

Nonfamily youths temporarily employed in agriculture

John C. Becker, Fern K. Willits, Anastasia Snyder, Dennis J. Murphy, James Hilton, Andrea Ryan, and Prem Bahandari

The study presented in this research summary was undertaken to increase researchers' understanding of the nature of the 12- to 20-year-old farm workforce that is employed by people other than youths' parents. The focus of the research was, on the one hand, the characteristics and perspectives of the agricultural employers who hire youth workers, and on the other hand, the attributes and views of the youth workers themselves. The aim was to answer a series of questions: How well do these young workers meet the needs and expectations of their employers? What are the effects of the farmwork experience on the youth workers? What are their reasons for seeking agricultural employment? What are these youths' perceptions of farming after their labor? and, finally, Do these youths show any interest in later employment in agriculture? Answering these questions is important because the answers may lead

John C. Becker is professor of agricultural economics and law, Fern K. Willits is Distinguished Professor of Rural Sociology, Dennis J. Murphy is Distinguished Professor of Agricultural Engineering, James Hilton is associate professor of agricultural engineering, and Andrea Ryan is an instructor in sociology, all at The Pennsylvania State University, University Park, PA; Anastasia Snyder is associate professor of human development and family science, The Ohio State University, Columbus, Ohio; and Prem Bahandari is a research analyst at the Alberta Research Council, Edmonton, Alberta, Canada. E-mail: jcb1@psu.edu

to knowledge about the role these workers will play in the future of U.S. agriculture.

The study was made possible by a grant to researchers at The Pennsylvania State University from the Youth Farm Safety Education and Certification Program, Cooperative State Research, Education, and Extension Service of the U.S. Department of Agriculture. Data from surveys of a sample of agricultural employers and their young employees were used to address the following general objectives:

1. Create a national profile of (a) the characteristics of agricultural producers who employ youths in the 12– 20-years age group, (b) the work responsibilities required of these young workers, and (c) the employers' perceptions of the skills that are most desirable in their young employees.
2. Identify (a) the characteristics of youth workers in the target age group, (b) their demographic characteristics, (c) their current skills, (d) the source(s) of their training, (e) their future plans for working in agriculture, and (f) the barriers they perceive to future agricultural employment.

Methodology

Names and addresses of farm businesses throughout the United States were obtained from a commercial sampling organization (Survey Sampling, Inc.) and from a national farming publication (*Farm Journal*). During 2004–05, letters were mailed to 32,119 of these businesses, requesting information on whether they had hired any workers (other than

dependents of the farm operator) between 12 and 20 years of age for less than 6 months during the preceding 12-month period. A total of 1,777 of the letters were returned as undeliverable. Of the remaining 30,342 businesses, 16,921 reported that they had not hired any youths meeting the study's criteria. Sequential mailings of survey materials, a postcard reminder, and a duplicate questionnaire at 2-week intervals resulted in the return of 1,440 completed survey forms from employers.

In each case, the employer was asked to provide names and contact information for up to five youth workers meeting the criteria of the study. A total of 879 of the 1,440 employers who responded to the survey complied with this request and provided the names and addresses of 1,875 employees. Questionnaires mailed to these youths resulted in the return of 694 completed forms from the young employees.

Agricultural employers of youths

The study dealt only with agricultural employers of youths between the ages of 12 and 20 who were not the dependents of the farm or ranch operator and who were employed for less than 6 months of the previous year. Excluded were the many farm operators whose sons and daughters worked, either for compensation or as unpaid family labor, on the home farms. Others who were excluded were employers who hired youths for more than 6 months and those who employed youth workers younger than 12 years or older than 20 years. The data provided information that would be useful for developing a generalized

profile of the targeted population of agricultural employers who hire temporary nonfamily youth workers.

A generalized profile of agricultural employers of youths. In developing a generalized profile of agricultural employers of youths, it is important to recognize that statistical averages and general descriptions focus on the broad picture, ignoring the variety and diversity of these employers, the types of work responsibilities they require of their young workers, and the skills they want them to possess. The employers studied in this research summary varied widely in the characteristics of their farming operations. Some of the larger combination farm-ranch establishments consisted of thousands of acres; others comprised less than 100 acres. Some had millions of dollars in farm sales; others sold less than \$10,000 a year in farm products. Some dealt almost exclusively with crops, others were primarily livestock operations, and still others had both crop and animal enterprises. Many hired only a single youth worker; others hired hundreds. Given the pre-

ceding caveat, what do the following data allow us to conclude concerning a generalized profile of agricultural employers who hired nonfamily temporary youth workers? ¹

- The farming operations of agricultural employers of youth workers had more acres and more farm sales than the average of all farms in the United States. (See table 1.)
- Agricultural employers of youth workers were likely to have crops only or both crops and animals as major enterprises, rather than only animal enterprises. (See table 2.)
- Employers of youth employees tended to hire only one or two such workers; few hired as many as five employees who were less than 20 years of age.
- Employers generally hired youth workers to help with seasonal tasks, rather than to catch up with ongoing work that was behind schedule or to obtain workers with needed skills.

- Employers tended to locate youth workers through informal channels—the youths were referred by friends or relatives of the employer and by other farmworkers—or through the youth’s directly applying for work.
- Most of these employers hired youths to perform general chores and maintenance activities around the farm or ranch, to do crop-related hand labor, or to carry out various machine-related tasks, including driving tractors and other farm vehicles, maintaining and repairing machines, and hitching and unhitching equipment. (See table 3.)
- Employers believed that possessing good work habits—including following directions, using time well, making simple work-related decisions, and working well with others—were more important than having academic skills or specialized knowledge of agriculture. (See table 4.)
- Overall, these agricultural employers were satisfied with the skills that their youth employees brought to the job.

Table 1. Comparison of farms and ranches in the employer sample with all U.S. farms as reported in the 2002 Census of Agriculture

[In percent]		
Farm or ranch characteristic	Employer sample (N = 1,440)	U.S. Census of Agriculture ¹ (N = 2,128,982)
Acreage:		
Less than 50 acres.....	12.0	34.8
50–179 acres.....	15.7	31.0
180–499 acres.....	24.0	18.3
500–999 acres.....	15.5	7.6
1,000 or more acres.....	32.8	8.3
Farm sales:		
Less than \$10,000.....	3.5	59.3
\$10,000–\$49,999.....	11.6	19.5
\$50,000–\$99,999.....	12.5	6.6
\$100,000 or more.....	72.4	14.6

From table 1, “Historical Highlights: 2002 and Earlier Census Years” (U.S. Census of Agriculture, 2002).

Explicating the diversity of agricultural employers. Although the preceding profile provides a generalized summary of agricultural employers who hire temporary youth workers (other than their own dependents), it is important to recognize the heterogeneity within this employer population. Substantial proportions of the employers surveyed held opinions that differed from those described by the foregoing data, depending upon region, farm size, sales, major enterprises, number of youths hired, and other factors. Thus,

- Although, overall, the farming operations of agricultural employers

Table 2. Characteristics of agricultural employers (N = 1,440)¹

Characteristic	Percent of employers reporting
Major farm enterprise:	
Crop.....	43.3
Animal.....	13.4
Both crop and animal.....	43.3
Number of youths hired:	
1.....	36.3
2.....	23.8
3 or 4.....	20.9
5 to 9.....	12.1
10 or more.....	6.9
Reason for hiring youth worker: ²	
Needed help with seasonal tasks.....	79.9
Needed help with catchup work that was behind schedule.....	21.5
Wanted to provide youth with farm experience or training.....	33.0
Asked by friend to hire youth.....	17.2
Needed special skills that youth had.....	7.4
How youth worker was located: ²	
Referred by friend or relative.....	53.4
Employed in previous year.....	34.4
Youth applied directly.....	31.5
Referred by another farmworker.....	22.8
Advertised in newspaper or bulletin board.....	2.9
Contacted employment agency.....	1.0
Referred by labor contractor.....	1.9

¹ Numbers of cases used in calculating percentages may vary from totals because some employees failed to respond to some survey questions.

² Percentages do not add to 100 because employers provided multiple responses to these questions.

of youth workers had more acres and more farm sales than the average of all farms in the United States, more than one-fourth of the farms and ranches in the employer sample had less than 180 acres, and another fourth had farm sales of less than \$100,000.

- Whereas agricultural employers of youth workers were likely to have crops only or both crops and animals as major enterprises, rather than only animal enterprises, the percentage of crops-only farms in a region varied from 71 percent of west coast farms to 27 percent of those in the south, and the incidence of animal-only operations varied from 8 percent on the west coast to 20 percent in the southwest and 23 percent in the northeast.²
- Although employers of youth employees tended to hire only 1 or 2 such workers, and few hired as many as 5 employees who were less than 20 years of age, nearly 1 in 5 employers did hire more than 5 workers, and a small per-

Table 3. Employer reports of tasks performed by youth workers, by age of worker

[Percent of employers reporting]

Task category	Age of worker			
	18–20 years	16–17 years	14–15 years	12–13 years
Chores or maintenance.....	83.8	85.9	81.2	78.4
Machinery related.....	77.4	74.4	68.8	39.8
Animal related.....	39.7	40.7	37.1	39.8
Crop related.....	71.0	66.8	63.8	72.4
Business related.....	16.3	15.4	17.0	12.2

¹ Specific items included in the task categories listed in the survey were as follows:

Chores or maintenance: Handling moving objects; general farm or ranch maintenance.

Machinery-related tasks: Fieldwork driving a tractor or a self-propelled machine; fieldwork as a rider on powered or pulled equipment; maintaining or repairing farm machinery; hitching implements or equipment.

Animal-related tasks: Caring for animals, including poultry; milking

cows or goats.

Crop-related tasks: Harvesting tree crops; harvesting ground crops; handworking or picking rocks; sorting or grading fruits or vegetables; landscaping, planting, pruning trees, shrubs, or vines; scouting for pests and diseases; applying fertilizers or protectants.

NOTE: An employer was designated as having workers engaged in a task category if the employer reported that one or more employees performed any of the specific tasks in the category.

Table 4. Employers' evaluations of the importance of various youth workers' skills and work habits, by age of worker¹

Characteristic	18–20 years	16–17 years	14–15 years	12–13 years
Academic skills:				
Reading and writing.....	52.7	53.5	45.8	36.0
Animal related.....	50.9	51.0	44.9	40.0
Work habits:				
Following directions	97.2	95.4	93.2	87.6
Using time wisely	90.7	89.5	87.0	80.0
Working well with others	85.8	86.1	84.0	76.7
Working independently.....	83.1	82.7	74.7	65.0
Making simple work-related decisions	78.8	79.7	74.7	64.4
Machinery skills:				
Knowing how to care for tools or machinery	66.5	61.4	45.4	41.4
Knowing how to use tools or machinery	65.8	61.0	45.0	39.8
Knowing what tools or machinery to use	56.8	57.9	38.2	31.8
Skills in working with crops.....	55.1	47.8	40.5	41.4
Skills in working with animals	41.0	42.3	34.1	38.9

¹ Percent of employers reporting that the skill or work habit was essential or very important.

centage (7 percent) hired 10 or more workers. Youths hired by the latter employers accounted for nearly half (48 percent) of all of the youth workers reported in the survey.

- Whereas most employers who hired youth workers for less than 6 months during the year hired White, non-Hispanic young persons, more than 1 in 4 of the employers of 18- to 20-year-olds reported hiring Hispanic or African-American youths or youths of other ethnic or racial backgrounds, and about 1 in 6 of the employers of workers younger than 18 years also did so.
- The statement that employers generally hired youth workers to help with seasonal tasks, rather than to catch up with ongoing work that was behind schedule or to obtain workers with needed skills was true, but more than 1 in 5 employers did hire these workers to help with catchup work, and a third reported that

one reason for hiring youths was to provide them with farm experience and training. Reasons for hiring also varied by major farm enterprise and number of youth employees hired, with those hired to work on crop farms and on farms with more youth workers the most likely to be hired to help with seasonal tasks. Farms and ranches that had major animal enterprises were more likely than employers on crop farms to hire youths to help with catchup work.

- The statement that employers tended to locate youth workers through informal channels or through the youth's directly applying for work also was true, although some employers, depending upon region, size of operation, major farm enterprise, and number of workers hired, used more formal labor sources. Employers hiring 10 or more workers were much more likely than those employing fewer youths to use labor contractors, advertisements, or

referrals from other workers to locate youth employees.

- Although most of the employers who hired youths hired them to perform general chores and maintenance activities around the farm or ranch, to do crop-related hand labor, or to carry out various machine-related tasks, about 40 percent of employers of youths in all age groups also reported that their young employees worked in animal-related tasks, and nearly 1 in 6 reported that their workers older than 13 years performed at least some business-related tasks, such as working at a farm stand or sales area or doing business-related computer tasks. Moreover, youths performing some tasks—for example, milking cows or caring for animals—spent most of their time carrying out those tasks rather than working on more general maintenance, crop-related, or machinery tasks.
- Employers did believe that possessing good work habits were

more important than having academic skills or specialized knowledge of agriculture, but such a belief should not be construed to mean that employers felt that agricultural skills were unimportant for their youth workers. Indeed, the majority of employers indicated that agricultural skills were important, if not essential, to the youths' carrying out the tasks they were assigned. These employers placed special emphasis on the importance of machinery-related skills, such as knowing what tools to use and how to use and care for them.

- Although, overall, these agricultural employers were satisfied with the skills that their youth employees brought to the job, sizeable proportions of employers expressed less than high levels of satisfaction with certain of their young workers' skill areas. More than 1 in 3 employers were less than highly satisfied with their employees as regards each of the following: use of time, ability to make simple work-related decisions, skill in working independently, skill in caring for tools and machinery, and knowledge of what tools to use and how to use them. Moreover, the levels of satisfaction varied by major farm enterprise and by number of workers employed.

Youth agricultural workers

Data bearing on the characteristics of the youth workers were available from both the employer survey and the employee survey. The information obtained was used to address the second general objective of the project: to identify (a) the demographic characteristics of youth workers in the

target age group, (b) other characteristics, (c) their current skills, (d) the source(s) of their training, (e) their future plans for working in agriculture, and (f) the barriers they perceive to future agricultural employment.

Demographic characteristics of youth workers: employer responses. Employers were asked to indicate, by gender, age, ethnicity, and full-time or part-time work status, the number of youths fitting the criteria of the study whom they had employed during the preceding year. Information on 6,111 targeted youth workers was obtained:

- Overall, 75 percent of the youths were males; only 25 percent were females.
- Youths between 18 and 20 years accounted for nearly half (47 percent) of all youth workers, with an additional 31 percent between 16 and 17 years. Just 17 percent were between 14 and 15 years, and only 5 percent were younger than 14 years.
- Sixty-four percent of all youth workers were White, non-Hispanic youths; about 1 in 3 was Hispanic; and the remaining 3 percent were Asians, African-Americans, or members of other racial or ethnic groups. Among 18- to 20-year-olds, nearly half (49 percent) of the youth workers were Hispanic. Although that percentage declined for younger workers, 23 percent of those 16 to 17 years and 18 percent of the 14- to 15-year-olds were Hispanic.
- Only about a third of the youths worked full time (35 or more hours a week), with the remaining two-thirds working only part time during their period of employment.

Youth worker characteristics: employee responses. The sample of youth employees was obtained by asking each employer to submit up to five names of their youth workers who fit the criteria of the study. Thus, if only 1 youth was employed, that individual fell within the sample. However, if an employer hired 10 or 100 youths, he or she still submitted no more than five names. As a result, youths who worked for employers who hired five or fewer workers were overrepresented in the sample. Sample bias also may have been introduced by the failure of many youths to respond to the survey. Whatever the cause, the youth employees surveyed contained somewhat greater proportions of younger, full-time workers than those reported by their employers. Moreover, although one-third of all workers reported by the employers were Hispanic, less than 5 percent of the youths who responded to the employee survey were Hispanic. (See table 5.)

Although the selective nature of the employee sample meant that generalizations concerning youth worker characteristics should be interpreted with caution, the employee survey provided additional information on the self-perceived skills of these youth workers, the source(s) of their training, their future plans for work in agriculture, and the barriers they perceived to future agricultural employment. This information was not available elsewhere.

Worker skills. Youths evaluated their own academic skills and work habits highly, with 95 percent or more reporting that they were at least somewhat skilled in reading and writing, arithmetic and mathematics, following directions, working well with others, and working independently. Although also high, their self-ratings on two categories of skills—using time well and making simple work-

Table 5. Characteristics of youth workers reported by employers, and characteristics of youths reported by employees

[In percent]

Characteristic	Employer sample	Employee sample
Sex:		
Male.....	74.4	74.5
Female.....	25.6	25.5
Age, years:		
18–20.....	47.1	33.4
16–17.....	31.4	37.2
14–15.....	16.9	23.2
12–13.....	4.6	6.2
Ethnicity or race:		
White, non-Hispanic.....	63.7	92.1
Hispanic or Latino.....	33.3	4.8
Other.....	3.0	3.1
Work status:		
Full time (35 or more hours per week).....	33.0	40.9
Part time (Less than 35 hours per week).....	67.0	59.1

NOTE: All percentages listed for age, ethnicity or race, and work status represent significant differences between the employer and employee samples ($p < .05$).

related decisions—were somewhat lower than their ratings for the other work habits.

Like their employers, youths felt that work habits (using time wisely, making simple work-related decisions, following directions, working well with others, and working independently) were more important than any specific skills in working with crops or animals. However, they reported higher importance ratings for these agricultural skills, and attached lower importance to academic skills, than did the employers.

Worker training. Almost half (49 percent) of the youth workers surveyed reported that they had ever lived on a farm, and not all of these reported that they had received training on tasks relevant to their agricultural employment. Most youth workers reported that they learned the skills that they used on their farm or ranch work on that job. On-the-job training

was thus an important element in the employment of these youths, underscoring the importance of following directions in performing their work.

About 4 out of every 10 youth employees reported that they had taken or were taking vocational agriculture classes, and nearly three-quarters of these youths indicated that the skills they learned in those classes were at least somewhat useful in their agricultural job. That more than 1 in 4 workers who had taken such classes did not find their learning there to be useful could reflect the fact that many of the tasks they were assigned were low-skill, manual-labor tasks or that some specialized skills are not part of an agriculture curriculum. Participation in 4-H and the National FFA Organization (formerly Future Farmers of America) accounted for other sources of training.

Plans for future agricultural employment. Although nearly 80 percent

of the youths who were surveyed reported that they were satisfied with their agricultural jobs, just 15 percent of the youths surveyed expressed an interest in being employed as an agricultural worker on a farm or ranch belonging to someone else when they would reach 30 years of age. A substantial proportion (more than 70 percent) of the youths who were surveyed reported that they planned to go to college. Hence, they likely looked upon their farm or ranch work as temporary, rather than as a source of income in adulthood.

Most viewed their farm or ranch job as a source of spending money or as a means of earning money for future educational expenses, and they felt that the pay they received was as good as or better than what they would have received from other work that they could get. Although these youths reported overwhelmingly that they had learned new skills that would benefit them in the future, the survey did not specify the nature of those skills; hence, it is unclear whether the youths perceived the skills they learned as either related to technical agriculture or relevant to their future employment. However, for the 45 percent of the youths who aspired to own a farm or ranch when they were 30 years of age, the farmwork experience may have contributed to that aspiration or to the acquisition of skills needed to achieve that goal.

Future research

By focusing on agricultural employers as the unit of analysis, the study presented in this research summary has shed some light on the characteristics of farm or ranch operators who hire temporary nonfamily youth workers, how they locate these employees, the nature of the tasks they expect their employees to perform, the skills they

deem to be important, and how satisfied they are with their young workers. Most of these employers hired only one or two youths, recruiting them through friends and family members, involving them largely in unskilled or semiskilled tasks, and expecting minimal agricultural knowledge or skill. Most expressed satisfaction with their young workers.

However, in describing the characteristics of youth workers on the basis of the sample of the 694 young employees who answered the employee survey, it is important to underscore the fact that the sample was not representative of all youth agricultural workers in the United States. The method of sampling and the selective response of youths to the mailed questionnaire meant that those who provided data for the employee analysis consisted almost entirely of young

people employed by neighbors and friends in their home areas and by employers who hired fewer than 5 youths in a year. Moreover, these youths were almost all non-Hispanic whites, lived with both parents, had plans to attend college, and were working to acquire spending money for themselves rather than to contribute to their families' support. To the extent that the total youth agricultural labor force in the country differs from these characteristics, conclusions drawn from the employee analysis presented here must be viewed with caution.

To understand the goals, perceptions, and plans of youths working in agriculture, additional research is needed that focuses on *all* such youths. This means obtaining data on various types of youth workers, not just seasonal ones, who are unrelated to their

employers. Such an analysis requires developing a sampling plan that focuses on *workers*, not employers, so that youths who are employed in relatively large numbers by a given employer are adequately represented. □

Notes

¹ The survey, conducted in 2005–06, asked for information on employment patterns “in the preceding 12 months”; hence, the information that was returned preceded the survey by not more than a year.

² For the purposes of this research summary, the west coast is defined as California, Oregon, and Washington; the south as Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia; the southwest as Arizona, Colorado, Nevada, New Mexico, Oklahoma, Texas, and Utah; and the northeast as Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.