REGISTRATION OF F-169 LIMA BEAN GERMPLASM
(Reg. No. GP 14)
C. A. Thomas and V. J. Fisher

F-169 lima bean (Phaseolus lunatus L.) germplasm was released jointly by AR-SEA-USDA and the Delaware Agricultural Experiment Station in 1975. It is resistant to races A, B, and D of downy mildew (caused by Phytophthora phaseoli) and is a Fordhook-type lima bean with green cotyledons.

F-169 arose from crosses of 'Piloy' (P.I. 189403), 'Fordhook 242', and $400. Piloy, a red-seeded bush lima bean from Guatemala, is resistant to downy mildew races A, B, and D. Fordhook 242 has a vigorous bush growth habit and white cotyledons. $400 is a bush breeding line that has baby-green seed.

Fordhook 242 was crossed with the F₁ hybrid from the three-way cross (Piloy × Fordhook 242) × $400, and Fordhook 242 was used as the recurrent parent in three backcrosses. Populations were grown and screened for mildew resistance in the greenhouse at Beltsville, Md. Seeds were bulked from plants in the BC₃ F₇ generation that were similar in growth habit to Fordhook 242, homozygous for mildew resistance, and produced seeds with green cotyledons.

In the field tests in Delaware, Maryland, and New Jersey F-169 yielded slightly less than Fordhook 242. It reached the prime marketable stage of maturity in 73 days and produced seeds slightly smaller than those of Fordhook 242.

F-169 offers combined resistance to races A, B, and D of downy mildew. Its green seed coat and cotyledons enable it to maintain high quality for several days. Small quantities of seeds can be obtained from the Applied Plant Pathology Laboratory, Plant Protection Institute, Beltsville Agricultural Research Center, Beltsville, MD 20705.

REGISTRATION OF C-171 LIMA BEAN GERMPLASM
(Reg. No. GP 15)
C. A. Thomas and V. J. Fisher

C-171 lima bean (Phaseolus lunatus L.) germplasm was released jointly by the AR-SEA-USDA and the Delaware Agricultural Experiment Station in 1973. It is resistant to races A, B, and C of downy mildew (caused by Phytophthora phaseoli) and has a bush growth habit and baby-green seeds.

C-171 arose from a cross of P.I. 195342 and US 1068. P.I. 195342 is resistant to races A, B, and C of downy mildew, a pole-type lima bean from Guatemala. Its seeds are white. US 1068 is a sister line of the cultivar 'Bridgeton', resistant to races A and B of downy mildew. It has a vigorous bush growth habit and produces baby-green seeds.

An F₂ population from US 1068 × P.I. 195342 was tested for resistance to race C of downy mildew in the greenhouse at Beltsville, Md. Mildew resistant F₃ plants were progeny tested and evaluated for homozygosity for mildew resistance and the bush growth habit. In two subsequent generations selection was practiced for green cotyledons, a trait conditioned by a single recessive factor pair. Seeds from homozygous bush plants that produced baby-green seeds were bulked.

In field tests in Delaware, C-171 reached the prime marketable stage of maturity in 77 days, the same as 'Early Thorogreen'. Seeds of C-171 weighed slightly less than those of 'Thorogreen', 9% more than those of 'Thaxter'. The seeds were thicker and smaller in diameter than 'Thorogreen and Thaxter'.

C-171 offers combined resistance to races A, B, and C of downy mildew. Small amounts of seed can be obtained from the Applied Plant Pathology Laboratory, Plant Protection Institute, Beltsville Agricultural Research Center, Beltsville, MD 20705.