REGISTRATION OF PARENTAL LINES

REGISTRATION OF FOUR PARENTAL LINES OF MAIZE

PA392, PA462P, PA463P, and PA468 are inbreds of yellow dent maize (Zea mays L.) of early-to-late AES 400 maturity developed at the Pennsylvania Agricultural Experiment Station. These lines have had extensive evaluation and were released in 1987 because of their varied genetic background and potential in hybrid combinations. Breeder seed is maintained by the Pennsylvania Agricultural Experiment Station and is available in 50 to 100 kernel lots from M.W. Johnson, Agronomy Department, Tyson Building, University Park, PA 16802.

PA392 (Reg. no. PL-103) (PI 517968) was selected from PA Virus resistant early synthetic (1). It was developed by selfing and selection in an ear-to-row manner for five generations and was evaluated in topcross and numerous single cross combinations from 1976 to 1986 for yield, standability, maturity, and disease reaction. This line silks about the same time as PA405 and A634H1. It has good stalk strength alone and in crosses and yields well with good seed quality. The plant attains a height of about 180 cm, has a medium green spreading leaf and a semi-erect, medium-branched tassel. It can be used as either a male or female parent in crosses. It combines well with lines such as A656, PA402P, ND309, and VA26. It has better than average resistance to northern leaf blight. It produces 12 rows of medium yellow, round kernels on a red cob.

PA462P (Reg. no. PL-104) (PI 517969) originated from CH157(CH157 X IIIA X PPP). It was developed through selfing and selection in an ear-to-row manner for five generations and was evaluated in topcross and numerous single cross combinations from 1976 to 1985 for yield, standability, maturity, and disease reaction. It silks at the same time as the inbreds VA26 and A670, but the grain dries more rapidly. Plant height is approximately 190 cm. It produces a medium green, spreading leaf and a semi-erect, medium-branched tassel. It has demonstrated good stalk strength both alone and in various crosses and has had above average resistance to northern leaf blight. It produces 12 rows of small, round, light yellow kernels on a white cob and serves best as a male parent in crosses.

PA463P (Reg. no. PL-105) (PI 517970) is partially related to PA462P, having originated from [(CH157 X IIIA) (CH157 X PPP)] [K64 X MO4155]. It was developed through selfing and selection in the ear-to-row manner for five generations and was evaluated in topcross and numerous single cross combinations from 1976 to 1985 for yield, standability, maturity, and disease reaction. This inbred silks at the same time as PA468 (Reg. no. PL-106) (PI 517971) was selected from PAWF9 Synthetic (1). It was developed by selfing and selection in the ear-to-row manner for five generations and was evaluated in topcross and numerous single cross combinations from 1976 to 1985 for yield, standability, maturity, and disease reaction. This line silks about the same time as PA463P and VA26. It has good stalk strength alone and in crosses and yields well with good seed quality. The plant attains a height of about 180 cm, has a medium green spreading leaf and a semi-erect, medium-branched tassel. It has demonstrated good stalk strength both alone and in crosses and has had above average resistance to northern leaf blight. It produces 12 rows of small, round, light yellow kernels on a white cob.

PA468 (Reg. no. PL-106) (PI 517971) was selected from PAWF9 Synthetic (1). It was developed by selfing and selection in the ear-to-row manner for five generations and was evaluated in topcross and numerous single cross combinations from 1976 to 1985 for yield, standability, maturity, and disease reaction. This inbred silks at the same time as PA462P and VA26. It has better than average resistance to northern leaf blight. It produces 12 rows of small, round, light yellow kernels on a white cob and serves best as a male parent in crosses.

References and Notes

1. This virus-resistant synthetic was developed by the Plant Pathology, The Pennsylvania State University, and was evaluated in topcross and numerous single cross combinations that also have virus resistance ratings for smut, leaf blights, and stalk and ear blights.


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REGISTRATION OF THREE PARENTAL LINES OF MAIZE WITH IMPROVED RESISTANCE TO GRAY LEAF SPOT

PA877, PA879, and PA880 are inbreds of dent maize (Zea mays L.) of mid- to late-AES 800 maturity developed at the Pennsylvania Agricultural Experiment Station. These lines were evaluated extensively for hybrid performance and disease resistance, particularly northern leaf spot (caused by Cercospora zeae-maydis Tehon and Daniels), but also exhibit resistance to northern corn leaf blight (caused by Exserohilum turcicum (Pass.) Leonard & Suggs). PA879 (Reg. no. PL-108 (PI 517973) was selected from PA877, PA879, and PA880 are inbred lines of yellow dent maize (Zea mays L.) of mid- to late-AES 800 maturity registered. In tests conducted in 1981 and 1982, it was one of the most GLS resistant lines. It is better than average in performance and disease resistance, particularly to gray leaf spot and disease reaction. This line silks about the same time as PA463P and VA26. It has good stalk strength alone and in crosses and yields well with good seed quality. The plant attains a height of about 180 cm, has a mediums green spreading leaf and a semi-erect, medium-branched tassel. It has demonstrated good stalk strength both alone and in crosses and has had above average resistance to northern leaf blight. It produces 12 rows of small, round, light yellow kernels on a white cob.

PA877 (Reg. no. PL-107) (PI 517972) originated from PA878 (Reg. no. PL-106) (PI 517971) was selected from PA878 (Reg. no. PL-106) (PI 517971) was selected from PA877, PA879, and PA880 are inbred lines of yellow dent maize (Zea mays L.) of mid- to late-AES 800 maturity registered. In tests conducted in 1981 and 1982, it was one of the most GLS resistant lines. It is better than average in performance and disease resistance, particularly to gray leaf spot and disease reaction. This line silks about the same time as PA463P and VA26. It has good stalk strength alone and in crosses and yields well with good seed quality. The plant attains a height of about 180 cm, has a medium green spreading leaf and a semi-erect, medium-branched tassel. It has demonstrated good stalk strength both alone and in crosses and has had above average resistance to northern leaf blight. It produces 12 rows of small, round, light yellow kernels on a white cob.