First Report of Recovery of Sorghum from Downy Mildew in Zimbabwe. S. D. Singh, Cereals Program, ICRISAT, Patancheru, A.P. 502 324, India, and W. A. J. de Milliano, SADCC/ICRISAT, P.O. Box 776, Bulawayo, Zimbabwe. Plant Disease 73:1020, 1989. Accepted for publication 18 July 1989.

The phenomenon of recovery (healthy regrowth) from infection with systemic downy mildew described recently in pearl millet (1) was observed in sorghum (Sorghum bicolor (L.) Moench) infected by Peronosclerospora sorghi (Weston & Uppal) C. G. Shaw. During 1986-1987, 30 susceptible selections of sorghum were tested for recovery at Matopos, Zimbabwe. A sandwich technique was used to inoculate 50 germinating seeds of each selection, and the seeds were planted in pots. Incidence of downy mildew among the selections ranged from 20 to 40%. The diseased plants were closely observed for recovery. One plant in each of three selections—(555 × (IS 146 × C53541)-6)-22-2-1AK, (BC-9 × Boganhilo)-16-3-3-1-3-1AK), and (555×168) -1-1-1), with 21, 17, and 23 infected plants, respectively produced disease-free leaves 25 days after inoculation. Shoots of these plants were clipped and the plants kept in the downy mildew screening nursery, where a continuous supply of conidial inoculum was available, to determine if tillers developed symptoms of systemic downy mildew. Later, the tillers were clipped again and their growing points injected with a conidial suspension of P. sorghi. New growth following the two clippings developed local lesions but no systemic infection. Selfed progenies from two of the three plants that produced healthy regrowth were also tested for recovery. Plants of one of the progenies did not show recovery, but 22 of the 30 plants of the other progeny, (BC-9 X Boganhilo)-16-3-3-1-3-1 AK, showed recovery 22 days after inoculation.

Reference: (1) S. D. Singh and S. B. King. Plant Dis. 72:425, 1988.