

# KEEP FRESH PRODUCE SAFE! OVERCOMING LANGUAGE BARRIERS IN FOOD SAFETY EDUCATION

Maria Marlin, M.S. – Faculty Research Assistant

Luisa Santamaria – Associate Professor- Extension Plant Pathologist

## Abstract

The implementation of the Food Safety Modernization Act (FSMA) Produce Safety Rule (which includes standards for growing, harvesting, packing, and holding of produce for human consumption) has created a continuous demand for training in good agricultural practices and food safety awareness. However, language can be a barrier to accomplishing effective education. We share our efforts to overcome this barrier by creating easily accessible bilingual training material, which includes a manual for food safety training in the field and 5 related videos in Spanish. These videos visualize worker hygiene practices for both the field and packing house. In addition, we hosted ten virtual “Train the Trainers” Food Safety Practices workshops in the late spring of 2020. Five workshops were offered in English and five workshops were offered in Spanish. Before each workshop began, participants were asked to use a predetermined scale to rate their knowledge on important concepts such as FSMA, new coronavirus guidelines, and routes of food contamination. They were then asked to complete the same rating at the conclusion of the workshop. The average “before” and “after” scores were used to calculate a percent increase in knowledge. Participants in the English workshop reported the highest increase of knowledge (49.3%) in the topic of coronavirus and its effects on agriculture. Participants in the Spanish workshop reported the highest increase of knowledge in the subject of disease outbreaks caused by food contamination (27.6%), with coronavirus as a close second (26.8%). These results signal that agricultural workers, both English- and Spanish-speaking, need continual access to relevant information to guide their efforts in preventing produce contamination.

## Creation and Production of Bilingual Food Safety Training Material

### Good Agricultural Practices for Food Safety Video Series

Our peer-reviewed video series entitled “[Buenas Practicas en el Campos Para Trabajadores Agricolas/Good Agricultural Practices for Food Safety](#)” were developed in collaboration with Oregon State University’s Extension ESC (Stephen Ward- videographer), AgriCare, and Gingerich Farms. The video audio is in Spanish, but there is an option for English subtitles. The five video titles in English are:

1. Introduction to Food Safety and Foodborne Pathogens
2. Cleaning and Sanitation: Hand Washing and Worker Hygiene
3. Cleaning and Sanitation: Field Equipment
4. Cleaning and Sanitation: Harvest Containers
5. Cleaning and Sanitation: Packing House



Fig. 1. Filming in action! Stephen Ward, OSU EESC videographer, films the cleaning and sanitizing of a blueberry harvest machine at an AgriCare facility.



Fig. 2. Introduction to our Good Agricultural Practices for Food Safety Video Series. All videos can be found at: <https://catalog.extension.oregonstate.edu/em9290>

## Bilingual Food Safety Training Manual

Our bilingual training manual is titled “Good Field Practices for Agricultural Workers” and is designed for people who train harvest workers in hygiene practices that will reduce fresh produce contamination. We divided the manual into ten learning modules; each module covers an important concept in food safety. There are pictures to reinforce the material and review questions at the end of each module. See the pictures directly above for a sneak peak inside!



A preview of the layout of our new Food Safety Manual: “Good Field Practices for Agricultural Workers”. English and Spanish text are side-by-side. A colorful picture is included on the opposite page to reinforce the material being discussed.

## 2020 Virtual Train the Trainers Food Safety Practices Workshops

We had just secured our locations throughout northwestern Oregon for our in-person training workshops when COVID-19 entered our lives. Very quickly, we had to completely reform our curriculum to include virtual-only presentation and activities. With the support of the Oregon Blueberry Commission, we held ten virtual Train the Trainers Food Safety Practices workshops in the Spring of 2020. Five were in English and five were in Spanish. Each workshop was three hours, and included a PowerPoint, polling questions to ensure participation, interactive activities in Zoom “breakout” rooms, and discussion. We also asked participants to rate their knowledge of certain topics both before and after the workshop. The average scores “before” and “after” were compared across all workshops to determine percent increase in knowledge (Fig. 3).

Participants reported an increase in knowledge of all 8 rated categories, which included:

- ❖ Microorganisms that cause disease through food contamination
- ❖ Methodology to train your workers in food safety practices
- ❖ The Food Safety Modernization Act (FSMA) and the Produce Safety Rule
- ❖ Food contamination routes
- ❖ Hygiene practices to be used during the harvest
- ❖ Coronavirus and its effect on agriculture
- ❖ Disease outbreaks caused by food contamination
- ❖ Challenges during training of harvest workers

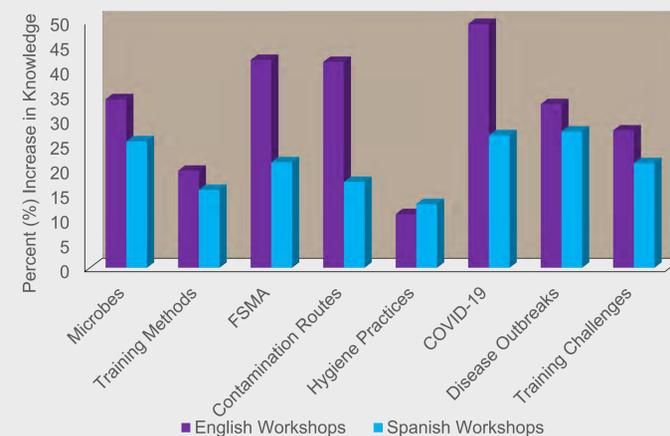


Fig. 3. Average percent increase in knowledge of English and Spanish-speaking participants in 8 categories. The difference in the average pre-workshop ratings and post-workshop ratings were used to calculate % increase in knowledge.

## Results from Outreach and Education Activities

The effects of the coronavirus on agriculture as well as the new regulations proved to be a topic of uncertainty for many of the participants. In a rapidly changing world, we need to ensure that agriculture workers have quick and easy access to educational materials, both for themselves and their employees. The Spanish-speaking participants reported the highest increase in knowledge on the topic of ‘disease outbreaks caused by food contamination.’ This could be the result of a language barrier, much of the information on current and past outbreaks is in English. Finally, members of both groups already seemed comfortable with the hygiene practices to be used during the harvest season; this category received the lowest % increase of knowledge for both groups. These results are helpful, as it guides our future work and outreach. We will spend less time on basic hygiene practices and more time on how to teach and train others to carryout these activities on daily basis in the field.

	English-speaking participants	Spanish-speaking participants
<b>Category where participants learned the most</b>	Coronavirus and its effects on agriculture	Disease outbreaks caused by food contamination
<b>Category where participants learned the least</b>	Hygiene practices to be used during the harvest season	Hygiene practices to be used during the harvest season

Table 1. Categories in which learning was highest and lowest for the two separate groups of participants.