

## **Center-Pivot Maintenance Trends in the Western United States**

Ngonidzashe L. Mufute, Matt A. Yost, Dustin Larsen, Burdette Barker, Troy Peters, and María Zamora-Re.

### **Abstract**

Following recommendations for replacing center pivots and center-pivot sprinkler packages can help farmers improve water application efficiency and optimize crop production. Little information exists on the frequency with which farmers are replacing center pivots and sprinkler packages. To help address this issue, this study evaluated an industry database of center pivot (n = 654) and sprinkler package (n = 5,131) replacements in the western United States. On average, pivot systems were oldest in Montana, Idaho, and Utah, with an average age of 18, 16, and 16 years, respectively. Oregon had the lowest average pivot age (9 years). Average pivot age also varied by brand: Reinke systems were the oldest (16 years) and Valley were the youngest (11 years), on average. Across the database, 92% of the pivots were 25 years old or younger. Utah also had the oldest average sprinkler package age (10 years). Oregon and California changed sprinkler packages most frequently ( $\leq 4$  years). Sprinkler package replacement frequency varied among center-pivot manufacturers, with Valley pivots having the highest frequency of sprinkler package changes (5 years) and Zimmatic pivots having the lowest frequency (8 years). Across the database, 50% of the sprinkler packages were replaced within 2 to 5 years, and 81% were replaced within 10 years. Most farmers in the region generally follow recommendations on replacing pivots and pivot sprinkler packages, but a sizeable number of farmers do not. Therefore, an opportunity exists to improve center-pivot and sprinkler package maintenance, thereby helping to make center-pivot irrigation more water efficient and crop production more sustainable.