



Proceeding Paper

Developing Youth's Capacities as Active Partners in Achieving Sustainable Global Food Security through Education [†]

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Abstract: Eradicating extreme poverty and achieving food security is still one of the greatest challenges of our time. Attracting and retaining youth in the agricultural sector is critical for alleviating hunger and malnutrition. The present study hypothesized that the provision of formal agricultural education, whether through direct involvement in farming practices with an emphasis on environmental sustainability or in entrepreneurial work, increases rural youth's connection to their local environment, their perceptions of agriculture's impact on their local community, and their aspirations for a career in the agricultural sector. To test the hypothesis, 577 students from a high school in Cambodia took two questionnaires following their participation in formal agricultural education provided by a technology park. Factor and linear regression analyses were conducted, and significant results were observed, highlighting the benefits of providing age-appropriate programs that are designed to raise awareness and build capacities in the agricultural sector. The findings of this study contribute to the growing body of literature that seeks to guide future policies and training agendas to adopt effective approaches in engaging youth in productive, profitable, and sustainable agriculture as active partners in the sustainable development efforts to achieve inclusive and stable societies.

Keywords: youth; agricultural education; innovation; technology; food insecurity; capacity building; development



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1. Introduction

Despite progress in recent decades, eradicating extreme poverty and achieving food security remains one of the greatest challenges of our time. At the end of 2020, more than 155 million people were suffering from acute food insecurity [1], and Asia remains home to the greatest number of malnourished people [2]. Given rapid population growth, high rates of global consumption, climate shocks, rural stagnation, conflict, and the need for sustainable agricultural production, the number of people affected by food insecurity is projected to surpass 840 million by 2030 [3]. With the COVID-19 pandemic exacerbating the situation further, swift action must be taken to increase the capacity for sustainable food production and resilient agricultural practices to alleviate hunger and malnutrition [4]. However, the rising average age of farmers poses a challenge to achieving this goal.

Recognized as the torchbearers of the sustainable development agenda, active youth engagement in the agricultural sector has been at the heart of several development policies [5]. The potential benefits of involving today's youth in the struggle to increase

agricultural production include food security, poverty reduction, job creation, and political stability. In Cambodia, 52% of the total population was aged younger than 25 years old as of 2015 [6]. According to data from the International Labour Organization (ILO), more than 77% of them reside in rural areas. This is a potential demographic dividend that may lead to economic growth if the right measures are taken [6]. However, to reap the benefits of engaging young people in the agricultural sector, challenges such as the skills mismatch, high rates of youth internal migration from rural areas into urban centers [7], and their disinterest in agricultural-related occupations must be addressed.

The Cambodian economy has significantly grown over the past few years and is still expanding at a fast rate. The agricultural sector alone contributes to almost a quarter of its GDP [8]. However, the Cambodian youth employment to population ratio dropped from 78% in 2010 to 70.2% in 2019, according to the International Labour Organization. Moreover, while the share of youth in vulnerable employment has fallen dramatically among youth over the years, it still remains at a non-negligible 47%. The total share of youth not in education, employment, or training is relatively low; nonetheless, it increased from 0.2% in 2010 to 6.1% in 2017, according to the Household Socio-Economic Survey.

As a consequence, a large outflow of Cambodian youth work in neighboring countries, such as Thailand, Malaysia, Singapore, and Korea, in the agricultural, industrial, and construction fields [7]. Due to the mismatch between the required and provided skills, knowledge, and abilities, Cambodian youth migrants are forced to work as unskilled or low-skilled workforces [9]. In fact, youth in Cambodia only receive an average of 6.3 years of education with few opportunities to improve their skills [10], making them less competitive in the ASEAN Economic Community and more likely to be vulnerable to violence, abuse, drugs, and exploitation [11]. Key intervention strategies aimed at involving youth in the agriculture sector can significantly reduce the risks of them becoming further disadvantaged.

Given recent transformations in agricultural markets and supply chains and that global agricultural demand is projected to increase by 60% by 2050 [12], new opportunities for youth to run profitable agribusinesses in Cambodia are emerging [12]. Evidence indicates, however, that disinterest in agricultural-related occupations exists amongst Cambodian youth due to stereotypes that perceive farming as outdated, unprofitable, and hard work [13–16]. Timely interventions directed at increasing youth's interest in the sector and providing capacity-building programs to produce a qualified workforce are likely to yield a greater return for sustainable development.

With subsistence agriculture being the main income source for most of the country's rural population [17], Cambodia's reliance on agriculture leaves the country's economy vulnerable to climate shocks. In 2019, Cambodia was hit with a prolonged and severe drought that resulted in failed crops and affected its fish stocks [18]. The problem was further exacerbated by the coronavirus pandemic, resulting in the market's inability to satisfy the increasing demand for food. Moreover, agriculture is often responsible for local water pollution and is a primary contributor to global warming through unsustainable large-scale practices. These issues offer opportunities for innovative tools, technology, and practices to sustainably intensify production. The right information and training provide young farmers with the tools and information they need to maximize efficiency and productivity and minimize their carbon footprints in agriculture. For Cambodia to further increase its agricultural productivity without forfeiting too much soil or entering unsustainable debt levels, youth involvement is thus essential.

Despite recognizing the role youth can play in the development of the agricultural sector, limited attention has been given to their aspirations and trajectories related to the labor market [19]. In order for specialists in the field of sustainable agricultural development to understand shifts in intergenerational relations and to be able to offer age-specific solutions and incentives, research aimed at youth is needed [20]. Further, there is a need for thorough systematic evaluations of implemented educational and vocational programs that can help in identifying the barriers and enabling factors for particular contexts and groups.

Social cognitive career theory (SCCT), which was developed by Lent, Brown, and Hackett (1994), postulates that to cultivate interest in pursuing a given academic major, individuals must be first exposed to direct, vicarious, and persuasive experiences that foster efficacy beliefs and positive outcome expectations in school, at home, and/ or in their communities [21]. According to this theory, background contextual factors and learning experiences have an effect on self-efficacy and outcome expectations, which, in turn, influence interests in pursuing a particular educational and career path [21]. Drawing on the interest, choice, and performance models of SCCT, the present study hypothesized that the provision of formal agricultural education increases rural youth's connection to their local environment, their perceptions of agriculture's impact on their local community, and their aspirations for a career in the agricultural sector. Specifically, the study sought to answer the following questions:

RQ1. Does the provision of formal agricultural training, whether through direct involvement in farming practices with an emphasis on environmental sustainability or in entrepreneurial work, increase rural youth's connection to the local environment?

RQ2. Does this kind of provision of formal agricultural education change rural youth's perceptions of agriculture's impact on their local community?

RQ3. Does this kind of provision of formal agricultural education change rural youth's aspirations for a career in the agricultural sector?

2. Materials and Methods

Two questionnaires (pre- and post-surveys) were administered to 577 students at a school located at the Kampong Thom Center of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN) Agricultural Technology Park, approximately 30% of the school population. The Technology Park is an innovation hub that brings together researchers, industry, and local farmers in designing and implementing appropriate tools and practices for sustainable intensification. Questionnaire items were pulled from instruments from previous studies with similar purposes and were reviewed for language and cultural appropriateness by a CE SAIN staff member. Seven items from the validated Nature Relatedness Scale (2009) were used to assess students' connection to the local environment. Six items of a similar nature were pulled from the Douglas et al. (2017) and Luckey (2012) studies to gauge students' perception of the impact agriculture has on their local community, and five items to assess students' interest in farming as a career. Since there were no validated and context-appropriate instruments that assess youth's attitudes regarding farming and agriculture, the three scales were used in an exploratory manner, and only the items that were found to be suitable in the Cambodian context were used. The questionnaires contained 18 Likert-type items with five points ranging from 1 (disagree strongly) to 5 (agree strongly). The items were used to capture (a) changes in students' perceptions of their own connection to the local environment, (b) changes in students' perceptions of agriculture's impact on the local community; and (c) changes in students' perceptions of a career in the agricultural sector.

One thousand one hundred nine students were enrolled in the school when the study started in 2018, with 140 students in Grade 9, 420 in Grade 10, 339 in Grade 11, and 210 in Grade 12. The pre-survey was administered in November 2018 to 324 students (56% of the entire sample), of which 198 of the pre-survey respondents were female students (61%) and 125 were male students (39%). Respondents' ages ranged from 12 to 20 years ($M = 16$, $SD = 1.6$), where two students in Grade 9 were just 12 years of age, and five students in Grades 11 and 12 were 20. Grade 9 served as the baseline, as the students had no previous engagement with the Technology Park's activities at the time of the survey. Two hundred seventy-one of the pre-survey respondents (84%) indicated having participated in the Technology Park program's educational activities. A total of 253 students (44% of the entire sample) were recruited for the post-survey in January 2020. The post-survey was initially intended as a paired follow-up survey and, as such, did not collect demographic variables. However, due to graduation, dropouts, new enrollments, and the fact that participation was voluntary,

only 43% ($n = 112$; 37 female, 73 male) of the initial sample took the post-survey, and additional participants were recruited. In total, 235 of the post-survey respondents (93%) indicated having participated in the Technology Park program’s activities. Frequencies and percentages for both surveys are presented in Table 1.

Table 1. Frequency table for the survey variables.

Variable	Level	Pre-Survey		Post-Survey	
		<i>n</i>	%	<i>n</i>	%
Gender	Female	198	61	–	–
	Male	125	39	–	–
Engagement with Park’s activities	No	53	16	18	7
	Yes	271	84	235	93
Prior exposure to farming	No	113	35	76	30
	Yes	211	65	177	70
Grade	9	75	23	–	–
	10	119	37	63	25
	11	65	20	163	64
	12	65	20	27	11

3. Results

Descriptive statistics for the entire data set and the correlations among the items were examined (Appendix A, Table A1). Factor analysis was conducted using the Lavaan package version 0.6–7 in R software with Promax rotation to estimate the model parameters, as the factors were believed to be correlated. The Kaiser’s eigenvalue-greater-than-one rule was applied to elect how many factors to retain for interpretation, and three factors were retained. Items were then averaged to create a score for the retained factors: environmental connection, agricultural impact, and farming career. Items and their loadings are summarized in Table 2.

Table 2. Questionnaires items and their standardized loadings.

Farming Career		Environmental Connection		Agricultural Impact	
Item	Loadings	Item	Loadings	Item	Loadings
I like to pursue agriculture as a career.	0.67	I am very aware of environmental issues.	0.49	Agriculture impacts me daily.	0.68
I want to own a farm business one day.	0.83	I always think about how my actions affect the environment.	0.53	Agriculture is important to my community.	0.68
Farming provides skills for one to earn a living.	0.51	My relationship to nature is an important part of who I am.	0.80	I feel that it is important for youth like me to learn about agriculture.	0.55
Farming generates enough income.	0.63	I think a lot about the suffering of animals.	0.60	Shelter is a result of agricultural practices.	0.63
I would like to work in agriculture.	0.82	I feel very connected to all living things and the earth.	0.50	Food is a result of agricultural practices.	0.57
		My connection to nature and the environment is part of my spirituality.	0.72	Clothing is a result of agricultural practices.	0.46
		I am not separate from nature, but a part of nature.	0.82		

Likert scores of 4 or greater were regarded as positive student perceptions. Scores of 2 or lower were regarded as negative student perceptions, whereas scores between 2.5 and 3.5 were regarded as neutral. Frequencies of the responses for both surveys filtered based on engagement with the Technology Park’s educational activities condition are summarized in Appendix B (Table A2). When respondents who participated in the activities were asked whether agriculture impacted them daily, 8% more positive responses were observed in the

post-survey. Meanwhile, 72% of the post-survey respondents indicated that they want to own a farm business one day, which is an 8% increase in the positive responses from the pre-survey (64%). Participation in the Park’s activities also resulted in positive changes in students’ perception of the sector’s profitability. Ninety-six percent (96%) of post-survey respondents indicated that farming provides skills for one to earn a living compared with 92% in the pre-survey. Similarly, the post-survey responses to the statement “farming generates enough income” were 5% more positive compared with pre-survey responses.

Linear regression analyses were conducted to assess whether engagement with the Park’s activities significantly predicted farming career, environmental connection, and agricultural impact, with prior exposure to farming and grade as covariates to control for their potential confounding effects. Participants reported on the question “we practice farming at home” as a measure of prior exposure to farming. The results for both surveys are discussed next.

3.1. Research Question 1 (RQ1)

The results of the linear regression model for the pre-survey were significant, $F(3,320) = 10.22, p < 0.001, R^2 = 0.09$, accounting for approximately 9% of the variance in students’ environmental connection as explained by prior exposure to farming, grade, and engagement with the Park’s activities. In this analysis, prior exposure to farming was nonsignificant (Table 3). Grade significantly predicted environmental connection, as did engagement with the Park’s activities. The results for the post-survey were significant as well, $F(3,249) = 11.88, p < 0.001, R^2 = 0.13$, indicating that approximately 13% of the variance in environmental connection is explained by the same variables. Prior exposure to farming and engagement with the Park’s activities were significant predictors. Unlike the pre-survey, grade did not significantly predict environmental connection.

Table 3. Results for linear regression with prior exposure, grade, and engagement predicting environmental connection, agricultural impact, and farming career.

RQ #	Survey	Variable	B	SE	95% CI	β	t	p
RQ1	Pre	(Intercept)	19.71	1.86	(16.05, 23.37)	0.00	10.59	0.001
		Prior exposure (yes)	0.75	0.50	(−0.24, 1.73)	0.08	1.49	0.137
		Grade	0.54	0.19	(0.18, 0.91)	0.16	2.92	0.004
		Engagement (yes)	1.62	0.53	(0.57, 2.66)	0.17	3.04	0.003
	Post	(Intercept)	16.05	3.88	(8.40, 23.69)	0.00	4.14	0.001
		Prior exposure (yes)	1.49	0.61	(0.29, 2.69)	0.15	2.44	0.015
		Grade	0.62	0.35	(−0.06, 1.31)	0.11	1.79	0.075
		Engagement (yes)	3.87	0.79	(2.32, 5.42)	0.29	4.92	0.001
RQ2	Pre	(Intercept)	13.53	1.80	(9.99, 17.08)	0.00	7.51	0.001
		Prior exposure (yes)	1.44	0.49	(0.49, 2.40)	0.16	2.97	0.003
		Grade	0.52	0.18	(0.17, 0.87)	0.16	2.90	0.004
		Engagement (yes)	2.19	0.51	(1.18, 3.20)	0.23	4.27	0.001
	Post	(Intercept)	13.65	3.59	(6.58, 20.71)	0.00	3.81	0.001
		Prior exposure (yes)	2.03	0.56	(0.92, 3.14)	0.22	3.61	0.001
		Grade	0.53	0.32	(−0.11, 1.16)	0.10	1.64	0.102
		Engagement (yes)	1.52	0.73	(0.09, 2.95)	0.13	2.09	0.037
RQ3	Pre	(Intercept)	10.68	1.71	(7.32, 14.04)	0.00	6.25	0.001
		Prior exposure (yes)	1.38	0.46	(0.47, 2.29)	0.16	3.00	0.003
		Grade	0.54	0.17	(0.21, 0.88)	0.18	3.20	0.002
		Engagement (yes)	1.38	0.49	(0.42, 2.34)	0.16	2.84	0.005
	Post	(Intercept)	11.11	3.12	(4.97, 17.26)	0.00	3.56	0.001
		Prior exposure (yes)	1.86	0.49	(0.90, 2.82)	0.23	3.80	0.001
		Grade	0.47	0.28	(−0.08, 1.02)	0.10	1.68	0.094
		Engagement (yes)	1.46	0.63	(0.21, 2.71)	0.14	2.31	0.022

3.2. Research Question 2 (RQ2)

The results of the linear regression model for the pre-survey were significant for agricultural impact, $F(3,320) = 18.05$, $p < 0.001$, $R^2 = 0.14$, accounting 14% of the variance. Prior exposure significantly predicted students' perceptions of agriculture's impact on their local community (Table 3). Grade and engagement with the Park's activities also significantly predicted agricultural impact. Similar to the pre-survey, the results for the post-survey were significant, $F(3,249) = 7.13$, $p < 0.001$, $R^2 = 0.08$, indicating that approximately 8% of the variance in agricultural impact is explainable by the variables. Both prior exposure and engagement significantly predicted agricultural impact. Grade, however, was nonsignificant.

3.3. Research Question 3 (RQ3)

The results of the linear regression model for the pre-survey were significant, $F(3,320) = 13.80$, $p < 0.001$, $R^2 = 0.11$, indicating that 11% of the variance in students' attitude toward a career in farming is explained by the variables. Both prior exposure and grade significantly predicted students' attitudes toward a career in farming. Engagement in the Park's activities was a significant predictor as well. The results of the linear regression model were also significant for the post-survey, $F(3,249) = 8.03$, $p < 0.001$, $R^2 = 0.09$, accounting for approximately 9% of the variance in students' attitudes toward a career in farming. The results indicate that having prior exposure to farming and engaging in the Park's activities significantly predict a career in farming. Grade, however, was nonsignificant. Table 3 summarizes the results of the regression models for both surveys.

4. Discussion

4.1. Sustainable Agriculture

Linear regression analyses of the pre- and post-surveys suggest that the provision of agricultural education at school around topics of sustainable agriculture, as well as prior experience with farming, can positively affect students' connection to their local environment. Grade was a predictor of higher environmental connection in the pre-survey, which included students in Grade 9 who had no previous engagement with the Technology Park's activities at the time of the survey. In the post-survey, when students in Grades 10–12 were surveyed 1 year later, grade was not a predictor of higher environmental connection. This provides support for the view that involving youth in educational programs that promote the adoption of sustainable agricultural technologies and practices can strengthen their connection with the local environment, such that after 1 year of schooling, there was not a significant difference between Grade 9 students and the upperclassmen. The results, consistent with prior studies conducted in similar contexts, suggest that youth involvement is essential to further increase global agricultural productivity.

4.2. Agricultural Impact

The Technology Park's educational activities had a significant effect on youths' perceptions of the impact that agriculture has on their local community. Participants' responses were significantly different between the pre- and post-questionnaires, as shown in Appendix B. Compared with the pre-survey, more participants in the post-survey understood that food is a direct result of agricultural practices, and that agriculture has an impact on their daily life. This was further confirmed by the results obtained from the regression analyses for both surveys, which indicated that the Park's activities, coupled with prior experience in farming, significantly improved young participants' perception of agriculture's impact. There were also no differences observed between Grade 9 students and the upperclassmen a year later. This again indicates that the provision of this type of education can significantly improve youths' perception and understanding of the impact agriculture has on the local community. These results are consistent with SCCT in that it is more likely for a person to engage in an activity if they believe it will lead to valuable

and positive results. To retain and attract youth in the sector, youth need to see farming as useful and understand the impact that it has on their local community.

4.3. Farming Career

One of the most significant outcomes of the Technology Park's program is that students were left with an improved perception of the agribusiness opportunities within the sector. The regression analyses of both surveys indicate that participants' engagement with the Technology Park's activities, along with prior exposure to farming, had a positive effect on their attitudes toward a career in farming. While grade was a significant predictor of farming career in the pre-survey, no significant difference between Grade 9 students and the rest of the students was observed in the post-survey. This follows the previous analyses and suggests that engagement with agricultural educational experiences positively changed students' perceptions about farming and a future career in agriculture. The results are consistent with SCCT in that youth tend to pursue a career that they perceive as profitable. As modern knowledge and skills are the basis of any future workforce, Cambodian youth need to be provided with a range of agricultural, financial, and entrepreneurial skills and knowledge through youth-targeted policies and investments.

The results further reinforce the notion that youth are, and should be, recognized as an integral part of the solution to food security. Stakeholder investment in education that engages young people in sustainable and production methods, and provides opportunities for greater market engagement and innovation, may help youth consider agriculture as a career option [12]. To precipitate interest toward agriculture, a broader change in a young person's experiences and changes at national and international levels are required. Given the demographic diversity of youth, both urban and rural youth should be involved as partners in decision-making at local and national levels.

5. Conclusions

The Cambodian agricultural sector provides a significant source of income and employs one-third of the national workforce. However, the rising average age of farmers and Cambodian youths' disinterest in agricultural-related occupations necessitate youth-targeted interventions. Grounded in SCCT, the present study sought to explore whether the provision of formal agricultural education significantly predicted youths' connection to their local environment, their attitudes toward the impact agriculture has on their local community, and their aspirations for a career in the agricultural sector. Linear regression analyses were conducted, and significant results were observed, indicating that engagement with agricultural education and practices positively influenced youths' interest in farming. The results highlight the benefits of providing age-appropriate programs that are designed to raise awareness and build capacities in the agricultural sector. Such programs are crucial for the inclusive and sustainable adoption of new technologies and access to markets. It is hoped that the results of this study can contribute to the growing body of literature that seeks to guide future policies and training agendas to adopt effective approaches in engaging youth in productive, profitable, and sustainable agriculture as active partners in the sustainable development efforts to achieve inclusive and stable societies.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Institutional Review Board of The University of Illinois Urbana-Champaign (protocol code 17844, 13 July 2018).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Deidentified data that support the findings of this study are available from the corresponding author, GA, upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Means, standard deviations, and correlations with confidence intervals.

Variable	M	SD	1	2	3	4	5	6
1. Survey	0.44	0.5						
2. Grade	10.58	0.91	0.27 ** [0.19, 0.34]					
3. Farming Career	13.92	2.92	0.11 ** [0.03, 0.19]	0.21 ** [0.13, 0.29]				
4. Environmental Connection	21.46	3.62	0.12 ** [0.04, 0.20]	0.25 ** [0.17, 0.32]	0.59 ** [0.53, 0.64]			
5. Agricultural Impact	19.96	2.4	0.01 [-0.07, 0.09]	0.19 ** [0.11, 0.27]	0.64** [0.59, 0.69]	0.58 ** [0.53, 0.64]		
6. Engagement with Park's Activities	0.79	0.41	0.30 ** [0.22, 0.37]	0.57 ** [0.51, 0.62]	0.24 ** [0.17, 0.32]	0.25 ** [0.17, 0.32]	0.24 ** [0.16, 0.31]	
7. Prior Exposure to Farming	0.85	0.36	0.06 [-0.02, 0.14]	0.10 * [0.02, 0.18]	0.25 ** [0.17, 0.33]	0.28 ** [0.20, 0.35]	0.20 ** [0.12, 0.27]	0.15 ** [0.07, 0.23]

Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. * Indicates $p < 0.05$. ** Indicates $p < 0.01$.

Appendix B

Table A2. Frequencies for response items filtered by treatment condition.

Condition	Response	No Engagement			Engagement		
		Negative	Neutral	Positive	Negative	Neutral	Positive
Pre-Survey	I like to pursue agriculture as a career.	16	23	14	46	67	158
	I want to own a farm business one day.	12	19	22	50	47	174
	Farming provides skills for one to earn a living.	6	6	41	8	15	248
	Farming generates enough income.	5	10	38	16	27	228
	I would like to work in agriculture.	12	19	22	37	57	177
	I am very aware of environmental issues.	17	9	27	35	37	199
	I always think about how my actions affect the environment.	6	4	43	18	9	244
	My relationship to nature is an important part of who I am.	3	8	42	12	14	245
	I think a lot about the suffering of animals.	10	8	35	37	31	203
	I feel very connected to all living things and the earth.	12	15	26	34	42	195
	My connection to nature and the environment is part of my spirituality.	12	19	31	17	21	233
	I am not separate from nature, but a part of nature.	2	2	49	7	3	261
	Agriculture impacts me daily.	24	19	10	56	45	170
	Agriculture is important to my community.	4	6	43	5	16	250
	I feel that it is important for youth like me to learn about agriculture.	7	11	35	17	24	230
	Shelter is a result of agricultural practices.	18	14	21	50	68	153
Food is a result of agricultural practices.	5	4	44	15	22	234	
Clothing is a result of agricultural practices.	33	6	14	83	40	148	

Table A2. *Cont.*

	Condition Response	No Engagement			Engagement		
		Negative	Neutral	Positive	Negative	Neutral	Positive
Post-Survey	I like to pursue agriculture as a career.	7	5	6	22	69	69
	I want to own a farm business one day.	6	2	10	15	50	50
	Farming provides skills for one to earn a living.	0	4	14	3	6	6
	Farming generates enough income.	0	2	16	9	17	17
	I would like to work in agriculture.	5	5	8	20	59	59
	I am very aware of environmental issues.	7	3	8	22	33	33
	I always think about how my actions affect the environment.	3	1	14	6	10	10
	My relationship to nature is an important part of who I am.	5	4	9	4	16	16
	I think a lot about the suffering of animals.	7	3	8	16	33	33
	I feel very connected to all living things and the earth.	4	7	7	28	51	51
	My connection to nature and the environment is part of my spirituality.	5	2	11	7	19	19
	I am not separate from nature, but a part of nature.	4	1	13	1	11	11
	Agriculture impacts me daily.	5	4	9	23	45	45
	Agriculture is important to my community.	2	3	13	12	17	17
	I feel that it is important for youth like me to learn about agriculture.	3	4	11	7	27	27
	Shelter is a result of agricultural practices.	3	4	11	33	51	51
Food is a result of agricultural practices.	3	2	13	8	13	13	
Clothing is a result of agricultural practices.	4	8	6	71	46	46	

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