

# IMPACT



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## Increasing Profitability of Potato Production by Planter Efficiency

### *The Situation*

Surveys of potato growers at the Idaho Potato Conference and in Elmore and Owyhee Counties emphasized the importance of planter performance efficiency, seed quality, and planting depth. Based on the Idaho Agricultural Statistics Services survey, we estimated 16 percent yield reduction as a result of missing plants. Many other studies show that in addition to yield loss, tuber quality is reduced.



### *Our Response*

The Elmore County Extension Educator initiated on-farm studies involving growers to determine effects of planter efficiency, seed quality, seed size distribution and seed depth. Seed pieces in a 25-foot row were uncovered, counted, and the spacing between the seed pieces was measured. Distances were categorized as: under-spaced (0-7 inches); acceptable (8-12 inches); or over-spaced (>12 inches). The number of spacings in the acceptable range was divided by the total and multiplied by 100 to determine planter efficiency. Seed evaluation included seed source and seed cutter distribution

performance. Sixteen years of field data has been collected and disseminated to the growers and scientists at the local, state, regional and international levels. The Educator gave poster presentations on this subject matter at the World Potato Congress in Boise, and at the World Potato Congress Farm Show in Wilder.

### *Program Outcomes*

Based on growers' planter performance profiles, since 1988, planter efficiency has increased from 32 percent to as high as 98 percent, with an average of 77 percent. Elmore County Extension and potato growers of Elmore and Owyhee Counties have recorded yield increases from 15 cwt to 120 cwt per acre as a result of increased planter efficiency. In addition, we found that growers with higher planter efficiency had more uniform potatoes. Evaluations by growers of the Idaho Potato Conference workshops rated very high in the areas of knowledge and skills gained.

### *For More Information*

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