

Pilot Crop Protection Survey – Sample Design

Sampling Plan

There was a requirement to report the survey results by main producing regions (Atlantic Provinces, Quebec, Ontario and British Columbia).

Target Population

The target population consisted of all active farms in Canada with sales of \$10,000 or more reported in the 2001 Census of Agriculture which contributed to the top 95% of the total acreage of each type of crop (apple, grape and carrot) in each region. Operational constraints led to the exclusion of certain types of farms: institutional farms (prisons, research stations, colleges), farms located on Indian reserves, small farms that contributed to the bottom 5% of the total acreage of each type of crop in each region, remote farms that could not be visited by interviewers with reasonable traveling distance and costs; and farms located in the Prairie Provinces, the Yukon, the Northwest Territories and Nunavut.

Stratification

The survey frame was updated with acreage of apple, grape and carrot operations for the subset of farm operations that also responded to the 2003, 2004 and 2005 Fruit and Vegetable Survey. The survey frame was split into overlapping family of crops (e.g., orchards, leaf greens, berries) and the objective was to select farms for only one type of crop. Each group was stratified by region and by size of operation based on acreage (large, medium and small operations).

Sample allocation

Based on the budget, the expected response rate of 80%, a targeted level of precision and AAFC requirements, the total sample size was set at 1,255 farms. Target coefficients of variation (CVs) of 2%, based on estimates of acreage, were used to derive the sample sizes as described below:

	Atlantic provinces	Quebec	Ontario	British Columbia	All selected provinces
<hr/> Initial distribution of farms sampled <hr/>					
Carrot	28	76	59	20	183
Apple	88	211	190	306	795
Grape	-	29	183	65	277
<hr/> Final distribution of farms with usable information ¹ <hr/>					
Carrot	22	54	35	15	126
Apple	70	163	138	246	617
Grape	-	22	132	55	209

1. Includes farm growers that agreed to participate to the survey and to share non-confidential information with AAFC, EC and HC.

Sample Selection

Farms were randomly selected within each stratum. Largest farms were definitely included in the sample (stratum of sample's subgroup of "take-all" farms). Other farms were selected with a known probability of inclusion in the sample ("take-some" farms). The sampling strategy ensured that a farm with more than one type of crop could be selected for only one type.