**Condition Change: UC ANR contributed to improved living and working conditions for California's food system and farm workers**

**Issue**

There are 21.6 million full- and part-time jobs related to the agricultural and food sectors – 11% of total U.S. employment. Migrant and seasonal farm workers are a vital component of those jobs, yet they continue to live in poverty with poor health indicators and limited access to health care services.

**Methods**

UC ANR continues research and extension efforts to improve conditions for workers in California’s food system.

A UC Agricultural Experiment Station researcher at the UC Davis location is working on rapid tools for monitoring food and forage. This project has developed and is deploying simple, accurate, and rapid tests for a range of potential toxicants in food systems, from pesticide residues to mycotoxins, naturally occurring toxins found in food produced by certain molds. This technology has the potential to benefit both the high intensity needs of the food production systems and to safeguard farm and food system workers as well as consumer safety (Bruce Hammock).

UC Cooperative Extension (UCCE) research is studying pest management techniques to reduce pesticide drift. Specifically, researchers are examining the efficacy of soil drench and liquid pesticide injections directly below the surface of soil as an alternative to foliar spray. One documented advantage of these pest management techniques is less pesticide “drift,” i.e. move off-target by wind. Without drift, that mechanism of exposure to humans directly or indirectly as residue on non-target sites is lessened. In addition, there are other advantages from less drift: less waste and applications can be made during windy and rainy weather. Currently more data are needed and these are not common methods in California. UCCE is extending information on the effectiveness and efficiency of these methods to growers and pest control adviser clientele so they know how to use it when the tool becomes available (Nicholas Clark).

**Outcome**

**Science-based information was applied to decision making that will improve farm and food system working conditions.**

* New knowledge on the efficacy of soil drench and liquid pesticide injections directly below the surface of soil supports the registration of these uses. Manufacturers are using the data to inform potential change in the federal and state pesticide label to reflect this use as allowable. A shift to using these techniques will diminish pesticide exposure risks. (Nicholas Clark)

These measured outcomes demonstrate changes to improve the working conditions for those working in the California food system, many of whom live in poverty and have poor health. In this way, UC ANR contributes to the public value of developing an inclusive and equitable society.These efforts also benefit the food system through workforce retention, improved safety, and improved product quality.