

# A 5-year Educational Extension Effort to Build Highly Skilled and Committed Spanish-Speaking Fruit Teams in Western NY

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Over the past five years, many New York fruit farm operations have undergone significant growth. Orchards that used to employ only a handful of people with low-skill horticultural

**“Basic technical knowledge among Hispanic orchard workers needs to continue and be improved, and the CCE LOF program has identified this as a key area for educational programming. The preliminary results build a case for an in-depth evaluation to develop more curriculum in horticulture, business, leadership, and pest management.”**

talent now look for more help to meet this demand. Why does one fruit grower always have highly efficient labor, while other similar farm operations do not? Why are some Spanish-speaking

crews so efficient, hard-working, motivated, and committed, while other similar crews at other places aren't?

Today, many fruit growers have found that their horticultural or machinery skills don't always translate to Spanish-speaking people skills. Despite their search for horticultural talent to support their recent plantings and new investments, some fruit growers still lack a reliable, skillful, and committed horticultural team to fuel potential growth in the next 5 to 10 years. The competitive challenge for growers is to find, attract, and retain the right people (whether Spanish-speaking employees or not) from within the farm operation, assuming that full-time Spanish-speaking employees are legally employed, satisfied, engaged, and waiting for a new job opportunity inside the farm. Finding the right people that can support the development of new business opportunities won't be easy. Assembling the wrong horticultural team and staffing prematurely could become costly and catastrophic. Innovative fruit companies understand that it is much cheaper to develop a highly skilled and motivated Hispanic fruit team than it is to go out and bring in new people year after year. Empowered employees and orchard managers will perform at their best level, make independent decisions, and find ways to improve orchard operations – including planting, pruning, hand thinning, and harvest (Figure 1).

## The Horticultural Team

Creating a high-functioning horticultural team is challenging under any circumstances. But when the team you are trying to build crosses different cultures, how do you meld individuals' talents, cultural expectations, and communication barriers into a super-performing team? For example, if you manage a Spanish-speaking harvest team (where only one or two people can barely communicate in English), you face greater communication chal-



**Figure 1: Some of the skilled Hispanic employees currently working on NY apple farms.**

lenges than those who lead a Jamaican harvest team (where the majority can speak English). Complicating your communication task is the probability that this growing season you will incorporate the use of some type of new technology or a motorized platform for higher labor efficiency and won't be fully able to explain the benefits of the technology to your Spanish-speaking employees.

In this complicated and rapidly evolving labor situation for fruit growing, you have to take action to capitalize on new opportunities and execute them efficiently. But it is also essential for you and your teams to learn quickly, to keep up with developing events, and stay ahead of the competition. That will happen only if you foster strong working relationships with your most talented Spanish-speaking employees and assemble skilled horticultural teams inside your farm.

## Orchard Skills for the Fruit Grower, the Spanish-speaking Orchard Worker and the Orchard Manager

While there is no single secret to success when building the perfect horticultural team, there are some common traits I recognize in the most successful fruit growers who employ Spanish-speaking employees at their operations. One of the single greatest changes you can make is to build basic Spanish-speaking relations in the orchard. No matter how good or how poor your Spanish pronunciation is, you must learn to say “*Buenos dias*” (Good morning), “*Como está hoy?*” (How are you doing today?). You can also say a few words in Spanish and smile – and mean it! When you or I smile sincerely, the warmth becomes self-reinforcing.

When I am asked to serve as a translator for a meeting between a grower and the Spanish-speaking orchard workers, frequently the first question that the employees will ask their “*patrón*” (boss, in Spanish) is, “How am I doing in my job?” Though the grower may have just finished going through a list of things that have been done well and some that need improvement, Spanish-speaking employees crave one-on-one contact, horticultural coaching, and constructive feedback – positive or

negative – from their boss or orchard manager. Some growers do a good job of addressing this question, if not on a daily basis, then at least when they have a translator like me available.

You, the grower, must show real interest in the well-being of your orchard workers and regularly ask some of the questions mentioned above. This sort of attention to Spanish-speaking communication creates a “relationship” between you and your orchard worker, with the result that the labor task receives maximum attention. Your workers’ commitment to the fruit farm is also increased. If you work hard at this aspect of communication with your Spanish-speaking employees, you will create better, trusted, longer-lasting relationships and avoid having to look for and train new people every year.

Most successful Spanish-speaking orchard managers are smart, have good people skills, can build confidence and generate enthusiasm, enjoy interacting with other growers, know the horticultural details of pruning, hand thinning, and harvest, and reliably make their budgets and deliver results. But in addition to all this, the best Spanish-speaking orchard managers have something more – they are curious, walk the orchard regularly, and can look at a problem through multiple lenses. They excel at mobilizing and exciting Spanish-speaking workers and are clear about the tasks to be accomplished (i.e., number of fruit buds to leave per tree when conducting precision pruning) but know when to change direction. They can see when a new pruning practice will be profitable and convert it to a new horticultural management tool. They can spot an unmet need (e.g., picking apples efficiently without the use of ladders) and change course to go after a bigger profit and more comfortable working conditions for Spanish-speaking orchard workers.

As their teams pursue new labor goals (more bins of high quality fruit per person per day when harvesting and clipping apples with motorized platforms) and strive to achieve this or other milestones, they have a clear view of what is in or out of alignment in terms of skills and capabilities, compensation, communication, how workers are collaborating and behaving.

### CCE LOF Spanish-speaking Fruit Program

In 2011, I began to realize that further training was necessary for Hispanic employees in Western NY. From 2009 to 2011, I was speaking to individuals during work time (planting, pruning, hand thinning, and harvest) and began to understand their work challenges, personal aspirations, relations with management and co-workers, job injuries, and overall technical understanding of the apple growing business. I also found that Hispanic employees tended to be younger on average than their non-Hispanic counterparts, and some of them were more eager for new technical knowledge and new opportunities. Hispanics were staying much longer in orchard work and were happy to return to work via the H-2A program year after year at the most progressive farms in Western NY. Growers who were “mentoring and taking care of” their employees were experiencing an improved stability in the workforce. It seemed to me that these Hispanic employees went out of their comfort zone to increase orchard efficiency above and beyond labor expectations. I envisioned that a basic training in horticulture and pest management would be beneficial for all Hispanic men and women working in fruit farms in Western NY.

### Educational Efforts (2012 through 2014)

The first lecture series were offered to Spanish-speaking em-

**Table 1. Attendance of Hispanic employees at educational events organized by CCE LOF program since 2012.**

CCE LOF Educational Event	Year				
	2012	2013	2014	2015	2016
<b>Niagara/Orleans Fruit School</b>					
Female	3	3	2	8	6
Male	37	42	40	38	45
Total	40	45	42	46	51
<b>Wayne Fruit School</b>					
Female	3	3		4	3
Male	13	9		13	16
Total	16	12		17	19
<b>Summer Fruit Tour in Orleans</b>					
Female				15	
Male				90	
Total				105	

ployees on February 6 and 7, 2012. The idea behind why this type of training was needed was initially discussed at a Lake Ontario Fruit Program advisory committee meeting conducted in Rochester in December 2011. We initially arranged for a concurrent short morning session (9:00–11:30 am) for Spanish-speaking employees to learn more about various aspects of fruit production practices; 40 employees from Niagara and Orleans County farms and 16 employees from Wayne County farms came just for the morning sessions (Table 1). Lunch was provided and included in their registration fee. They were able to join the regular CCE LOF Winter Fruit School after lunch if they desired to do so. The first training sessions focused on “Understanding the Life Cycle of an Apple Tree” (Mario Miranda Sazo, CCE LOF), “Pruning of Vertical Axe and Tall Spindle” (Terence Robinson, Cornell Univ.), “Quality Grades of Apples” (Craig Kahlke, CCE LOF, content translated by Mary Jo Dudley, Cornell Farmworker Program), and “Future Opportunities and Job Satisfaction” (Mary Jo Dudley). All sessions were taught in approximately 40–60 minutes, where questions and discussion were encouraged and handouts were provided. DEC credits were not provided.

We decided to extend the length of the educational program for one more hour after lunch on 2013. Again, the training was offered as a concurrent morning session from 9:00 am until 1:30 pm on February 4 and 5, 2013. Training sessions focused this time on “Tool Care, Preventing Common Injuries” (Anna Meyerhoff, NYCAHM), “Tree and Crop Load Management” (Terence Robinson), “Reporting Injuries and Taking Care of Yourself” (Alison DeMarree, CCE LOF, content translated by Mary Jo Dudley), and the talks “Changes in Immigration Policy: What Could it Mean for You” and “Improving Workplace Relations and Communications” (Mary Jo Dudley); 45 employees from Niagara and Orleans County farms and 12 employees from Wayne County farms attended the sessions (Table 1). Again, all sessions were taught in approximately 40–60 minutes, where questions and discussion were encouraged and handouts were provided. DEC credits were not provided.

In 2014, the Lake Ontario Fruit Program advisory committee continued emphasizing the need for a special educational program for Spanish employees. Due to low participation in this Spanish-speaking session at the Wayne County winter schools in

2012 and 2013, the CCE LOF program offered the Spanish session only at the Niagara school on February 3, 2014. For a third consecutive year, we arranged a concurrent morning session for Spanish-speaking employees to learn more about various aspects of fruit production practices; 42 employees from Orleans and Niagara County farms came just for the morning sessions (Table 1). Lunch was provided and included in their registration fee. As always, they were able to join the regular CCE LOF Winter Fruit School after lunch if they desired to do so. Training sessions focused on “Use of Rootstocks in the Modern Orchards” (Mario Miranda Sazo), “Cutting Out Fire Blight and Recognizing other Pests” (Deborah Breth CCE LOF, content translated by Anna Meyerhoff), “Quality Grades of Apples” (Craig Kahlke), and “Respirator Fit Test Demonstration” (Anna Meyerhoff), and “Creating Positive Workplaces” (Mary Jo Dudley). All sessions were taught in approximately 40–60 minutes, where questions and discussion were encouraged and handouts were provided. The length of the program was extended for approximately two more hours after lunch in 2014. DEC credits were not provided.

### **Educational Efforts (2015 and 2016)**

For the first time, we offered 1.5 DEC credits for a full day (9:00 am through 3:30 pm) of educational sessions for Spanish-speaking employees on February 2 and 3, 2015. This was the first successful year for the Spanish-speaking fruit school in Wayne County. A total of 17 participants attended the Spanish-speaking Wayne County Fruit School on February 3, 2015; 46 participants attended from Niagara and Orleans County farms (Table 1). Horticultural and pest management sessions continued emphasizing the science behind insect monitoring, disease control, pruning, and basic tree plant physiology. For the first time, young and mature apple trees were used for more hands-on pruning activities. The program also facilitated a round table discussion to talk about the advantages and disadvantages of working smarter, not harder, and entrepreneurship. Training sessions focused on “Managing Orchard Workers for Higher Labor Efficiency” (Jose Iniguez, Lamont Fruit Farm), “Round Table Discussion with Spanish-speaking Employees to talk about the “Advantages and Disadvantages of Working Smarter, not Harder, and Entrepreneurship” (discussion moderated by Mario Miranda Sazo), “How to Recognize the Damage produced by Black Stem Borers in Apple Trees” (Deborah Breth, content translated by Mary Jo Dudley), “Physiological Effects of Pruning and Types of Pruning Cuts” (Leonel Dominguez, Cornell Univ.), “Precision Pruning and Hand Thinning can Improve Fruit Quality” (Terence Robinson), “Basic Scouting in Apple Orchards for Scab, Fire Blight, How to Recognize the Difference between Fire Blight and Nectria Canker, Use of Traps to Monitor Several Insect Pests” (presented by Mario Miranda Sazo, talk content prepared by Deborah Breth), and “What You Need to Know about the New Immigration Reform—DAPA and What It Might Mean for Farmworkers” (Mary Jo Dudley).

This year, the CCE LOF team decided to hold the Spanish-speaking fruit schools on different days from the English fruit schools. The “traditional/regular” 2016 CCE LOF Winter Fruit Schools were conducted on February 1 and 2, while the 2016 CCE LOF Spanish-speaking Fruit Schools were conducted later, on February 23 and 24. The primary reason was that it was difficult to plan, coordinate, and simultaneously hold two winter fruit schools on the same day, as in the previous 4 years. I felt much of

my educational effort was on the Spanish-speaking school, even though I always gave talks at the regular schools. However, I did not get much time to interact with growers during the regular fruit schools. This year, we also changed the Spanish-speaking school content to include the use of dissecting microscopes to learn to dissect and differentiate vegetative and floral buds of Honeycrisp and Gala and improved the “hands-on” pruning time at an orchard. The schools were conducted at a farm instead of a CCE County office. Growers who agreed to host the schools at their respective farms were Mike Zingler in Orleans County and Chip Bailey in Wayne County.

Training sessions focused on “Why Irrigation is so Important for Apple Production, How and When to Irrigate” (Jaume Lordan Sanahuja, Cornell Univ.), “Main Apple Diseases that Reduce Apple Crop Value” (Gemma Reig Cordoba, Cornell Univ.), “Tips for Creating Positive Workplace Relations” (Mary Jo Dudley, group activity assisted by Katie Oakes, CCE Orleans and Mario Miranda Sazo), “Introduction to Floral Induction, Floral Anatomy”, and a Lab Activity to Learn to Differentiate Vegetative and Floral Buds of Honeycrisp with a Dissecting Microscope” (Mario Miranda Sazo, Liz Tee, CCE LOF and Jaume Lordan Sanahuja), “Precision Crop Load Management via Pruning” (Orchard pruning group exercises led by Mario Miranda Sazo and Jaume Lordan Sanahuja). The educational program was evaluated by the participants at the end of the schools.

### **First Northeastern Spanish-speaking Fruit Summer Tour in Western NY**

Last summer, the CCE LOF organized the first fruit summer tour for Spanish-speaking employees – the first one of this type in the Northeast (Figure 2). It was held in Orleans County on Saturday August 1, 2015. The 5-stop tour was well attended, with approximately 105 participants. The majority of farm employees came from Orleans and Niagara County farms, and a few from Wayne County. There were also two employees who came from Michigan, as a result of media advertising in the American Western Fruit Grower Magazine. Participants were hosted by a Spanish-speaking employee who was the owner and/or had acquired significant field experience by managing an orchard and/or a nursery operation. Viliulfo “Vilo” Rosario, an orchard manager and a co-owner of an apple orchard with Kast Farms in Orleans County, talked about his experience dealing with fire blight pressure while pursuing his dream to become a successful apple grower. Jose Perez of Perez Farms shared his experience with drainage issues, clearing of his new property, deer fence installation, and overall management of his new high density orchards planted since 2013. Jose Iniguez of Lamont Fruit Farm hosted 3 of the 5 stops and explained tree nursery production, training, trellis support, mechanical summer pruning, and use of a reflective groundcover fabric to improve light within tree fruit. Jose Iniguez, an orchard manager who I consider to be one of the most talented Spanish-speaking horticulturalists in NY today, encouraged participants to work smarter, not harder, to be curious, honest, and walk the orchard regularly to look for problems and solve them quickly. At the end of the tour, a very special and generous group of Orleans fruit growers prepared and served a nice barbeque chicken dinner to all attendees at Lamont Fruit Farm.

This summer, the CCE LOF program will be organizing the second Spanish-speaking Fruit Summer tour, to be conducted

in Wayne County on Saturday August 13, from 1 to 5pm.

### Preliminary Results and Future of the CCE LOF Spanish-speaking Fruit School Program:

In 2012, we began a horticultural and pest management program, which has been more successful on the west side of Rochester than in Wayne County. Classroom-based instruction has been successful, but it needs to be complemented with non-formal science education in the orchard. This year, 80 Spanish-speaking fruit workers participated in a full day educational session, Feb. 23–24 (Table 1). Attendees were introduced to basic and applied pomological and pest management concepts and modern apple pruning practices in the Spanish language. The educational program included the use of dissecting microscopes to learn how to dissect and differentiate vegetative and floral buds of Honeycrisp and Gala (Figure 3). The horticultural “hands-on” pruning sessions were well received and continued emphasizing the science behind pruning and basic tree plant physiology (Figure 4).

More than 280 employees have been trained on both the east and west side of Rochester since the program was started in 2012 (Table 1). Participants who have attended two or three of the five Spanish-speaking fruit schools offered so far have increased their overall understanding of rootstocks, crop load management, and pruning of high density plantings.

The first summer tour for Spanish-speaking farmers and workers established some common ground and began a networking system for Hispanics in the Western NY fruit industry. The tour was well attended, with approximately 105 participants (Table 1). Touring of orchards with Hispanic participants and Hispanic hosts proved to be a very successful idea for additional participation in 2015.

In 2016, participants were asked questions on the topical value and quality of presentations on a scale of 1 (poor) to 4 (excellent) for the five topics presented in Orleans and Wayne schools. The means of their responses on the value of presentations ranged from 3.7 to 3.8 in Orleans Co. and from 3.1 to 3.9



**Figure 2:** A view of Hispanic participants at a nursery stop and at an orchard stop during the first Hispanic Summer Fruit Tour conducted in Western NY in August 2015.

in Wayne Co. The means (data not shown) of their responses on quality of presentations ranged from 3.6 to 3.8 in Orleans Co. and from 3.5 to 3.9 in Wayne Co. When participants were asked to cite the most valuable things learned in the 2016 school, participant responses included “I learned to recognize a vegetative bud from a floral bud”, “the importance of irrigation in high density plantings”, “why pest management is so critical for fruit quality”, “the concept of biennial bearing”, “how precision pruning can improve fruit size”, etc. Several participants in this group have attended at least three of the five schools offered in the region, and several of them are now more familiar with the new concepts.

The success and future of the CCE LOF Spanish-speaking Fruit School Program is promising. In 2010 Hispanics were the largest minority group (17.6%) in the State (Figure 5). While Upstate NY is less ethnically and racially diverse than downstate, the upstate Hispanic population is almost 2.5 times larger in 2010 than in 1990 (Figure 6). These numbers demonstrate that basic technical knowledge among Hispanic orchard workers in Western NY needs to continue and be improved, and the CCE LOF program has identified this as a key area for educational programming the following years. The preliminary results (increased attendance at schools, interest in tours, perceived level of knowledge gained, and the request for more and more applied technical training) build a case for an in-depth evaluation to develop more curriculum or modules in horticulture, business, leadership, and pest management in the near future.

### Literature Cited

Denton, Nancy, Samantha Friedman and Nicole D’Anna. “Metropolitan and Micropolitan New York State: Population



**Figure 3:** Participants learn how to dissect and differentiate vegetative and floral buds of Honeycrisp and Gala in 2016.



**Figure 4: The methods and benefits of precision pruning are explained to Hispanic employees during outdoor and indoor educational activities in 2016.**

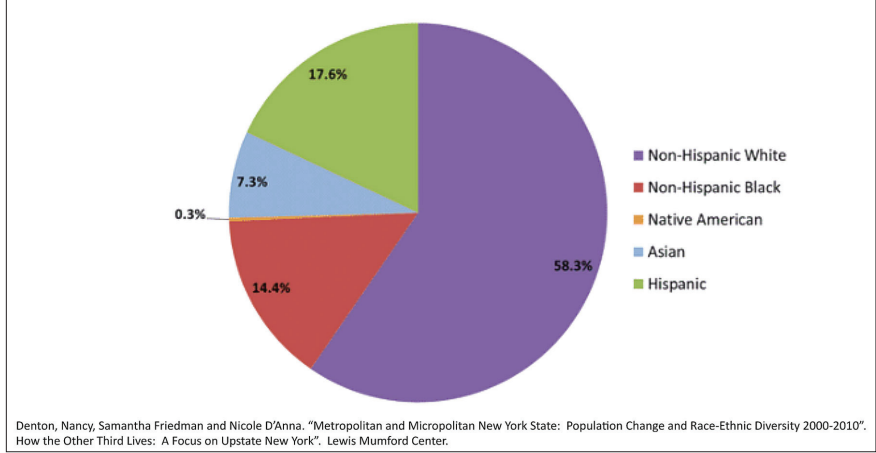
Change and Race-Ethnic Diversity 2000-2010”. How the Other Third Lives: A Focus on Upstate New York”. Lewis Mumford Center (Figures 5 and 6).

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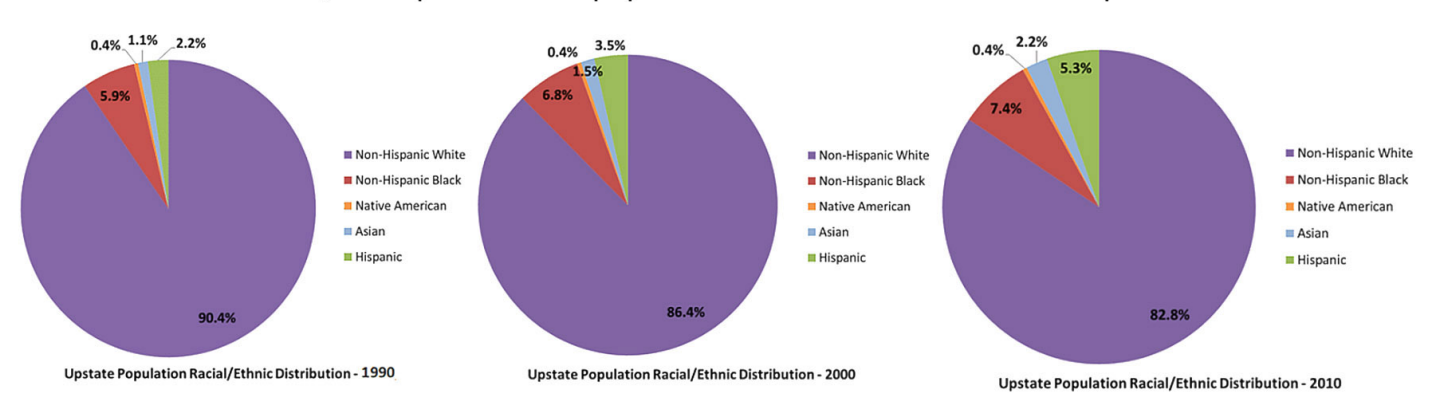
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Ethnic and Racial composition has changed in NYS – in 2010 Hispanics were the largest minority group (17.6%) in the State.



**Figure 5: Ethnic and racial composition has changed in NY State and Hispanics are the largest minority group in the State today.**

While Upstate NY is less ethnically & racially diverse than downstate, the upstate Hispanic population is almost 2.5 times larger in 2010 than in 1990, The upstate Asian population has also doubled over the period.



Denton, Nancy, Samantha Friedman and Nicole D’Anna. “Metropolitan and Micropolitan New York State: Population Change and Race-Ethnic Diversity 2000-2010”. How the Other Third Lives: A Focus on Upstate New York”. Lewis Mumford Center.

**Figure 6: Upstate population racial/ethnic distribution (1990, 2000, and 2010).**