Abstract


The cost of managing late blight in potatoes during a severe epidemic caused by new, aggressive strains of *Phytophthora infestans* in the Columbia basin of Washington and Oregon in 1995 was documented. The mean number of fungicide applications per field varied from 5.1 to 6.3 for early- and midseason potatoes, and from 8.2 to 12.3 for late-season potatoes in the northern and southern Columbia Basin, respectively. In 1994, a year when late blight was not severe, the mean number of fungicide applications per field made to early- and midseason potatoes was 2.0; whereas late-season potatoes received a mean of 2.5 applications. The mean per acre cost of individual fungicides applied varied from $4.90 for copper hydroxide to $36.00 for propamocarb + chlorothalonil. Total per acre expenses (application costs plus fungicide material) for protecting the crop from late blight during 1995 ranged from $106.77 to $110.08 for early and mid-season potatoes in different regions of the Columbia Basin and from $149.30 to $226.75 for late-season potatoes in the northern and southern Columbia Basin, respectively. Approximately 28% of the crop was chemically desiccated before harvest as a disease management practice for the first time in 1995, resulting in an additional mean cost of $34.48/acre or $1.3 million for the region. Harvested yields were 4 to 6% less then in 1994. The total cost of managing late blight in the Columbia Basin in 1995 is estimated to have approached $30 million.