

Table 1. Youth Agricultural Employer Pilot Study response.

Region	# Receiving Prenotification Letter	# Known Bad Addresses	# Indicating Ineligible to Participate	# Completed Surveys	Pilot Hit Rate^a	Pilot Response Rate^b
					%	%
Northeast	800	58	421	57	43.3	17.8
South	800	94	349	19	50.6	5.3
Midwest	800	19	489	51	37.4	17.5
Plains	800	23	469	54	39.6	17.5
Southwest	800	136	334	32	49.7	9.7
West Coast	800	92	253	28	50.1	7.9
Total	4,800	422	2,415	241	44.8	12.3

^aHit rate = ((# receiving pre-notification - # bad addresses - # ineligible to participate)/(# receiving pre-notification - # bad addresses)) X 100

^bResponse rate = ((# completed surveys)/(# receiving pre-notification - # bad addresses - # ineligible to participate)) X 100

Table 2. Total Youth Agricultural Employer Survey response.

Region	# Receiving Prenotification Letter	# Known Bad Addresses	# Indicating Ineligible to Participate	# Completed Surveys	Hit Rate^a	Response Rate^b
					%	%
Northeast	3,508	182	2,026	230	39.1	17.7
South	4,986	399	2,764	140	44.6	7.7
Midwest	5,699	165	3,398	287	38.6	13.4
Plains	5,016	159	2,919	316	56.1	16.3
Southwest	4,694	549	2,132	170	48.6	8.4
West Coast	8,216	800	3,682	287	50.4	8.0
Total	32,119	1,777	16,921	1,440	44.2	10.7

^aHit rate = ((# receiving pre-notification - # bad addresses - # ineligible to participate)/(# receiving pre-notification - # bad addresses)) X 100

^bResponse rate = ((# completed surveys)/(# receiving pre-notification - # bad addresses - # ineligible to participate)) X 100

Table 3. Total Youth Agricultural Employee Survey response.

Region	# in Sample	# Known Bad Addresses	# Indicating Ineligible to Participate	# Completed Surveys	Response Rate^a
					%
Northeast	314	19	13	129	45.7
South	178	33	11	37	24.0
Midwest	371	21	40	150	48.4
Plains	431	19	29	206	53.8
Southwest	233	30	22	74	40.9
West Coast	379	66	17	98	33.1
Total	1,906	199	132	694	44.1

^aResponse rate = ((# completed surveys)/# in sample - # bad addresses - # ineligible to participate) X 100

Table 4. Characteristics of farm/ranch employers included in the sample (N=1,440).

Farm/Ranch Characteristics	Number of Employers	Percent
Region		
Northeast	232	16.1
South	140	9.7
Midwest	287	19.9
Plains	316	21.9
Southwest	168	11.7
West Coast	297	20.6
Acreage		
<10 acres	74	5.1
10-49 acres	96	6.7
50-179 acres	223	15.5
180-499 acres	341	23.7
500-999 acres	220	15.3
1,000-1,999 acres	201	14.0
2,000+ acres	264	18.3
No answer	21	1.5
Farm Sales		
<\$2,500	15	1.0
\$2,500-\$9,999	32	2.2
\$10,000-\$24,999	60	4.2
\$25,000-\$49,999	94	6.5
\$50,000-\$99,999	167	11.6
\$100,000-\$499,999	530	36.8
\$500,000-\$999,999	188	13.1
\$1,000,000-\$2,499,999	136	9.4
\$2,500,000-\$4,999,999	62	4.3
\$5,000,000+	49	3.4
No answer	107	7.4
Major Farm Enterprise		
Crop	610	42.4
Animal	189	13.1
Both crop & animal	609	42.3
No answer	32	2.2

Table 5. Farm size, sales, enterprises, and number of youth workers by region.

Farm/Ranch Characteristics	Region					
	Northeast (N=232) ^a	South (N=140)	Midwest (N=287)	Plains (N=316)	Southwest (N=168)	West Coast (N=297)
	%	%	%	%	%	%
Acreage						
<180 acres	43.9	35.5	28.3	9.6	14.6	37.5
180-99 acres	36.5	33.3	31.4	13.7	15.9	18.2
500-1,999 acres	17.0	22.5	33.2	41.9	37.2	22.3
2,000+ acres	2.6	8.7	7.1	34.8	32.3	22.0
Farm Sales						
<\$100,000	29.8	42.1	28.2	21.1	36.7	20.6
\$100,000-\$499,999	45.6	35.3	42.0	37.3	34.0	41.2
\$500,000+	24.7	22.6	29.8	41.6	29.3	38.3
Major Farm Enterprise						
Crop	42.8	27.2	34.6	39.2	32.1	70.6
Animal	23.1	16.9	12.0	7.4	20.4	8.0
Both crop & animal	34.1	55.9	53.4	53.4	47.5	21.5

^aTotal number of cases varies from sample totals due to missing data

Table 6. Comparison of farms/ranches in the employer sample with all U.S. farms as reported in 2002 Census of Agriculture.^a

Farm/Ranch Characteristics	Employer Sample (N = 1,440)	U.S. Census of Agriculture^a (N = 2,128,982)
	%	%
Acreage		
<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+ acres	32.8	8.3
Farm Sales		
<\$10,000	3.4	59.3
\$10,000-\$49,999	11.1	19.5
\$50,000-\$99,999	12.1	6.6
\$100,000+	65.4	14.6
Region		
Northeast	16.1	7.0
South	9.7	27.2
Midwest	19.9	29.2
Plains	21.9	11.2
Southwest	11.7	18.1
West Coast	20.6	7.3

^a Source: Table 1. Historical Highlights: 2002 and Earlier Census Years, 2002 US Census of Agriculture.

Table 7. Comparing characteristics of farms in the current employer sample with farms sampled in the CAIS Study, by region.^a

Farm/Ranch Characteristic	Region							
	Northeast		North Central		South		West	
	Employer Sample (N = 228)	CAIS Sample (N = 840)	Employer Sample (N = 499)	CAIS Sample (N = 678)	Employer Sample (N = 224)	CAIS Sample (N = 473)	Employer Sample (N = 489)	CAIS Sample (N=715)
	%	%	%	%	%	%	%	%
Acreage								
<500 acres	80.5	87.3	40.9	61.8	50.7	72.9	49.8	64.2
500-1,000 acres	8.0	8.3	19.2	13.0	15.8	9.1	15.1	8.2
1,000+ acres	11.5	4.4	39.9	25.2	33.5	18.0	35.1	27.6
Farm Sales								
<\$10,000	3.8	14.3	2.4	14.0	3.8	19.9	4.4	19.4
\$10,000-\$99,999	26.5	32.9	21.7	30.5	37.0	46.1	19.4	30.6
\$100,000+	69.7	52.8	75.9	55.5	59.1	34.0	76.2	49.9
Number of Youth Hired								
1-2	54.0	69.0	64.7	70.1	64.7	78.0	56.1	68.4
3-4	45.7	19.2	20.3	19.9	20.9	15.9	19.5	18.5
5 or more	30.7	11.8	14.9	10.0	14.4	6.1	24.4	13.1

^aSource: Data file for Childhood Agricultural Injury Survey (CAIS), National Institute for Occupational Safety, and U.S. Department of Agriculture

Table 8. Number of youth workers on the sampled farms.

Number of Youth Workers Hired/Farm	Employers		Total Youth Workers	
	Number	%	Number	%
One	505	36.3	505	8.3
Two	332	23.8	664	10.9
3-4	291	20.9	990	16.2
5-9	169	12.1	1,042	17.0
10-19	61	4.4	762	12.5
20 or more	35	2.5	2,148	35.1
Total	1,393^a	100.0	6,111	100.0

^a47 employers did not report the total number of youth employees

Table 9. Number of youth workers per farm/ranch by region, acreage, farm sales, and farm enterprises.

Farm/Ranch Characteristics	Number of Youth Workers					Total
	One	Two	3-4	5-9	10 or more	
	%	%	%	%	%	
Region						
Northeast	30.7	24.1	24.6	13.6	7.0	228
South	33.1	29.4	21.3	8.8	7.4	136
Midwest	28.0	26.9	24.4	14.3	6.5	279
Plains	48.4	19.7	16.4	11.2	4.3	304
Southwest	38.9	24.2	23.6	8.9	4.5	157
West Coast	36.0	22.1	17.6	13.1	11.1	289
Acreage						
<180 acres	26.8	22.6	26.1	14.7	9.7	380
180-499 acres	37.2	24.3	19.4	12.3	6.8	325
500-1,999 acres	39.2	26.2	18.2	10.7	5.8	413
2,000+ acres	42.8	21.8	19.8	11.3	4.3	257
Farm Sales						
<\$100,000	34.4	26.7	24.4	10.8	3.7	352
\$100,000-\$499,999	38.7	23.5	19.4	12.3	6.1	511
\$500,000+	34.3	21.7	19.6	14.3	10.0	428
Major Farm Enterprises						
Crop	32.3	21.7	17.8	15.6	12.6	595
Animal	36.3	24.7	25.8	10.4	2.7	182
Both crop & animal	39.5	25.7	22.7	9.5	2.6	587

Table 10. Number of employers hiring youth workers and number of workers hired, by age.

Age of Workers	Employers		Youth Workers	
	Number ^a	% ^a	Number	%
18-20 years	803	55.8	2,879	47.1
16-17 years	750	52.1	1,922	31.5
14-15 years	456	31.7	1,032	16.9
12-13 years	130	9.0	278	4.5
Total	1,440	100.0	6,111	100.0

^aNumbers and percentages for employers to not add to totals because some employers hired workers in more than one age category

Table 11. Percentages of employers hiring male and female youth workers and workers of different racial/ethnic groups and the percentages of workers in these categories, by age.

Worker Characteristics	Employers %	Youth Workers %
18-20 Year Olds		
Gender		
Male	89.3	76.3
Female	26.8	23.6
Race/Ethnicity		
White (not Hispanic/Latino)	77.2	48.8
Hispanic/Latino	25.5	48.5
Other	4.0	2.7
16-17 Year Olds		
Gender		
Male	89.5	72.5
Female	26.7	27.5
Race/Ethnicity		
White (not Hispanic/Latino)	84.7	73.7
Hispanic/Latino	16.9	23.4
Other	5.1	2.9
14-15 Year Olds		
Gender		
Male	85.3	73.6
Female	29.3	26.4
Race/Ethnicity		
White (not Hispanic/Latino)	84.9	79.5
Hispanic/Latino	15.6	17.5
Other	1.5	3.0
12-13 Year Olds		
Gender		
Male	83.1	70.9
Female	30.0	29.1
Race/Ethnicity		
White (not Hispanic/Latino)	84.6	83.0
Hispanic/Latino	13.8	11.0
Other	4.6	6.0

^aPercentages for employers do not total 100.0 because some employers hired workers in more than one gender and/or race/ethnicity category

Table 12. Why did employers hire these youth workers? (N=1,440).

Reasons	Not Selected	Selected ^a
	%	%
Needed help with seasonal tasks	20.1	79.9
Needed help to “catch up” on work that was behind schedule	78.5	21.5
Wanted to provide youth with farm experience/training	67.0	33.0
Asked by friend to hire youth	82.8	17.2
Needed special skills that youth had	92.6	7.4

^a Some employers gave more than one reason.

Table 13. Reasons for hiring youth by region, farm size, farm sales, major enterprises, and number of youth workers hired.^a

Farm/Ranch Characteristic	Help with Seasonal Tasks	Catch-up Work	Provide Worker with Experience	Asked by Friend	Needed Special Skills
	%	%	%	%	%
Region					
Northeast	78.4	18.5	31.0	20.7	7.8
South	75.7	30.0	32.9	21.4	2.1
Midwest	79.4	19.2	34.1	17.1	8.4
Plains	83.9	23.7	30.7	12.3	7.3
Southwest	74.4	26.8	36.9	16.7	8.3
West Coast	82.2	16.5	33.7	18.2	8.1
Farm Size					
<180 acres	80.2	24.2	30.3	17.6	6.4
180-499 acres	77.7	19.4	32.8	20.5	8.2
500-1,999 acres	79.3	22.3	35.9	15.2	6.9
2,000+ acres	83.0	19.7	33.7	16.3	9.1
Farm Sales					
<\$100,000	78.3	26.1	32.3	16.6	6.8
\$100,000-\$499,999	83.4	19.6	34.0	17.4	7.5
\$500,000+	78.6	19.8	32.2	20.2	8.0
Major Enterprises					
Crop	85.6	13.4	30.8	18.5	6.4
Animal	63.5	30.2	29.6	17.5	9.0
Both crop & animal	79.3	26.9	37.3	16.1	7.9
Total Youth Hired					
1	76.4	23.8	31.9	14.3	7.5
2	78.6	22.0	35.8	19.6	7.2
3-4	83.8	21.3	32.3	17.2	10.3
5-9	86.4	19.5	36.1	20.7	5.3
10 or more	90.6	13.5	35.4	22.9	3.1

^aRelationships shown in bold are statistically significant (p < .05)

Table 14. How did you locate the youth workers you employed? (N = 1,440)

Method of locating	Not Used	Used^a
	%	%
Youth worker was referred to me by a friend or relative	46.6	53.4
Youth worker was employed by me in a previous year	65.6	34.4
Youth worker applied to me directly	68.5	31.5
Youth worker was referred to me by another farm worker on the farm or ranch	77.2	22.8
Advertised in newspaper, other publications, or on bulletin board	97.1	2.9
Contacted an employment agency	99.0	1.0
Youth worker was referred to me by a labor contractor	98.1	1.9

^aSome employers reported multiple methods for locating workers

Table 15. How employees located their youth workers by region, farm size, farm sales, major enterprises, and number of youth workers hired.^a

Farm/Ranch Characteristics	Referred by Friend or Relative	Employed Previous Year	Youth Applied Directly	Referred by Another Worker	Advertisements	Labor Contractor
	%	%	%	%	%	%
Region						
Northeast	61.2	33.2	34.5	19.0	7.3	0.0
South	60.0	27.9	37.9	17.1	2.1	4.3
Midwest	52.6	40.8	32.8	23.3	3.5	1.4
Plains	51.6	38.3	27.2	14.9	1.6	1.6
Southwest	50.6	28.6	33.9	24.4	1.8	0.6
West Coast	48.5	31.6	27.9	35.4	1.3	4.0
Farm Size						
<180 acres	52.4	34.1	31.8	22.6	4.3	4.1
180-499 acres	56.9	35.5	35.2	22.0	3.8	1.2
500-1,999 acres	50.6	34.4	30.4	22.3	1.7	1.7
2,000+ acres	56.4	33.7	27.7	24.6	1.1	5.2
Farm Sales						
<\$100,000	59.2	31.8	28.3	12.0	2.4	1.9
\$100,000-\$499,999	51.9	35.8	31.3	20.9	3.0	2.3
\$500,000+	52.6	32.2	33.3	34.7	3.2	1.8
Major Enterprises						
Crop	51.5	38.4	33.4	26.9	3.9	3.4
Animal	49.2	24.3	28.6	23.8	2.6	1.1
Both crop & animal	57.3	34.5	30.5	19.0	1.8	0.8
Total Youth Hired						
1	47.9	21.6	21.4	15.0	1.0	0.6
2	53.6	34.3	28.9	16.6	3.6	1.2
3-4	59.1	38.1	32.3	25.1	2.4	1.4
5-9	56.8	51.5	49.7	41.4	4.1	3.0
10 or more	64.6	66.7	64.6	49.0	10.4	12.5

^a Relationships shown in bold are statistically significant ($p < .05$)

Table 16. Percentage of employers indicating participation of youth workers in each of the general task categories, by age.

General Task Category	Age of Workers			
	18-20 years % ^a	16-17 years %	14-15 years %	12-13 years %
Chores/Maintenance	83.8	85.9	81.2	78.9
Machinery	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

^aPercentages do not sum to 100 because some employers had workers participating in more than one category

Table 17. Relationship of region, farm size, farm sales, major enterprise, and total youth hired to worker participation in chores and maintenance tasks, by age of worker.^a

Farm/Ranch Characteristics	Age of Worker		
	18-20	16-17	14-15
	%	%	%
Region			
Northeast	91.1	84.1	87.5
South	87.2	92.8	86.5
Midwest	88.4	92.9	82.4
Plains	85.9	87.1	76.8
Southwest	84.5	81.0	78.4
West Coast	72.4	77.4	75.7
Farm Size			
<180 acres	79.7	80.7	82.7
180-499 acres	87.2	87.6	86.6
500-1,999 acres	88.8	90.1	83.2
2,000+ acres	78.7	83.2	66.1
Farm Sales			
<\$100,000	85.6	85.2	85.1
\$100,000-\$499,999	83.8	84.8	83.6
\$500,000+	83.8	88.1	73.9
Major Enterprise			
Crop	77.0	81.0	73.4
Animal	87.1	87.0	88.5
Both crop & animal	91.0	90.2	86.8
Total Youth Hired			
1	86.2	84.1	84.8
2	84.0	91.8	85.5
3-4	85.5	85.4	81.8
5-9	82.1	82.5	81.6
10 or more	81.1	84.3	76.8

^aRelationships shown in bold are statistically significant (p < .05)

Table 18. Relationship of region, farm size, farm sales, major enterprise, and total youth hired to worker participation in machinery-related tasks, by age of worker.^a

Farm/Ranch Characteristics	Age of Worker		
	18-20	16-17	14-15
	%	%	%
Region			
Northeast	75.6	65.9	61.5
South	80.8	84.1	64.9
Midwest	78.7	72.1	67.6
Plains	89.0	84.1	81.7
Southwest	71.4	79.7	80.4
West Coast	69.4	65.0	59.5
Farm Size			
<180 acres	65.2	57.9	58.3
180-499 acres	79.3	76.3	73.9
500-1,999 acres	84.3	83.3	74.8
2,000+ acres	83.2	80.3	71.0
Farm Sales			
<\$100,000	73.3	72.8	68.4
\$100,000-\$499,999	78.4	75.0	69.7
\$500,000+	79.2	75.3	66.7
Major Enterprise			
Crop	70.5	67.6	61.7
Animal	73.3	65.2	61.5
Both crop & animal	87.1	83.3	78.2
Total Youth Hired			
1	85.7	83.1	75.9
2	76.8	86.2	78.4
3-4	74.5	72.8	62.1
5-9	75.6	62.5	71.4
10 or more	71.7	62.7	60.9

^aRelationships shown in bold are statistically significant (p < .05)

Table 19. Relationship of region, farm size, farm sales, major enterprise, and total youth hired to worker participation in crop-related tasks, by age of worker.^a

	Age of Worker		
	18-20 %	16-17 %	14-15 %
Region			
Northeast	74.0	65.9	59.4
South	65.4	62.3	59.5
Midwest	65.8	65.6	66.7
Plains	69.0	61.8	58.5
Southwest	77.4	69.6	64.7
West Coast	74.5	75.9	73.0
Farm Size			
<180 acres	83.3	70.1	71.7
180-499 acres	60.9	60.4	59.7
500-1,999 acres	69.5	67.6	58.8
2,000+ acres	67.7	67.9	64.5
Farm Sales			
<\$100,000	72.2	66.3	64.0
\$100,000-\$499,999	71.5	63.0	58.8
\$500,000+	68.8	68.7	68.1
Major Enterprise			
Crop	86.8	79.4	79.3
Animal	44.6	39.1	36.5
Both crop & animal	61.6	62.3	55.3
Total Youth Hired			
1	58.1	57.7	49.4
2	67.4	66.7	55.7
3-4	70.9	62.1	62.1
5-9	69.2	62.5	61.2
10 or more	87.7	79.4	78.1

^aRelationships shown in bold are statistically significant (p < .05)

Table 20. Relationship of region, farm size, farm sales, major enterprise, and total youth hired to worker participation in animal-related tasks, by age of worker.^a

Farm/Ranch Characteristics	Age of Worker		
	18-20 %	16-17 %	14-15 %
Region			
Northeast	44.7	45.2	41.7
South	48.7	47.8	32.4
Midwest	53.5	49.4	51.0
Plains	39.4	48.2	30.5
Southwest	50.0	35.4	47.1
West Coast	17.9	16.8	14.9
Farm Size			
<180 acres	28.6	28.9	26.0
180-499 acres	52.0	53.8	49.6
500-1,999 acres	45.3	44.1	37.4
2,000+ acres	34.8	38.0	37.1
Farm Sales			
<\$100,000	37.2	38.5	38.6
\$100,000-\$499,999	42.3	41.3	34.5
\$500,000+	38.1	42.4	39.1
Major Enterprise			
Crop	3.0	2.8	2.7
Animal	87.1	83.7	75.0
Both crop & animal	68.7	68.2	59.4
Total Youth Hired			
1	47.6	51.3	45.6
2	43.6	45.9	48.5
3-4	47.3	53.4	40.9
5-9	41.0	38.8	40.8
10 or more	24.1	21.1	22.5

^aRelationships shown in bold are statistically significant (p < .05)

Table 21. Relationship of region, farm size, farm sales, major enterprise, and total youth hired to worker participation in business-related tasks, by age of worker.^a

Farm/Ranch Characteristics	Age of Worker		
	18-20 %	16-17 %	14-15 %
Region			
Northeast	30.1	27.0	24.0
South	21.8	11.6	8.1
Midwest	12.3	16.2	21.6
Plains	12.3	11.8	7.3
Southwest	11.9	6.3	9.8
West Coast	13.8	15.3	21.6
Farm Size			
<180 acres	24.7	28.9	29.9
180-499 acres	14.0	13.0	17.6
500-1,999 acres	11.2	9.0	7.6
2,000+ acres	13.5	9.5	8.1
Farm Sales			
<\$100,000	21.1	16.6	17.5
\$100,000-\$499,999	13.7	14.9	17.6
\$500,000+	15.0	14.8	13.8
Major Enterprise			
Crop	20.5	21.5	25.0
Animal	13.9	10.9	11.5
Both crop & animal	11.9	10.5	10.7
Total Youth Hired			
1	12.4	7.4	7.6
2	13.8	11.9	16.5
3-4	17.3	16.5	11.2
5-9	9.0	15.0	8.3
10 or more	24.5	25.0	25.6

^aRelationships shown in bold are statistically significant (p < .05)

Table 22. How much of the total work time of 18-20 year old workers was spent on . . . ?

Tasks	None	Very Little	Some	A Great Deal	All or Almost All	Mean Intensity Score ^a
	%	%	%	%	%	
Chores & Maintenance						
Handling or moving objects	22.4	13.7	38.2	18.2	7.6	1.75
Doing general farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	39.9	16.6	32.1	9.7	1.6	1.17
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	44.9	8.8	22.8	15.9	7.6	1.32
Doing farm field work as rider on power or pulled equipment	69.0	10.0	13.3	5.3	2.4	.62
Driving a farm tractor, truck, or vehicle not described above	42.5	13.9	26.9	12.6	4.0	1.22
Installing, using, or maintaining irrigation equipment	73.3	8.3	12.3	5.1	1.0	.52
Maintaining or repairing farm machinery	59.0	16.3	18.5	5.3	.9	.73
Hitching and unhitching implements and equipment	52.7	17.6	23.3	5.2	1.3	.85
Crop-Related						
Harvesting or picking tree crops	85.0	2.0	4.4	4.6	4.0	.41
Harvesting or picking ground crops	74.8	3.4	9.5	6.6	5.7	.65
Hand weeding or picking rocks	61.3	12.9	18.0	4.4	3.4	.76
Sorting or grading farm products	81.0	3.7	7.6	5.6	2.1	.44
Landscaping and planting	74.8	10.1	10.6	2.9	1.5	.46
Scouting for pests and plant diseases	91.2	4.0	3.4	1.0	.4	.15
Applying fertilizers and protectants	83.8	7.3	7.0	1.4	.5	.27
Animal-Related						
Caring for animals or poultry	61.8	4.9	16.4	11.9	4.9	.93
Milking cows or goats by hand	97.2	.9	1.3	.5	.1	.05
Milking cows using equipment	88.5	1.1	3.7	3.9	2.8	.31
Business-Related						
Using a computer for farm business purposes	91.3	3.0	4.4	1.0	.3	.16
Working on a farm stand or sales area	90.3	1.4	4.2	2.9	1.3	.24

^aIntensity Scores were calculated by scoring the subjects' responses from "None"=0 to "All or Almost all"=4.

Table 23. How much of the total work time of 16-17 year old workers was spent on . . . ?

Tasks	None	Very Little	Some	A Great Deal	All or Almost All	Mean Intensity Score ^a
	%	%	%	%	%	
Chores & Maintenance						
Handling or moving objects	20.1	15.1	34.3	21.6	8.8	1.84
General farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	40.5	16.3	30.2	11.6	1.4	1.17
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	51.3	8.4	22.7	11.8	5.7	1.12
Farm field work as rider on power or pulled equipment	71.0	10.9	12.7	4.5	1.0	.53
Driving a farm tractor, truck, or vehicle not described above	46.9	15.8	26.0	9.1	2.2	1.04
Installing, using, or maintaining irrigation equipment	77.0	6.0	9.3	5.7	2.0	.05
Maintaining or repairing farm machinery	62.3	15.2	17.7	4.5	.3	.65
Hitching and unhitching implements and equipment	52.5	18.9	22.4	5.6	.5	.83
Crop-Related						
Harvesting or picking tree crops	90.3	2.3	3.3	2.2	1.9	.23
Harvesting or picking ground crops	78.6	4.2	8.2	5.6	3.4	.51
Hand weeding or picking rocks	58.1	11.8	19.0	7.2	3.8	.87
Sorting or grading farm products	84.4	2.9	6.1	4.5	2.2	.37
Landscaping and planting	79.0	7.9	8.6	3.5	1.0	.39
Scouting for pests and plant diseases	92.4	4.6	2.6	.3	.1	.11
Applying fertilizers and protectants	88.0	7.3	3.5	.8	.3	.18
Animal-Related						
Caring for animals or poultry	61.2	7.2	18.0	8.8	4.8	.89
Milking cows or goats by hand	97.8	.7	.8	.5	.1	.04
Milking cows using equipment	87.5	1.2	3.9	4.4	3.0	.34
Business-Related						
Using a computer for farm business purposes	93.3	3.9	2.0	.4	.3	.10
Working on a farm stand or sales area	89.7	1.8	4.4	2.0	2.2	.25

^aIntensity Scores were calculated by scoring the subjects' responses from "None"=0 to "All or Almost all"=4.

Table 24. How much of the total work time of 14-15 year old workers was spent on . . . ?

Tasks	None	Very Little	Some	A Great Deal	All or Almost All	Mean Intensity Score ^a
	%	%	%	%	%	
Chores & Maintenance						
Handling or moving objects	26.9	11.8	30.3	18.3	12.7	1.78
General farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	50.9	15.4	25.3	5.4	2.9	.94
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	70.8	9.0	13.1	5.2	1.8	.58
Farm field work as rider on power or pulled equipment	76.9	8.4	9.3	3.8	1.6	.45
Driving a farm tractor, truck, or vehicle not described above	66.3	12.2	17.0	3.4	1.1	.61
Installing, using, or maintaining irrigation equipment	80.5	3.8	8.6	4.3	2.7	.45
Maintaining or repairing farm machinery	76.2	11.8	10.9	1.1	.0	.37
Hitching and unhitching implements and equipment	65.4	17.0	15.2	2.0	.5	.55
Crop-Related						
Harvesting or picking tree crops	89.6	2.3	3.8	2.5	1.8	.25
Harvesting or picking ground crops	80.8	3.2	5.4	5.7	5.0	.51
Hand weeding or picking rocks	59.5	10.2	18.8	6.8	4.8	.87
Sorting or grading farm products	81.2	3.4	7.0	5.0	3.4	.46
Landscaping and planting	80.1	7.5	9.3	2.3	.9	.36
Scouting for pests and plant diseases	95.5	3.2	.9	.5	.0	.06
Animal-Related						
Caring for animals or poultry	63.6	7.2	15.8	7.2	6.1	.85
Milking cows or goats by hand	98.4	.7	.2	.5	.2	.03
Milking cows using equipment	90.3	.9	5.2	1.6	2.0	.24
Business-Related						
Using a computer for farm business purposes	93.2	3.8	1.6	1.1	.2	.11
Working on a farm stand or sales area	87.8	3.2	3.6	3.2	2.3	.29

^aIntensity Scores were calculated by scoring the subjects' responses from "None"=0 to "All or Almost all"=4.

Table 25. Task intensity scores by region, farm size, farm sales, major enterprises, and number of youth workers hired for 18-20 year old workers.^a

Farm/Ranch Characteristic	Handling/ Moving	Drive Tractor	Drive other Vehicle	General Maintenance Repairs	Caring for Animals	Hitching Equipment	Hand Weeding
----- Mean Intensity Score-----							
Region							
Northeast	2.04	1.14	1.07	1.04	1.08	.78	.72
South	1.79	1.21	1.18	1.21	1.28	.95	.71
Midwest	1.94	1.26	1.23	1.15	1.17	.96	.85
Plains	1.76	1.88	1.65	1.54	.91	1.15	.76
Southwest	1.69	1.32	1.17	1.29	1.23	.93	1.00
West Coast	1.41	1.10	1.00	.90	.40	.48	.62
Farm Size							
<180 acres	1.76	.73	.83	.89	.75	.50	.70
180-499 acres	1.85	1.35	1.14	1.17	1.20	.87	.61
500-1,999 acres	1.83	1.65	1.37	1.28	1.04	1.13	.76
2,000+ acres	1.48	1.70	1.66	1.38	.77	.92	1.01
Farm Sales							
<\$100,000	1.95	1.17	1.13	1.13	.90	.90	.67
\$100,000-\$499,999	1.70	1.44	1.18	1.15	.95	.91	.72
\$500,000+	1.71	1.27	1.30	1.17	.90	.75	.80
Major Enterprise							
Crop	1.65	1.24	1.06	.90	.03	.65	.91
Animal	1.75	.86	1.17	1.43	2.31	.79	.38
Both crop & animal	1.88	1.58	1.44	1.41	1.57	1.11	.71
Total Youth Hired							
1	1.64	1.71	1.49	1.36	1.15	1.01	.54
2	1.72	1.36	1.30	1.24	.98	.99	.76
3-4	1.76	1.15	1.13	1.11	1.05	.82	.77
5-9	1.85	1.06	.96	.95	.71	.60	.97
10 or more	1.92	1.05	.96	.98	.39	.55	.98

^aRelationships shown in bold are statistically significant (p < .05)

Table 26. Task intensity scores by region, farm size, farm sales, major enterprises, and number of youth workers hired for 16-17 year old workers.^a

Farm/Ranch Characteristic	Handling/ Moving	Drive Tractor	Drive other Vehicle	General Maintenance Repairs	Caring for Animals	Hitching Equipment	Hand Weeding
----- Mean Intensity Score -----							
Region							
Northeast	1.88	.72	.87	.97	1.03	.79	.80
South	2.04	1.32	1.12	1.14	1.07	1.04	.67
Midwest	2.12	1.00	1.05	1.15	1.08	.94	1.07
Plains	1.77	1.48	1.25	1.42	.99	.93	.86
Southwest	1.67	1.57	.99	1.28	.80	.90	.96
West Coast	1.56	.83	.91	1.01	.36	.47	.75
Farm Size							
<180 acres	1.90	.63	.58	.81	.78	.42	.70
180-499 acres	2.04	.91	1.01	1.04	1.09	.95	.83
500-1,999 acres	1.81	1.44	1.32	1.40	.90	1.03	.93
2,000+ acres	1.55	1.59	1.24	1.45	.82	.93	1.07
Farm Sales							
<\$100,000	2.04	.99	.94	1.02	.91	.83	.96
\$100,000-\$499,999	1.85	1.17	1.11	1.12	.89	.82	.82
\$500,000+	1.69	1.20	1.08	1.33	.90	.85	.85
Major Enterprise							
Crop	1.69	1.08	.82	.97	.04	.60	1.02
Animal	1.87	.66	1.05	1.26	2.15	.78	.47
Both crop & animal	1.98	1.30	1.27	1.34	1.42	1.08	.83
Total Youth Hired							
1	1.60	1.73	1.28	1.42	.98	1.03	.57
2	2.01	1.33	1.37	1.47	1.04	1.13	.97
3-4	1.73	.91	.90	1.04	1.08	.70	.92
5-9	2.06	.60	.73	.85	.66	.62	1.04
10 or more	1.96	.58	.58	.76	.24	.33	1.00

^aRelationships shown in bold are statistically significant (p < .05)

Table 27. Task intensity scores by region, farm size, farm sales, major enterprises, and number of youth workers hired for 14-15 year old workers.^a

Farm/Ranch Characteristic	Handling/ Moving	Drive Tractor	Drive other Vehicle	General Maintenance Repairs	Caring for Animals	Hitching Equipment	Hand Weeding
Mean Intensity Score							
Region							
Northeast	2.21	.26	.41	.85	1.00	.57	.69
South	1.86	.62	.57	.70	.76	.54	.65
Midwest	1.77	.65	.63	.94	1.13	.74	1.14
Plains	1.57	.70	.76	1.07	.67	.50	.93
Southwest	1.43	.94	.92	1.16	1.04	.61	1.27
West Coast	1.66	.51	.49	.88	.39	.30	.51
Farm Size							
<180 acres	1.96	.29	.30	.76	.70	.31	.78
180-499 acres	2.03	.61	.63	1.03	1.08	.82	.68
500-1,999 acres	1.73	.69	.82	.95	.83	.60	.94
2,000+ acres	1.11	.92	.79	1.15	.81	.47	1.27
Farm Sales							
<\$100,000	1.93	.55	.49	.92	.89	.58	.82
\$100,000-\$499,999	1.88	.58	.64	.90	.70	.62	.83
\$500,000+	1.47	.57	.61	1.01	.99	.43	1.01
Major Enterprise							
Crop	1.56	.48	.41	.78	.05	.31	1.03
Animal	1.90	.17	.48	1.25	2.00	.52	.56
Both crop & animal	1.95	.80	.83	1.03	1.31	.80	.81
Total Youth Hired							
1	1.76	.80	.77	1.14	1.06	.54	.72
2	1.66	.80	.88	1.15	1.10	.78	.84
3-4	1.90	.56	.59	.80	.84	.71	.88
5-9	1.84	.36	.43	.88	.75	.32	1.05
10 or more	1.67	.31	.24	.69	.28	.22	.81

^aRelationships shown in bold are statistically significant (p < .05)

Table 28. How much of the total work time of 18-20 year old workers who worked on the task was spent on . . . ?

Tasks	Very Little	Some	A Great Deal	All or Almost All	Number of Employers ^a	Mean Specialization Score ^b
	%	%	%	%		
Chores & Maintenance						
Handling or moving objects	17.6	49.2	23.5	9.8	614	2.25
Doing general farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	27.6	53.5	16.2	2.7	475	1.94
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	16.1	41.3	28.9	13.8	436	2.40
Doing farm field work as rider on power or pulled equipment	32.2	42.9	17.1	7.8	245	2.00
Driving a farm tractor, truck, or vehicle not described above	24.2	46.8	22.0	7.0	455	2.12
Installing, using, or maintaining irrigation equipment	31.3	46.0	19.0	3.8	211	1.95
Maintaining or repairing farm machinery	39.8	45.1	13.0	2.2	324	1.77
Hitching and unhitching implements and equipment	37.2	49.2	11.0	2.7	374	1.79
Crop-Related						
Harvesting or picking tree crops	13.4	29.4	30.3	26.9	119	2.71
Harvesting or picking ground crops	13.6	37.7	26.1	22.6	199	2.58
Hand weeding or picking rocks	33.3	46.4	11.4	8.8	306	1.96
Sorting or grading farm products	19.3	40.0	29.3	11.3	150	2.33
Landscaping and planting	40.2	42.2	11.6	6.0	199	1.83
Scouting for pests and plant diseases	45.7	38.6	11.4	4.3	70	1.74
Applying fertilizers and protectants	45.3	43.0	8.6	3.1	128	1.70
Animal-Related						
Caring for animals or poultry	12.9	43.0	31.1	12.9	302	2.44
Milking cows or goats by hand	31.8	45.5	18.2	4.5	22	1.95
Milking cows using equipment	9.9	31.9	34.1	24.2	91	2.73
Business-Related						
Using a computer for farm business purposes	34.8	50.7	11.6	2.9	69	1.83
Working on a farm stand or sales area	14.3	42.9	29.9	13.0	77	2.42

^aEmployers who reported that their employees did not do this task were excluded.

^bSpecialization Scores were calculated by scoring responses from “Very little”=1 to “All or Almost all”=4.

Table 29. How much of the total work time of 16-17 year old workers who worked on the task was spent on . . . ?

Tasks	Very Little	Some	A Great Deal	All or Almost All	Number of Employers ^a	Mean Specialization Score ^b
	%	%	%	%		
Chores & Maintenance						
Handling or moving objects	18.9	42.9	27.1	11.1	587	2.30
General farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	27.5	50.8	19.5	2.3	437	1.97
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	17.3	46.6	24.3	11.7	358	2.30
Farm field work as rider on power or pulled equipment	37.6	43.7	15.5	3.3	213	1.85
Driving a farm tractor, truck or vehicle not described above	29.7	49.0	17.2	4.1	390	1.96
Installing, using, or maintaining irrigation equipment	26.0	40.2	24.9	8.9	169	2.17
Maintaining or repairing farm machinery	40.4	46.9	11.9	.7	277	1.73
Hitching and unhitching implements and equipment	39.8	47.3	11.7	1.1%	349	1.74
Crop-Related						
Harvesting or picking tree crops	23.9	33.8	22.5	19.7	71	2.38
Harvesting or picking ground crops	19.7	38.2	26.1	15.9	157	2.38
Hand weeding or picking rocks	28.2	45.5	17.2	9.1	308	2.07
Sorting or grading farm products	18.3	39.1	28.7	13.9	115	2.38
Landscaping and planting	37.7	40.9	16.9	4.5	154	1.88
Scouting for pests and plant diseases	60.7	33.9	3.6	1.8	56	1.46
Applying fertilizers and protectants	61.4	29.5	6.8	2.3	88	1.50
Animal-Related						
Caring for animals or poultry	18.6	46.3	22.8	12.3	285	2.29
Milking cows or goats by hand	31.3	37.5	25.0	6.3	16	2.06
Milking cows using equipment	9.8	31.5	34.8	23.9	92	2.73
Business-Related						
Using a computer for farm business purposes	59.2	30.6	6.1	4.1	49	1.55
Working on a farm stand or sales area	17.1	42.1	19.7	21.1	76	2.45

^aEmployers who reported that their employees did not do this task were excluded.

^bSpecialization Scores were calculated by scoring responses from “Very little”=1 to “All or Almost all”=4.

Table 30. How much of the total work time of 14-15 year old workers who worked on the task was spent on . . . ?

Tasks	Very Little	Some	A Great Deal	All or Almost All	Number of Employers ^a	Mean Specialization Score ^b
	%	%	%	%		
Chores & Maintenance						
Handling or moving objects	16.1	41.5	25.1	17.3	323	2.44
General farm ranch maintenance, repairs, painting, upkeep, cleaning, etc.	31.3	51.6	11.1	6.0	217	1.92
Machinery-Related						
Farm field work as driver of a tractor or self propelled machine	31.0	45.0	17.8	6.2	129	1.99
Farm field work as rider on power or pulled equipment	36.3	40.2	16.7	6.9	102	1.94
Driving a farm tractor, truck, or vehicle not described above	36.2	50.3	10.1	3.4	149	1.81
Installing, using, or maintaining irrigation equipment	19.8	44.2	22.1	14.0	86	2.30
Maintaining or repairing farm machinery	49.5	45.7	4.8	.0	105	1.55
Hitching and unhitching implements and equipment	49.0	43.8	5.9%	1.3	153	1.59
Crop-Related						
Harvesting or picking tree crops	21.7	37.0	23.9	17.4	46	2.37
Harvesting or picking ground crops	16.5	28.2	29.4	25.9	85	2.65
Hand weeding or picking rocks	25.1	46.4	16.8	11.7	179	2.15
Sorting or grading farm products	18.1	37.3	26.5	18.1	83	2.45
Landscaping and planting	37.5	46.6	11.4	4.5	88	1.83
Scouting for pests and plant diseases	70.0	20.0	10.0	.0	20	1.40
Animal-Related						
Caring for animals or poultry	19.9	43.5	19.9	16.8	161	2.34
Milking cows or goats by hand	42.9	14.3	28.6	14.3	7	2.14
Milking cows using equipment	9.3	53.5	16.3	20.9	43	2.49
Business-Related						
Time spent using a computer for farm business purposes	56.7	23.3	16.7	3.3	30	1.67
Time spent working on a farm stand or sales area	25.9	29.6	25.9	18.5	54	2.37

^aEmployers who reported that their employees did not do this task were excluded.

^bSpecialization Scores were calculated by scoring responses from “Very little”=1 to “All or Almost all”=4.

Table 31. Specialization scores for selected tasks by region, farm size, farm sales, major enterprise, and number of youth workers hired for 18-20 year old workers.^a

Farm/Ranch Characteristics	Milking Cows	Harvesting Tree Crops	Harvesting Ground Crops	Caring for Animals	Working on Farm Stand	Driving Tractor	Sorting/Grading	Handling/Moving	Hand Weeding/Picking Rock
----- Mean Specialization Scores-----									
Region									
Northeast	2.87	2.40	2.69	2.56	2.67	2.22	2.03	2.30	1.76
South	2.57	2.44	2.71	2.63	2.17	2.14	2.31	2.22	1.90
Midwest	2.60	2.18	2.42	2.43	2.18	2.18	2.32	2.35	1.94
Plains	3.00	2.38	2.62	2.31	2.00	2.70	2.58	2.22	2.07
Southwest	2.33	1.67	2.36	2.45	2.25	2.58	2.33	2.18	2.21
West Coast	3.17	3.03	2.72	2.29	2.47	2.44	2.48	2.25	1.91
Farm Size									
<180 acres	2.47	2.77	2.76	2.71	2.41	2.08	2.26	2.35	1.90
180-499 acres	2.75	2.62	2.36	2.43	2.77	2.21	2.12	2.26	1.76
500-1,999 acres	2.83	2.65	2.50	2.33	2.30	2.56	2.58	2.25	1.89
2,000+ acres	2.67	2.67	2.61	2.33	2.00	2.69	2.42	2.09	2.29
Farm Sales									
<\$100,000	2.67	2.54	2.65	2.45	2.18	2.29	2.10	2.40	1.92
\$100,000-\$499,999	2.74	2.88	2.38	2.34	2.58	2.40	2.32	2.20	1.82
\$500,000+	2.88	2.62	2.68	2.53	2.56	2.46	2.43	2.22	2.10
Major Enterprise									
Crop	2.75	2.84	2.66	1.20	2.53	2.48	2.36	2.26	2.12
Animal	2.71	3.00	2.70	2.81	3.00	2.07	2.57	2.27	1.41
Both crop & animal	2.73	1.94	2.45	2.36	2.07	2.40	2.15	2.25	1.86
Total Youth Hired									
1	2.63	2.22	2.46	2.48	1.80	2.48	1.83	2.10	1.71
2	2.83	2.87	2.26	2.33	2.33	2.49	2.50	2.21	1.92
3-4	2.52	2.75	2.44	2.48	2.54	2.31	2.14	2.28	1.95
5-9	3.13	2.79	2.73	2.58	2.56	2.31	2.32	2.44	2.27
10 or more	3.33	2.77	3.07	2.25	2.57	2.26	2.55	2.42	2.05

^aRelationships shown in bold are statistically significant (p < .05)

Table 32. Specialization scores for selected tasks by region, farm size, farm sales, major enterprise, and number of youth workers hired for 16-17 year old workers.^a

Farm/Ranch Characteristics	Milking Cows	Harvesting Tree Crops	Harvesting Ground Crops	Caring for Animals	Working on Farm Stand	Driving Tractor	Sorting/Grading	Handling Moving	Hand Weeding/Picking Rock
----- Mean Specialization Scores -----									
Region									
Northeast	2.84	1.88	2.33	2.45	2.80	2.02	2.19	2.44	1.84
South	3.14	2.33	1.88	2.31	2.33	2.33	2.46	2.27	2.09
Midwest	2.65	1.80	2.26	2.37	2.00	2.05	2.18	2.46	2.23
Plains	2.89	1.00	2.46	2.09	2.00	2.41	2.59	2.18	2.04
Southwest	2.30	1.00	2.62	2.33	1.67	2.64	2.60	2.28	2.11
West Coast	2.33	2.85	2.74	2.27	2.75	2.38	2.56	2.16	2.10
Farm Size									
<180 acres	2.77	2.59	2.40	2.73	2.35	2.08	2.44	2.46	2.04
180-499 acres	2.70	2.33	2.25	2.18	2.87	2.03	2.21	2.44	2.12
500-1,999 acres	2.76	1.93	2.37	2.14	2.33	2.41	2.50	2.22	1.99
2,000+ acres	2.71	2.00	2.48	2.24	3.00	2.53	2.10	2.02	2.16
Farm Sales									
<\$100,000	2.50	2.56	2.31	2.43	2.41	2.30	2.25	2.55	2.25
\$100,000-\$499,999	2.72	2.41	2.40	2.27	2.52	2.24	2.44	2.29	2.01
\$500,000+	2.77	2.26	2.37	2.26	2.50	2.41	2.41	2.13	2.03
Major Enterprise									
Crop	3.00	2.58	2.56	1.50	2.68	2.48	2.48	2.23	2.27
Animal	2.64	2.00	2.00	2.64	1.60	1.91	2.33	2.32	1.87
Both crop & animal	2.79	1.50	2.21	2.19	1.83	2.23	1.96	2.36	1.88
Total Youth Hired									
1	2.68	1.86	2.31	2.67	2.25	2.60	2.00	2.09	1.67
2	2.95	2.00	2.06	2.29	1.82	2.24	2.00	2.36	1.97
3-4	2.56	2.59	2.18	2.40	2.55	2.16	2.26	2.25	2.10
5-9	3.00	2.84	2.74	2.56	2.65	2.03	2.61	2.57	2.40
10 or more	2.00	2.12	2.79	2.43	2.52	1.91	2.54	2.35	2.48

^aRelationships shown in bold are statistically significant (p<.05)

Table 33. How important was it for your 18-20 year old to have these skills?

Skills	1	2	3	4	5	Number of Employers	Mean Importance Score ^a
	Not at all important				Essential		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	15.5	8.6	23.2	20.4	32.3	746	3.45
Arithmetic and math skills	16.1	9.9	23.1	24.1	26.8	739	3.36
Work Habits							
Making simple work-related decisions	3.2	3.3	14.7	31.2	47.6	756	4.17
Using time well	1.0	.7	7.6	27.9	62.8	764	4.51
Following directions	.5	.1	2.2	15.8	81.4	768	4.77
Working well with others	.8	2.0	11.5	28.2	57.6	759	4.40
Working independently	2.1	2.1	12.7	27.7	55.4	762	4.32
Machinery Skills							
Knowing what tools and machinery to use	14.4	7.5	21.3	22.7	34.1	736	3.55
Knowing how to use tools and equipment	11.9	5.8	16.5	25.3	40.5	739	3.77
Knowing how to care for tools and machinery	13.1	5.6	14.9	23.4	43.0	732	3.78
Skill in Working with Crops	21.0	8.0	15.9	20.5	34.6	723	3.40
Skill in Working with Animals	47.5	4.7	6.8	9.7	31.3	688	2.73

^aImportance Scores were calculated by scoring responses from “Not at all important”=1 to “Essential”=5.

Table 34. How important was it for your 16-17 year old workers to have these skills?

Skills	1	2	3	4	5	Number of Employers	Mean Importance Score ^a
	Not at all important				Essential		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	15.4	8.0	23.2	22.4	31.1	689	3.46
Arithmetic and math skills	15.8	8.8	24.5	25.0	26.0	685	3.37
Work Habits							
Making simple work-related decisions	2.1	2.6	15.6	35.0	44.7	700	4.18
Using time well	.9	.6	9.1	31.3	58.2	705	4.45
Following directions	.6	.1	3.9	17.2	78.2	714	4.72
Working well with others	1.4	1.1	11.3	28.0	58.1	699	4.40
Working independently	2.4	2.6	12.3	30.1	52.6	705	4.28
Machinery Skills							
Knowing what tools and machinery to use	14.8	8.2	19.1	27.2	30.7	670	3.51
Knowing how to use tools and equipment	10.6	6.6	21.7	23.7	37.3	678	3.71
Knowing how to care for tools and machinery	12.5	6.9	19.1	24.7	36.7	664	3.66
Skill in Working with Crops	22.6	9.6	20.0	20.2	27.6	655	3.21
Skill in Working with Animals	44.2	4.3	9.3	12.5	29.8	634	2.79

^aImportance Scores were calculated by scoring responses from “Not at all important”=1 to “Essential”=5.

Table 35. How important was it for your 14-15 year old workers to have these skills?

Skills	1	2	3	4	5	Number of Employers	Mean Importance Score ^a
	Not at all important				Essential		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	23.7	9.5	21.0	17.3	28.5	410	3.18
Arithmetic and math skills	22.5	9.1	23.5	18.9	26.0	408	3.17
Work Habits							
Making simple work-related decisions	3.1	5.0	17.2	31.7	43.0	419	4.06
Using time well	1.4	.7	10.9	29.3	57.7	430	4.41
Following directions	.7	.0	6.0	21.6	71.6	430	4.63
Working well with others	3.1	1.6	11.3	31.3	52.7	425	4.29
Working independently	4.5	5.0	15.8	28.9	45.8	419	4.06
Machinery Skills							
Knowing what tools and machinery to use	24.7	11.5	25.7	19.1	19.1	393	2.96
Knowing how to use tools and equipment	21.4	8.8	24.9	20.9	24.1	398	3.18
Knowing how to care for tools and machinery	22.5	9.9	22.0	22.0	23.5	395	3.14
Skill in Working with Crops	29.5	7.8	22.2	17.8	22.7	387	2.97
Skill in Working with Animals	49.2	4.7	12.0	9.2	24.9	382	2.56

^aImportance Scores were calculated by scoring responses from “Not at all important”=1 to “Essential”=5.

Table 36. How important was it for your 12-13 year old workers to have these skills?

Skills	1	2	3	4	5	Number of Employers	Mean Importance Score ^a
	Not at all important				Essential		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	27.2	16.7	20.2	13.2	22.8	114	2.88
Arithmetic and math skills	27.0	14.8	18.3	17.4	22.6	115	2.94
Work Habits							
Making simple work-related decisions	5.9	7.6	22.0	27.1	37.3	118	3.82
Using time well	1.7	2.5	15.8	27.5	52.5	120	4.27
Following directions	1.7	.8	9.9	20.7	66.9	121	4.50
Working well with others	3.3	3.3	16.7	22.5	54.2	120	4.21
Working independently	6.8	6.8	21.4	23.1	41.9	117	3.86
Machinery Skills							
Knowing what tools and machinery to use	28.2	13.6	26.4	12.7	19.1	110	2.81
Knowing how to use tools and equipment	26.5	13.3	20.4	15.9	23.9	113	2.97
Knowing how to care for tools and machinery	31.5	12.6	14.4	17.1	24.3	111	2.90
Skill in Working with Crops	31.5	9.0	18.0	9.0	32.4	111	3.02
Skill in Working with Animals	46.3	4.6	10.2	6.5	32.4	108	2.74

^aImportance Scores were calculated by scoring responses from “Not at all important”=1 to “Essential”=5.

Table 37. Importance of work habits, machinery skills, skills in working with crops and with animals, and academic skills rated by employers, by age of workers.

Skill	Age of Worker			
	18-20 years	16-17 years	14-15 years	12-13 years
	----- Mean Importance Scores ^a -----			
Work habits	4.44	4.41	4.29	4.12
Machinery skills	3.69	3.62	3.09	2.86
Skill in working with crops	3.40	3.21	2.97	3.02
Skill in working with animals	2.73	2.80	2.56	2.74
Academic skills	3.40	3.41	3.17	2.89

^aImportance rated on a scale from 1 = Not at all important to 5 = Essential

Table 38. Importance scores for skills of 18-20 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm/Ranch Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Importance Scores -----					
Region					
Northeast	4.46	3.37	3.33	2.66	3.58
South	4.26	3.50	3.14	2.97	3.23
Midwest	4.48	3.86	3.21	3.31	3.39
Plains	4.50	4.12	3.69	2.77	3.65
Southwest	4.48	3.93	3.26	3.27	3.71
West Coast	4.39	3.37	3.50	1.88	3.02
Farm Size					
<180 acres	4.40	3.20	3.29	2.20	3.12
180-499 acres	4.46	3.76	3.25	3.25	3.32
500-1,999 acres	4.46	3.96	3.60	3.00	3.55
2,000+ acres	4.45	3.91	3.45	2.57	3.66
Farm Sales					
<\$100,000	4.47	3.77	3.23	2.67	3.26
\$100,000-\$499,999	4.47	3.71	3.52	2.89	3.35
\$500,000+	4.40	3.60	3.33	2.56	3.55
Major Enterprise					
Crop	4.38	3.40	3.73	1.22	3.26
Animal	4.44	3.62	1.87	4.39	3.50
Both crop & animal	4.52	4.06	3.49	3.81	3.56
Total Youth Hired					
1	4.51	4.06	3.36	3.09	3.65
2	4.48	3.79	3.51	2.99	3.60
3-4	4.37	3.72	3.25	2.99	3.16
5-9	4.46	3.24	3.36	2.17	3.19
10 or more	4.30	3.15	3.59	1.60	3.19

^aRelationships shown in bold are statistically significant (p < .05)

Table 39. Importance scores for skills of 16-17 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm/Ranch Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Importance Scores -----					
Region					
Northeast	4.44	3.13	2.89	2.99	3.47
South	4.31	3.88	3.27	3.33	3.28
Midwest	4.40	3.58	2.98	3.00	3.48
Plains	4.42	4.03	3.51	2.90	3.48
Southwest	4.52	3.89	3.34	2.76	3.53
West Coast	4.35	3.27	3.28	1.95	3.18
Farm Size					
<180 acres	4.36	3.22	3.29	2.35	3.28
180-499 acres	4.49	3.52	2.95	3.20	3.40
500-1,999 acres	4.40	3.87	3.29	2.90	3.54
2,000+ acres	4.39	3.88	3.32	2.78	3.39
Farm Sales					
<\$100,000	4.40	3.76	3.15	2.82	3.10
\$100,000-\$499,999	4.48	3.63	3.32	2.76	3.47
\$500,000+	4.35	3.51	3.15	2.85	3.58
Major Enterprise					
Crop	4.36	3.35	3.59	1.25	3.35
Animal	4.45	3.62	2.12	4.29	3.32
Both crop & animal	4.45	3.88	3.15	3.73	3.52
Total Youth Hired					
1	4.49	4.09	3.17	3.09	3.60
2	4.42	4.00	3.36	3.13	3.60
3-4	4.40	3.48	3.06	3.01	3.32
5-9	4.37	3.12	3.21	2.36	3.14
10 or more	4.27	2.80	3.32	1.52	3.19

^aRelationships shown in bold are statistically significant (p < .05)

Table 40. Importance scores for skills of 14-15 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm/Ranch Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Importance Scores -----					
Region					
Northeast	4.31	2.65	2.65	2.55	3.09
South	4.11	3.00	3.38	2.64	2.95
Midwest	4.35	3.29	2.85	3.03	3.41
Plains	4.18	3.52	3.21	2.55	3.17
Southwest	4.40	3.42	3.37	2.86	3.39
West Coast	4.30	2.66	2.78	1.71	2.93
Farm Size					
<180 acres	4.30	2.71	2.93	2.02	3.14
180-499 acres	4.36	3.13	3.01	3.09	3.10
500-1,999 acres	4.21	2.27	2.79	2.59	3.20
2,000+ acres	4.41	3.42	3.36	2.61	3.28
Farm Sales					
<\$100,000	4.26	3.13	2.80	2.55	2.83
\$100,000-\$499,999	4.30	3.07	3.03	2.50	3.18
\$500,000+	4.30	3.06	2.99	2.57	3.34
Major Enterprise					
Crop	4.25	2.71	3.23	1.25	3.14
Animal	4.38	3.01	1.64	3.81	3.00
Both crop & animal	4.30	3.41	3.04	3.27	3.22
Total Youth Hired					
1	4.29	3.48	2.70	2.78	3.38
2	4.41	3.47	2.89	3.07	3.41
3-4	4.33	3.08	3.19	2.61	3.11
5-9	4.28	2.74	2.91	2.32	3.03
10 or more	3.99	2.40	3.12	1.56	2.86

^aRelationships shown in bold are statistically significant (p < .05)

Table 41. How satisfied were you that your 18-20 year old workers met your skill needs?

How satisfied were you with employees' skill in . . . ?	1	2	3	4	5	Number of Employers	Mean Satisfaction Score ^a
	Very dissatisfied				Very satisfied		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	2.1	2.2	18.8	28.7	48.2	624	4.19
Arithmetic and math skills	2.0	5.4	20.4	28.2	44.0	609	4.07
Work Habits							
Making simple work-related decisions	2.7	7.8	22.7	34.9	31.9	714	3.86
Using time well	3.4	10.1	23.8	31.3	31.4	732	3.77
Following directions	1.5	6.9	20.8	35.6	35.2	739	3.96
Working well with others	1.2	2.8	15.8	32.1	48.1	723	4.23
Working independently	2.2	8.5	23.2	31.2	35.0	21	3.88
Machinery Skills							
Knowing what tools to use	2.1	6.2	26.2	34.7	30.8	614	3.86
Knowing how to use tools and equipment	2.3	6.7	26.3	33.5	31.1	639	3.84
Knowing how to care for tools and machinery	3.7	7.9	28.3	31.8	28.3	619	3.73
Skills in Working with Crops							
	1.1	3.9	26.3	40.0	28.6	562	3.91
Skill in Working with Animals							
	3.5	3.2	21.0	36.3	36.0	372	3.98

^aSatisfaction Scores were calculated by scoring responses from “Very dissatisfied”=1 to “Very satisfied”=5.

Table 42. How satisfied were you that your 16-17 year old workers met your skill needs?

How satisfied were you with employees' skill in . . . ?	1	2	3	4	5	Number of Employers	Mean Satisfaction Score ^a
	Very dissatisfied				Very satisfied		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	1.2	2.3	17.5	26.4	52.6	561	4.27
Arithmetic and math skills	1.6	3.1	17.4	30.4	47.5	556	4.19
Work Habits							
Making simple work-related decisions	1.4	6.1	24.0	36.1	32.4	657	3.92
Using time well	2.4	8.3	25.7	34.1	29.6	666	3.80
Following directions	1.5	5.3	20.9	37.7	34.6	674	3.99
Working well with others	.6	1.5	14.1	34.7	49.0	659	4.30
Working independently	1.5	9.6	23.3	31.9	33.6	648	3.87
Machinery Skills							
Knowing what tools to use	.9	5.9	31.7	32.5	29.0	542	3.83
Knowing how to use tools and equipment	1.9	7.7	29.0	33.6	27.6	568	3.77
Caring for tools and machinery	2.4	11.5	30.2	30.5	25.5	550	3.65
Skills in Working with Crops							
	1.0	2.9	33.6	32.8	29.7	485	3.87
Skills in Working with Animals							
	2.0	2.9	20.9	35.5	38.7	344	4.06

^aSatisfaction Scores were calculated by scoring responses from "Very dissatisfied"=1 to "Very satisfied"=5.

Table 43. How satisfied were you that your 14-15 year old workers met your skill needs?

How satisfied were you with employee's skills in . . . ?	1	2	3	4	5	Number of Employers	Mean Satisfaction Score ^a
	Very dissatisfied				Very satisfied		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	.6	2.6	19.8	31.2	45.8	308	4.19
Arithmetic and math skills	1.0	3.2	22.3	32.6	41.0	310	4.09
Work Habits							
Making simple work-related decisions	1.6	6.8	28.6	36.2	26.8	384	3.80
Using time well	2.7	11.6	28.2	33.4	24.0	404	3.64
Following directions	2.5	6.4	26.0	35.6	29.5	404	3.83
Working well with others	1.0	3.5	18.1	37.5	39.8	397	4.12
Working independently	2.6	9.0	30.7	32.0	25.8	388	3.69
Machinery Skills							
Knowing what tools to use	2.4	11.1	32.5	32.9	21.1	289	3.59
Knowing how to use tools and equipment	2.6	10.9	34.4	32.8	19.2	302	3.55
Caring for tools and machinery	3.8	11.6	38.9	28.7	17.1	293	3.44
Skills in Working with Crops							
	1.5	5.5	33.8	34.9	24.3	272	3.75
Skills in Working with Animals							
	4.1	4.6	23.0	35.2	33.2	196	3.89

^aSatisfaction Scores were calculated by scoring responses from "Very dissatisfied"=1 to "Very satisfied"=5.

Table 44. How satisfied were you that your 12-13 year old workers met your skill needs?

Skills	1	2	3	4	5	Number of Employers	Mean Satisfaction Score^a
	Very dissatisfied				Very satisfied		
	%	%	%	%	%		
Academic Skills							
Reading and writing skills	1.3	.0	19.5	39.0	40.3	77	4.17
Arithmetic and math skills	1.3	.0	22.5	31.3	45.0	80	4.19
Work Habits							
Making simple work-related decisions	.0	6.6	28.3	32.1	33.0	106	3.92
Using time well	2.7	10.0	27.3	27.3	32.7	110	3.77
Following directions	.9	8.1	21.6	27.0	42.3	111	4.02
Working well with others	.9	4.7	21.5	28.0	44.9	107	4.11
Working independently	1.0	7.8	29.1	26.2	35.9	103	3.88
Machinery Skills							
Knowing what tools to use	.0	1.3	28.9	35.5	34.2	76	4.03
Knowing how to use tools and equipment	.0	3.8	31.6	32.9	31.6	79	3.92
Caring for tools and machinery	.0	8.2	30.1	30.1	31.5	73	3.85
Skills in Working with Crops							
	.0	4.2	40.3	27.8	27.8	72	3.79
Skills in Working with Animals							
	2.0	2.0	19.6	31.4	45.1	51	4.16

^aSatisfaction Scores were calculated by scoring responses from “Very dissatisfied”=1 to “Very satisfied”=5.

Table 45. Employer satisfaction with work habits, machinery skills, skills in working with crops, and academic skills.

Skill	Age of Worker			
	18-20 years	16-17 years	14-15 years	12-13 years
	----- Mean Satisfaction Scores ^a -----			
Work habits	3.93	3.97	3.78	3.95
Machinery skills	3.80	3.74	3.52	3.91
Skill in working with crops	3.91	3.87	3.75	3.79
Skill in working with animals	3.98	4.06	3.89	4.16
Academic skills	4.13	4.23	4.13	4.17

^aSatisfaction rated on a scale from 1 = Very dissatisfied to 5 = Very satisfied

Table 46. Satisfaction scores for skills of 18-20 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Satisfaction Scores -----					
Region					
Northeast	3.89	3.69	3.86	4.04	4.22
South	3.76	3.75	4.12	3.77	3.96
Midwest	4.04	3.84	3.88	4.12	4.22
Plains	3.99	3.96	4.02	4.01	4.33
Southwest	4.00	3.81	4.02	4.10	4.22
West Coast	3.87	3.70	3.77	3.72	3.87
Farm Size					
<180 acres	3.94	3.82	4.04	3.99	4.10
180-499 acres	3.90	3.73	3.70	3.93	4.14
500-1,999 acres	3.90	3.78	3.88	4.08	4.14
2,000+ acres	4.02	3.90	4.02	3.91	4.20
Farm Sales					
<\$100,000	4.03	3.93	4.05	4.09	4.17
\$100,000-\$499,999	3.96	3.81	3.93	3.97	4.15
\$500,000+	3.84	3.73	3.88	3.92	4.13
Major Enterprise					
Crop	3.90	3.77	3.85	3.20	4.06
Animal	3.81	3.78	3.79	4.20	4.01
Both crop & animal	4.02	3.85	4.03	4.09	4.27
Total Youth Hired					
1	4.11	4.00	4.13	4.14	4.23
2	3.97	3.73	3.95	3.85	4.23
3-4	3.82	3.80	3.79	4.04	4.09
5-9	3.90	3.69	3.85	3.87	4.09
10 or more	3.73	3.52	3.69	3.67	3.87

^aRelationships shown in bold are statistically significant (p < .5)

Table 47. Satisfaction scores for skills of 16-17 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Satisfaction Scores -----					
Region					
Northeast	4.01	3.62	3.64	4.04	4.31
South	3.94	3.80	3.93	4.08	4.02
Midwest	4.00	3.76	3.78	4.14	4.23
Plains	4.00	3.90	3.98	4.13	4.39
Southwest	3.91	3.74	3.96	3.93	4.05
West Coast	3.96	3.56	3.95	3.83	4.18
Farm Size					
<180 acres	4.01	3.74	3.94	4.18	4.27
180-499 acres	4.00	3.74	3.79	4.11	4.27
500-1,999 acres	4.00	3.80	3.85	4.02	4.26
2,000+ acres	3.93	3.70	3.92	3.94	4.13
Farm Sales					
<\$100,000	4.09	3.88	3.96	4.15	4.12
\$100,000-\$499,999	4.07	3.80	3.89	4.10	4.31
\$500,000+	3.81	3.59	3.79	3.98	4.18
Major Enterprise					
Crop	3.98	3.79	3.98	3.76	4.24
Animal	3.94	3.64	3.67	4.29	4.06
Both crop & animal	4.00	3.75	3.80	4.04	4.29
Total Youth Hired					
1	4.21	4.06	4.16	4.15	4.48
2	4.01	3.65	3.85	4.00	4.21
3-4	3.96	3.61	3.70	4.06	4.15
5-9	3.81	3.67	3.81	4.00	4.16
10 or more	3.66	3.49	3.75	3.92	3.88

^aRelationships shown in bold are statistically significant (p < .5)

Table 48. Satisfaction scores for skills of 14-15 year old youth workers by region, farm size, farm sales, and number of youth workers hired.^a

Farm Characteristic	Work Habits	Machinery Skills	Crop Skills	Animal Skills	Academic Skills
----- Mean Satisfaction Scores -----					
Region					
Northeast	3.73	3.57	3.74	3.95	4.15
South	3.86	3.41	4.04	4.07	4.12
Midwest	3.87	3.57	3.72	3.98	4.04
Plains	3.70	3.52	3.66	3.67	4.25
Southwest	3.56	3.36	3.71	3.81	4.01
West Coast	3.92	3.58	3.80	3.86	4.26
Farm Size					
<180 acres	3.75	3.65	3.79	3.87	4.08
180-499 acres	3.66	3.44	3.83	3.95	4.10
500-1,999 acres	3.90	3.50	3.67	3.93	4.28
2,000+ acres	3.83	3.51	3.72	3.63	4.07
Farm Sales					
<\$100,000	3.80	3.57	3.78	3.88	4.08
\$100,000-\$499,999	3.76	3.58	3.75	3.68	4.18
\$500,000+	3.81	3.45	3.71	4.09	4.15
Major Enterprise					
Crop	3.77	3.49	3.70	3.12	4.08
Animal	3.60	3.67	3.82	4.08	3.97
Both crop & animal	3.85	3.52	3.78	3.98	4.24
Total Youth Hired					
1	4.09	3.90	3.95	4.03	4.54
2	3.77	3.36	3.70	3.87	4.10
3-4	3.87	3.59	3.83	4.01	4.11
5-9	3.64	3.34	3.65	3.71	4.16
10 or more	3.44	3.35	3.55	3.36	3.68

^aRelationships shown in bold are statistically significant (p < .5)

Table 49. Demographic and family characteristics of youth employees (N=694).

Characteristic	Percent
Gender	
Male	74.5
Female	25.5
Age	
18-20 years	33.4
16-17 years	37.2
14-15 years	23.2
12-13 years	6.2
Education	
6-8 th grade	22.5
9-10 th grade	33.4
11-12 th grade	28.0
Post high school	16.1
Ethnicity	
White (non-Hispanic/Latino)	92.1
Hispanic/Latino	4.8
Other	3.1
Living Arrangement	
Lives with both parents	84.3
Other	15.7
Mother's Education	
Less than high school graduate	5.2
High school graduate	24.1
Some post high school	38.9
College graduate	26.7
Don't know	5.2
Father's Education	
Less than high school graduate	7.9
High school graduate	29.3
Some post high school	32.0
College graduate	23.9
Don't know	6.9
Family can afford things of most other families	
Agree	66.4
Undecided	18.6
Disagree	15.0

Table 50. Farm experience of youth employees (N=694).

Farm Experience	Percent
Farm Residence	
Lives on a farm now	34.0
Lived on a farm in the past, not now	14.8
Never lived on a farm	51.1
Another member of household worked on a farm in the last 12 months	
Yes	55.3
No	43.9
Don't know	.7
Took classes related to agriculture	
No	58.4
Yes, in the past	22.8
Yes, currently	18.9
How useful were skills learned in ag classes? ^a	
Very useful	28.7
Somewhat useful	45.0
Not very useful	21.1
Not at all useful	5.2
Sources of Training	
On this job	75.9
On family farm	46.1
On previous farm job	22.5
From ag classes in school	20.2
From 4-H or FFA	26.2
From previous non-farm job	14.6
From ag training outside of school	9.5

^aBased on the 289 youth who reported having classes in agriculture

^bPercents for these responses do not sum to 100 because respondents could give more than one answer

Table 51. Why did you take this farm/ranch job? How did you hear about this job?

Questions	Percent
Why did you take the job? ^a	
To earn spending money	84.6
To gain work experience	65.7
To earn money for future education	46.3
To help my employer	41.4
To learn about farming/ranching	33.3
To be with friends	17.0
To get away from home	14.6
To help support family	6.5
How did you hear about this job? ^a	
From someone in my family	53.0
From a friend or acquaintance	41.9
Asked farm operator	31.1
Worked there before	24.5
From another worker on that farm	23.9
From school teacher/administrator	3.7
From an advertisement	2.3
From a contractor	2.3
Through an employment agency	.3

^aPercents do not sum to 100 because respondents could give more than one answer

Table 52. Number of hours worked in a typical week and enterprises in which work was done.

Job characteristic	Percent
Hours worked per week	
< 10 hours	13.4
10-19 hours	22.6
20-34 hours	23.1
35 hours or more	40.9
Enterprises	
Crop only	46.7
Animal only	18.0
Both crop & animal	33.6
Neither	1.7

Table 53. Work intensity scores and percent of total work time spent on various tasks.

Tasks	None	Very little	Some	A great deal	All or almost all	Mean Intensity Score ^a
	%	%	%	%	%	
Chores & Maintenance						
Loading and unloading, stacking, carrying	9.2	15.7	34.4	28.8	11.8	2.18
General farm/ranch maintenance, repairs, painting, upkeep, cleaning, etc.	28.8	16.9	24.1	22.9	7.3	1.63
Machinery-Related						
Field work as a driver of tractor or self-propelled machine	34.7	8.9	20.0	22.2	14.1	1.72
Field work as a rider of powered or pulled equipment	42.7	19.9	21.6	9.9	5.9	1.17
Driving a farm tractor, utility vehicle, farm truck, lawn mower, or other vehicle	24.6	11.8	20.2	26.4	17.0	1.99
Installing, using, and/or maintaining irrigation equipment	59.9	11.0	13.5	11.0	4.6	.89
Maintaining or repairing of farm machinery	41.5	20.0	23.2	11.8	3.5	1.16
Hitching/unhitching various types of implements/equipment	33.7	15.9	24.2	18.0	8.2	1.51
Crop-Related						
Harvesting or picking tree crops	78.0	8.9	7.1	4.0	2.0	.43
Harvesting or picking ground crops	51.4	11.7	14.7	15.6	6.6	1.14
Hand weeding or picking rocks	46.0	16.9	19.9	10.7	6.6	1.15
Sorting or grading farm products (fruit, vegetables, eggs, etc.)	69.9	11.4	8.9	5.2	4.6	.63
Landscaping, planting, pruning trees, shrubs, vines, or any other plants	59.1	17.6	14.0	6.2	3.2	.77
Scouting for pests and plant diseases	68.9	20.0	8.6	1.7	.7	.45
Applying fertilizer or protectants	65.0	15.9	14.7	3.5	1.0	.60
Animal-Related						
Total work time caring for animals and/or poultry (feeding, cleaning pens, etc.)	49.0	10.5	9.8	17.0	13.7	1.36
Total work time milking cows or goats by hand	90.3	6.6	1.0	.9	1.2	.16
Total work time milking using equipment	80.5	3.2	3.2	4.5	8.6	.57
Business-Related						
Total work time using a computer for farm business purposes	82.9	11.2	4.3	.9	.7	.25
Total work time working at a farm stand or sales area	82.1	4.9	5.0	3.6	4.3	.43

^aIntensity Scores were calculated by scoring responses from “None”=0 to “All or Almost all”=4.

Table 54. Specialization scores and percent of total work time spent on various tasks.

Tasks	Very little	Some	A great deal	All or almost all	Total Count ^a	Mean Specialization Score ^b
	%	%	%	%		
Chores & Maintenance						
Loading and unloading, stacking, carrying	17.3	37.9	31.7	13.0	630	2.40
General farm/ranch maintenance, repairs, painting, upkeep, cleaning, etc.	23.7	33.8	32.2	10.3	494	2.29
Machinery-Related						
Farm field work as a driver of tractor or self-propelled machine	13.7	30.7	34.0	21.6	453	2.64
Farm field work as a rider of powered or pulled equipment	34.7	37.7	17.3	10.3	398	2.03
Driving a farm tractor, utility vehicle, farm truck, lawn mower, or other vehicle	15.7	26.8	35.0	22.6	523	2.64
Installing, using and/or maintaining irrigation equipment	27.3	33.8	27.3	11.5	278	2.23
Maintaining or repairing of farm machinery	34.2	39.7	20.2	5.9	406	1.98
Hitching/unhitching various types of implements/equipment	23.9	36.5	27.2	12.4	460	2.28
Crop-Related						
Harvesting or picking tree crops	40.5	32.0	18.3	9.2	153	1.96
Harvesting or picking ground crops	24.0	30.3	32.0	13.6	337	2.35
Hand weeding or picking rocks	31.2	36.8	19.7	12.3	375	2.13
Sorting or grading farm products (fruit, vegetables, eggs, etc.)	37.8	29.7	17.2	15.3	209	2.10
Landscaping, planting, pruning trees, shrubs, vines, or any other plants	43.0	34.2	15.1	7.7	284	1.88
Scouting for pests and plant diseases	64.4	27.8	5.6	2.3	216	1.46
Applying fertilizer or protectants	45.3	42.0	9.9	2.9	243	1.70
Animal-Related						
Caring for animals and/or poultry (feeding, cleaning pens, etc.)	20.6	19.2	33.3	26.8	354	2.66
Milking cows or goats by hand	68.7	10.4	9.0	11.9	67	1.64
Milking using equipment	16.3	16.3	23.0	44.4	135	2.96
Business-Related						
Using a computer for farm business purposes	65.5	25.2	5.0	4.2	119	1.48
Working at a farm stand or sales area	27.4	28.2	20.2	24.2	124	2.41

^a Subjects who reported that they did not do this task were excluded.

^b Specialization Scores were calculated by scoring responses from “Very little”=1 to “All or Almost all”=4.

Table 55. How skilled were you BEFORE this job?

Skills	Not at all Skilled	Slightly Skilled	Somewhat Skilled	Very Skilled	Extremely Skilled	Skill Score ^a
	%	%	%	%	%	
Academic Skills						4.05
Reading and writing	.4	2.4	14.3	40.3	42.5	4.22
Arithmetic and math	.6	4.6	26.2	44.2	24.4	3.87
Work Habits						3.98
Making simple work-related decisions	.7	5.0	30.0	44.5	19.7	3.78
Using time well	.9	5.2	29.3	42.7	22.0	3.80
Following directions	.4	2.6	15.9	48.6	32.6	4.10
Working well with others	.4	2.0	18.6	43.5	35.4	4.12
Working independently	.9	2.9	18.0	39.9	38.3	4.12
Task-Related Skills						3.15
Knowing what tools, machinery, or equipment to use	9.4	20.9	31.4	23.2	15.1	3.14
Knowing how to use tools, machinery, or equipment	7.9	18.9	31.8	26.2	15.1	3.22
Know how to care for tools, machinery, or equipment	10.2	19.1	29.3	25.9	15.5	3.18
Skill in working with crops	14.0	25.2	32.3	20.9	7.6	2.93
Skill in working with animals	6.5	15.9	29.3	27.1	21.2	3.40

^aSkill Scores were calculated by scoring response categories so that “Not at all skilled”=1 through “Extremely skilled”=5.

Table 56. How important was each of the following skills to your agricultural job?

Skills	Not at all Important %	Slightly Important %	Somewhat Important %	Very Important %	Extremely Important %	Importance Score^a
Academic Skills						2.55
Reading and writing	25.4	30.5	25.5	13.7	4.9	2.42
Arithmetic and math	21.0	26.4	24.9	18.6	9.1	2.68
Work Habits						4.06
Making simple work-related decisions	2.4	6.5	22.8	40.1	28.2	3.85
Using your time well	2.0	4.2	14.0	44.7	35.2	4.07
Following directions	.4	1.0	5.3	35.4	57.8	4.49
Working well with others	2.3	4.8	21.3	37.5	34.1	3.96
Working independently	3.2	6.6	20.2	36.6	33.4	3.90
Tools/Machinery						3.63
Knowing what tools, machinery, or equipment to use	8.8	12.1	20.9	28.2	30.0	3.59
Knowing how to use tools, machinery, or equipment	8.4	9.2	16.7	30.0	35.7	3.76
Know how to care for tools, machinery, or equipment	11.7	10.5	19.0	28.0	30.8	3.56
Working with Crops	15.4	12.2	18.6	26.2	27.5	3.38
Working with Animals	40.6	8.6	8.8	16.1	25.8	2.78

^aImportance Scores were calculated by scoring response categories so that “Not at all important”=1 through “Extremely important”=5.

Table 57. Youth workers' feelings about their farm/ranch jobs.

Attitude Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total Count
	%	%	%	%	%	
Generally, how satisfied would you say you are with the farm/ranch job? ^a	35.9	49.9	13.1	.9	.3	694
I would like to have this job again.	37.6	35.3	20.5	4.2	2.4	694
I learned new skills that will benefit me in the future.	42.5	45.5	6.9	4.0	1.0	694
The pay was too low.	6.8	15.0	23.3	36.5	18.4	694
The tasks I worked on were boring and monotonous.	4.5	14.6	21.0	39.5	20.5	694
I enjoyed working on farm/ranch tasks.	39.3	41.4	14.6	3.9	.9	694
The pay was as good or better than other jobs I could have had.	25.6	35.2	20.3	14.3	4.6	694
I enjoyed working outdoors.	64.4	29.4	5.2	.3	.7	694

^aResponse categories for this item only were: Extremely satisfied, Satisfied, Neither satisfied nor dissatisfied, Dissatisfied, and Extremely dissatisfied.

Table 58. Youths' interest in various types of jobs when they are 30 years old.

Types of Jobs	Not at all Interested	A little Interested	Somewhat Interested	Quite a Bit Interested	Very much Interested	Interest Score
	%	%	%	%	%	
Interest in owning a farm or ranch	21.2	14.4	19.5	18.7	26.2	3.14
Interest in operating or managing a farm or ranch owned by someone else	32.4	20.0	24.1	16.4	7.1	2.46
Interest in working as an agricultural worker on a farm or ranch owned by someone else	35.0	24.1	25.8	11.4	3.7	2.25
Interest in working in an agriculture-related business but NOT a farm	30.3	26.9	28.4	11.2	3.2	2.30
Interest in non-agricultural work	19.4	4.4	10.5	19.4	46.4	3.69

Table 59. Factors encouraging/discouraging employment as an agricultural worker.

Factors	Discourage	Neither Encourage nor Discourage	Encourage
	%	%	%
Health and/or retirement benefits	44.2	24.8	31.0
Pay rate	36.6	25.2	38.2
Number of work hours	25.5	45.2	29.3
Job advancement	22.5	36.6	40.9
Flexibility of work hours	20.7	24.5	54.8
Difficulty of the work	17.9	54.3	27.8
Availability of jobs	14.1	40.6	45.2
Required education/certification	11.2	53.6	35.2
Required skills	7.8	44.8	47.4
Rural location	7.6	28.1	64.3

Table 60. Characteristics of youth workers reported by employers and characteristics of youth in the employee sample.

Characteristic	Employer Report	Employee Sample
	%	%
Gender		
Male	74.4	74.5
Female	25.6	25.5
Age		
18-20 years	47.1	33.4
16-17 years	31.4	37.2
14-15 years	16.9	23.2
12-13 years	4.6	6.2
Ethnicity/Race		
White (not Hispanic)	63.7	92.1
Hispanic/Latino	33.3	4.8
Other	3.0	3.1
Work Status		
Full-time (35 hrs.+ /wk.)	33.0	40.9
Part-time (<35 hrs. /wk.)	67.0	59.1

^a Significant differences between the Employers Report and the Employee Sample data are bold (p<.05).

Table 61. Importance ratings for work habits, machinery skills, skills in working with crops and with animals, and academic skills rated by employers and employees, age of worker.^a

	Age of Worker							
	18-20 years		16-17 years		14-15 years		12-13 years	
	Employer Rating	Employee Rating	Employer Rating	Employee Rating	Employer Rating	Employee Rating	Employer Rating	Employee Rating
	-----Mean Scores-----							
Work habits	4.44	4.15	4.41	4.16	4.29	3.88	4.12	3.61
Machinery skills	3.69	3.79	3.62	3.86	3.09	3.23	2.86	2.94
Skill in working with crops	3.40	3.44	3.21	3.59	2.97	3.25	3.02	2.45
Skill in working with animals	2.73	3.05	2.80	2.70	2.56	2.50	2.74	2.72
Academic skills	3.40	2.67	3.41	2.68	3.17	2.20	2.89	2.21

^aSignificant differences between employers' and employees' ratings within an age category are bold (p < .05)