.

The Iowa Agricultural Experiment Station will maintain breeder seed.

Other information on Magna has been published in the Iowa Farm Science 21(12):3-5, 1967, and in the Soybean Digest 27:8, 1967.

REGISTRATION OF PRIZE SOYBEANS1

(Reg. No. 67)

C. R. Weber2

'PRIZE' soybeans (Glycine max (L.) Merr.) originated as an F3 plant selection from the cross [Mandarin (Ottawa) × 'Prize'] × [Mandarin (Ottawa) × 'Kanro']. Hybridization, selection, and development leading to this large-seeded variety were done at the Iowa Agricultural and Home Economics Experiment Station in cooperation with the U. S. Regional Soybean Laboratory, U.S. Department of Agriculture. Before release, Prize was designated AX84-98. Prize is of group II maturity and is best adapted to approximately 41° to 43°N latitude.

Prize was evaluated in regional uniform tests beginning in 1965 by the Crops Research Division and cooperating agricultural experiment stations in Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, Ohio, South Dakota, Wisconsin, U.S.A., and Ontario, Canada. Prize was increased and released in the spring of 1967 in Illinois, Iowa, Minnesota, and Ohio.

Prize was developed because other large-seeded soybean varieties of this maturity were agronomically poor. Large-seeded varieties are used in foreign export, in home gardens, and by canners and frozen food processors. The increased interest in the production of large-seeded soybeans prompted Prize's release. Presently, 'Kanrich' is the only agronomically acceptable, completely yellow, large-seeded soybean variety available.

In its area of best adaptation, Prize yields over 11% more than Kanrich and is 3 days earlier in maturity. Prize yields equal to or above 'Hawkeye,' is 1 day earlier in maturity, has nearly 60% larger seed, is 6 inches shorter, lodges less, and is slightly lower in protein and oil content. Prize has satisfactory seed holding and seed quality at maturity. Field reaction to diseases appears similar to that of Hawkeye.

Prize has purple flowers, gray pubescence, tan pods at maturity, and yellow seeds with yellow hila and dull luster, weighing approximately 27 grams per 100. Its growth habit is upright and rather broad.

The Iowa Agricultural Experiment Station will maintain breeder seed.

Other information on Prize has been published in the Iowa Farm Science 21(12):3-5, 1967, and in the Soybean Digest 27:8, 1967.

REGISTRATION OF ARROWHEAD SUNFLOWER1

(Reg. No. 1)

R. G. Robinson2

'ARROWHEAD' sunflower (Helianthus annuus L.) originated as a single head selection from a plot of 'Mammoth Russian' variety at Duluth, Minnesota. The selection was made about 1920 by M. J. Thompson, former superintendent of the Northeast Agricultural Experiment Station, Duluth, Minn. It was grown for silage on a small acreage in northeastern Minnesota until about 1940.

In 1948, interest in sunflower seed for oil led to testing of Arrowhead as an oilseed variety. Tests from 1948 to 1952 indicated Arrowhead was satisfactory in maturity and yield but low in oil.

After interest in oilseed production diminished and production for birdfeed began, the Minnesota Agricultural Experiment Station released the variety in 1954.

Arrowhead is single-headed, early in maturity, medium in height, and medium to high in yield. The variety stands well for combining but tends to shatter when dry. The seedlings are vigorous so grow relatively well on poor and weed-infested soils. Seed is medium in size, medium in hull, low in oil, high in protein, and high in test weight. Arrowhead seed is of good size, appearance, and quality for birdfeed.

Table 1. Characteristics of Arrowhead and 'Mennonite' sunflower varieties at Rosemount and Crookston, Minn., 1954-60.

Variety      Seed yield (kg/ha)  Seed weight (g/100)  Test weight (g/liter)  Head diam. (cm)  Date flowering  Height (m)  Head diam. (cm)
---          ---------------  -----------------  -----------------  ---------------  -----------------  --------  ---------------
Arrowhead   1522       7.9              303               July 24        1.55           14       
Mennonite   1209       7.7              369               July 29        1.53           15       

Data on Arrowhead in addition to that in Table 1 have been published in Minnesota Agricultural Experiment Station Miscellaneous Report 24, Revised 1966.

Founding seed is available from Agronomy Seedstocks, University of Minnesota.

REGISTRATION OF MINGREN SUNFLOWER1

(Reg. No. 2)

R. G. Robinson2

'MINGREN' sunflower (Helianthus annuus L.) originated from five generations of mass selection for large seed of uniform color from good-appearing plants in the 'Mennonite' variety. The Minnesota Agricultural Experiment Station named the variety in 1963 and released it in 1964. In 1965-66, it was the major variety grown in Minnesota for the dehulled and whole seed human food market. It is also used for birdfeed.

The variety is single-headed in Minnesota, medium in maturity and height, and medium to high in yield. Seed is striped, very large, high in hull, and low in oil and test weight. It is well adapted to mechanical dehulling and is of good eating quality.

Table 1. Average yields and other characteristics of Mingren and Mennonite sunflower varieties at Rosemount and Crookston, Minn., 1958-63.

Variety      Seed yield (kg/ha)  Large seed (%)  Seed weight (g/100)  Date flowering  Height (m)  Head diam. (cm)
---          ---------------  -------------  -----------------  -----------------  --------  ---------------
Mingren      1775       32              10.3             July 27        1.68       
Mennonite    1610       34              9.5              July 28        1.68       

* Held on 20/64 round-hole sieve.

Data on Mingren in addition to that in Table 1 have been published in Minnesota Agricultural Experiment Station Miscellaneous Report 24, Revised 1966.

Founding seed is available from Agronomy Seedstocks, University of Minnesota.

R. G. Robinson2

'NINGREN' sunflower (Helianthus annuus L.) originated as a single head selection from a plot of 'Mennonite Russian' variety at Duluth, Minnesota. The selection was made about 1920 by M. J. Thompson, former superintendent of the Northeast Agricultural Experiment Station, Duluth, Minn. It was grown for silage on a small acreage in northeastern Minnesota until about 1940.

In 1948, interest in sunflower seed for oil led to testing of Arrowhead as an oilseed variety. Tests from 1948 to 1952 indicated Arrowhead was satisfactory in maturity and yield but low in oil.

After interest in oilseed production diminished and production for birdfeed began, the Minnesota Agricultural Experiment Station released the variety in 1954.

Arrowhead is single-headed, early in maturity, medium in height, and medium to high in yield. The variety stands well for combining but tends to shatter when dry. The seedlings are vigorous so grow relatively well on poor and weed-infested soils. Seed is medium in size, medium in hull, low in oil, high in protein, and high in test weight. Arrowhead seed is of good size, appearance, and quality for birdfeed.

Table 1. Characteristics of Arrowhead and 'Mennonite' sunflower varieties at Rosemount and Crookston, Minn., 1954-60.

Variety      Seed yield (kg/ha)  Seed weight (g/100)  Test weight (g/liter)  Head diam. (cm)  Date flowering  Height (m)  Head diam. (cm)
---          ---------------  -----------------  -----------------  ---------------  -----------------  --------  ---------------
Arrowhead   1522       7.9              303               July 24        1.55           14       
Mennonite   1209       7.7              369               July 29        1.53           15       

Data on Arrowhead in addition to that in Table 1 have been published in Minnesota Agricultural Experiment Station Miscellaneous Report 24, Revised 1966.

Founding seed is available from Agronomy Seedstocks, University of Minnesota.

REGISTRATION OF MINGREN SUNFLOWER1

(Reg. No. 1)

R. G. Robinson2

'MINGREN' sunflower (Helianthus annuus L.) originated from five generations of mass selection for large seed of uniform color from good-appearing plants in the 'Mennonite' variety. The Minnesota Agricultural Experiment Station named the variety in 1963 and released it in 1964. In 1965-66, it was the major variety grown in Minnesota for the dehulled and whole seed human food market. It is also used for birdfeed.

The variety is single-headed in Minnesota, medium in maturity and height, and medium to high in yield. Seed is striped, very large, high in hull, and low in oil and test weight. It is well adapted to mechanical dehulling and is of good eating quality.

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Variety      Seed yield (kg/ha)  Large seed (%)  Seed weight (g/100)  Date flowering  Height (m)  Head diam. (cm)
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Data on Mingren in addition to that in Table 1 have been published in Minnesota Agricultural Experiment Station Miscellaneous Report 24, Revised 1966.

Founding seed is available from Agronomy Seedstocks, University of Minnesota.