

PLANT TISSUE Sampling Guidelines

POTATO - IRISH

Recommended sampling

Initial plant tissue samples may be taken when the potato plant reaches 8 to 12 inches in height and diameter. Subsequent samples may be taken as frequently as desired through the bulking stage until about four weeks prior to harvest. Other key growth stages include tuber initiation, tuber set, 2" minimum tuber size, bulking, and senescence. Tuber initiation is characterized by the production of stolons. Early tuber initiation is sometimes referred to as the "hooking" or "hook" stage. Pea-sized tubers on the ends of the stolons indicate the transition from tuber initiation to tuber set. The completion of the first tuber setting period often coincides with peak bloom of the potato crop. Some potato tubers may already be two inches in diameter as the completion of bloom takes place. As the blooms fade, the transition is to a bulking phase which is characterized by a rapid increase in tuber size. As the crop matures, senescence of the foliage occurs and tuber growth begins to slow down.

Sampling

Always select the most recently mature, fully expanded leaf. It is generally the 4th petiole from the growing point. Separate the leaflets from the petioles. Use the petioles for NO₃-N, PO₄-P, and K and the leaflets for all other nutrients. Collect 30-40 petioles/leaves for an adequate sample.

Preferred analyses

All samples – Test codes 1155 or 1156.

