

Goggi, A. S., K. M. Adam, H. Lopez-Sanchez, and M. Westgate. 2006. Improving corn grain purity by using color-sorting technology. **Crop Management doi:10.1094/CM-2006-0309-01-RS.**

### **Abstract**

Color sorting is often used to remove unwanted off-colored contaminants. The objectives of this study were to determine the usefulness of color sorting in removing adventitious corn from a seed lot and to evaluate the impact of contaminant color on efficacy. Seed lots of two contrasting colors were used in the experiments: yellow corn in a white lot and purple corn in a yellow lot. Samples were collected from three experimental sites: two white corn seed production fields surrounding a yellow pollen source, and a yellow corn seed production field surrounding a purple popcorn pollen source. Collected samples were color sorted in three successive passes. Outcross levels in the original nonsorted samples ranged from 0.10 to 38.55% in the yellow and white samples and from 0.61 to 45.78% in the purple and yellow samples. Color sorting reduced the percentage of outcross of yellow and purple kernels in the sample. The percentage of yellow seeds in white-seeded corn was reduced to 6.22% in samples collected at 3 ft and 0.01% at 820 ft from the source. The percentage of blue seeds in yellow-seeded corn samples was reduced to 0.58 at 0 ft and 0% at 270 ft from the source. These results indicate that color sorting is very effective at removing outcross seeds.

### **URL:**

<http://www.plantmanagementnetwork.org/pub/cm/research/2006/color/>