Online Appendix to 'Knowledge of Vitamin A
Deficiency and Crop Adoption: Evidence from a
Field Experiment in Mozambique'

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1. Measurement and descriptive statistics: knowledge outcomes

In this section we present auxiliary tables for the knowledge outcome variables. Table A1 displays the phrasing of the knowledge survey questions, while Table A2 provides descriptive statistics for the variables in the original scale.

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Table A1: Information survey measures

	Variables	phrasing of the question	original scale
Nutrition knowledge	**heard about vitamin A**	Have you heard about vitamin A? (no/yes)	**0 to 1**
	knowledge about importance of vitamin A	How is vitamin A important for people? (Answers ranged from not knowing to mentioning it being important for growth and development of the body/protecting the eyes/protecting against infections)	**1 to 3**
	considers vitamin A deficiency a problem	Do you consider vitamin A deficiency a problem? (Answers ranged from not serious problem to very serious problem)	**1 to 5**
	knowledge of who suffers most from vitamin A deficiency	Who suffers most from vitamin A deficiency? (Answers ranged from not knowing to mentioning pregnant women and children)	**1 to 3**
	knowledge about preventing vitamin A deficiency	What can you do to prevent vitamin A deficiency? (Answers ranged from not knowing to mentioning eating vitamin A rich foods)	**1 to 3**
	knowledge about food containing vitamin A	Please name three food items that contain vitamin A.	**0 to 3**
	awareness of OFSP	What is an OFSP? (Answers ranged from not knowing to mentioning that it is na food item important for health)	**1 to 3**
	knowledege about importance of OFSP	Why do you think that eating OFSP is important? (Answers ranged from not knowing to mentioning that it is important for growth and development/that it protects against diseases)	**1 to 3**
	knowledege about who should consume OFSP	In your view who would benefit the most from eating OSFP? (Answers ranged from not knowing to mentioning pregnant women and children)	**1 to 3**
Cooking knowledge	**number of dishes with OFSP**	Please name dishes you can cook using OFSP as an ingredient.	**0 to 10**
Farming knowledge	**knowledge of how to prepare the field to plant OFSP**	Mrs. Alzira wants to plant OFSP and she has two farms. One where she has always planted OFSP and another where she has not planted OFSP in the past two years. Where do you think she should plant? (wrong answer or not knowing/correct answer)	**0 to 1**
	knowlede of how to plant OFSP	Mr. José wants to plant OFSP, but he does not know if he should plant in mounds or just bury the vine. What do you think he should do? (wrong answer or not knowing/correct answer)	**0 to 1**
	knowledge of how to irrigate OFSP	Mr. Vítorino has planted OFSP in the past week but he does not how many times he should irrigate the vine. What do you think he should do? (wrong answer or not knowing/correct answer)	**0 to 1**
	knowledege of when to harvest OFSP	Mrs. Maria planted OFSP, but she does not know when to harvest. When do you think she should harvest? (wrong answer or not knowing/correct answer)	**0 to 1**
	knowledge of how to harvest OFSP	Mrs. Idalina planted OFSP and it is ready to be harvested. However, she does not know if she should leave the potatoes in the field or store them in a hole. What do you think she should do? (wrong answer or not knowing/correct answer)	**0 to 1**
	knowledge of how to prepare the field after harvesting	Mr. António harvested the OFSP and he wants to plant another crop. However, he does not know if he should leave the stover in the field or if he should clean the field. What do you think he should do? (wrong answer or not knowing/correct answer)	**0 to 1**

Table A2: Descriptive Statistics - knowledge outcomes

		post-treatment	endline
Nutrition knowledge	**heard about vitamin A**	0.88	0.95
		(0.33)	(0.23)
	knowledge about importance of vitamin A	2.08	2.20
		(0.92)	(0.83)
	considers vitamin A deficiency a problem	3.78	4.16
		(1.70)	(1.19)
	knowledge of who suffers most from vitamin A deficiency	1.76	1.88
		(0.78)	(0.61)
	knowledge about preventing vitamin A deficiency	2.14	2.26
		(1.13)	(0.77)
	knowledge about food items containing vitamin A	1.25	1.82
		(1.21)	(0.91)
	awareness of OFSP	2.16	2.21
		(0.80)	(0.57)
	knowledge about importance of OFSP	2.02	2.20
		(0.77)	(0.54)
	knowledge about who should consume OFSP	1.79	1.90
		(0.72)	(0.54)
Cooking knowledge	**number of dishes with OFSP**	2.99	2.88
		(2.00)	(0.95)
Farming knowledge	**knowledge of how to prepare the field to plant OFSP**	0.75	0.84
		(0.44)	(0.37)
	knowledge of how to plant OFSP	0.74	0.94
		(0.44)	(0.25)
	knowledge of how to irrigate OFSP	0.50	0.75
		(0.50)	(0.43)
	knowledge of when to harvest OFSP	0.76	0.91
		(0.43)	(0.28)
	knowledge of how to harvest OFSP	0.51	0.67
		(0.50)	(0.47)
	knowledge of how to prepare the field after harvesting	0.79	0.77
		(0.41)	(0.42)

Note: Table shows averages and corresponding standard errors in parenthesis.

2. Balance tests

We now present the results from balance tests discussed in the main body of the paper. In Table A3a we focus on the existence of infrastructures, market vendors, electricity, and piped-water supply at the village level. Table A3b displays the individual-level results for basic demographics, religion and ethnicity and occupation. The individual-level results for assets and expenditures, and for agriculture are reported in Table A3c. Finally, in Table A3d we report the results of the balance tests for basic demographics and anthropometrics, and children health for the children in our sample.

Table A3a: Location characteristics - differences across treatments and control; for both baseline and endline samples

	baseline sample		endline sample	
	control	treatment	control	treatment
complete primary school	0.78	-0.01 (0.08)	0.80	0.00 (0.08)
police	0.22	-0.01 (0.08)	0.20	0.00 (0.08)
health center	0.65	-0.01 (0.10)	0.65	-0.02 (0.10)
market vendors	0.33	-0.03 (0.09)	0.33	-0.01 (0.10)
electricity	0.41	0.00 (0.10)	0.41	0.00 (0.10)
piped water	0.22	-0.01 (0.08)	0.20	0.00 (0.08)
paved road	0.10	0.00 (0.06)	0.10	0.01 (0.07)
land road	0.43	0.02 (0.10)	0.45	0.03 (0.10)
river	0.77	0.01 (0.09)	0.76	0.02 (0.09)

Note: Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A3b: Individual characteristics - differences across treatment and control groups; for both baseline and endline samples

		baseline sample		endline sample	
		control	treatment	control	treatment
basic demographics	age	35.78	-0.48 (2.46)	36.45	-0.54 (2.56)
	years of education	3.20	0.21 (0.58)	2.98	0.41 (0.59)
	married	0.59	-0.02 (0.10)	0.57	-0.03 (0.10)
	separated	0.04	0.04 (0.05)	0.04	0.03 (0.05)
	single	0.33	-0.05 (0.09)	0.35	-0.03 (0.10)
	widowed	0.04	0.02 (0.04)	0.04	0.03 (0.05)
	father's education	1.63	-0.46 (0.39)	1.51	-0.56 (0.38)
	mother's education	1.04	-0.47 (0.32)	1.04	-0.47 (0.34)
religion and ethnicity	no religion	0.04	-0.02 (0.04)	0.04	-0.02 (0.04)
	zion	0.28	0.02 (0.09)	0.29	0.03 (0.10)
	other christian	0.50	-0.02 (0.10)	0.50	-0.04 (0.11)
	changana	0.14	-0.04 (0.07)	0.14	-0.05 (0.07)
	bitonga	0.00	0.06 (0.03)	0.00	0.07 (0.04)
	chironga	0.76	-0.11 (0.09)	0.80	-0.14 (0.09)
	chonga	0.02	-0.02 (0.02)	0.02	-0.02 (0.02)
	chopi	0.06	-0.02 (0.04)	0.04	-0.02 (0.04)
	zulu	0.02	0.02 (0.03)	0.00	0.05 (0.03)
occupation	farmer	0.78	0.01 (0.08)	0.80	0.00 (0.08)
	stays at home	0.00	0.02 (0.02)	0.00	0.02 (0.02)
	vendor	0.00	0.02 (0.02)	0.00	0.02 (0.02)
	has no job	0.02	-0.02 (0.02)	0.02	-0.02 (0.02)

Note: Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A3c: Individual characteristics - differences across treatment and control groups; for both baseline and post-treatment samples (continued)

		baseline sample		endline sample	
		control	treatment	control	treatment
assets and expenditures	expenditures	2407.34	2130.46 (1 711.80)	2445.96	2339.76 (1 858.03)
	income	3357.25	-1384.02 (878.56)	3420.00	-1337.67 (933.33)
	pigs	0.47	-0.04 (0.58)	0.49	-0.01 (0.62)
	cows	1.65	-0.99 (0.74)	1.69	-1.08 (0.78)
	donkey	0.33	-0.33 (0.24)	0.35	-0.35 (0.25)
	chicken	7.25	0.89 (1.56)	6.92	1.33 (1.65)
	ducks	1.55	-0.86 (0.53)	1.61	-1.02* (0.55)
	phone	1.45	0.00 (0.21)	1.39	0.00 (0.20)
	tables	0.98	0.12 (0.17)	1.00	0.11 (0.18)
	chairs	3.55	-0.12 (0.51)	3.49	-0.24 (0.52)
	bed	1.29	-0.25 (0.21)	1.33	-0.35* (0.21)
	radio	0.51	-0.06 (0.12)	0.53	-0.08 (0.13)
	tv	0.33	-0.01 (0.10)	0.35	-0.03 (0.11)
	bike	0.24	0.01 (0.09)	0.24	0.03 (0.10)
	clock	0.24	0.19 (0.21)	0.24	0.19 (0.23)
	solar panel	0.31	-0.11 (0.11)	0.29	-0.10 (0.12)
agriculture	owns plot	0.94	-0.04 (0.05)	0.96	-0.05 (0.05)
	plot size	14374.59	-266.26 (2 041.45)	13922.45	663.60 (1 983.39)
	crop diversification	3.47	0.08 (0.41)	3.35	-0.03 (0.43)
	crop rotation	0.67	-0.12 (0.10)	0.69	-0.10 (0.10)
	use of extension services	0.21	0.09 (0.09)	0.22	0.08 (0.09)
	purchase of seeds	0.43	-0.02 (0.10)	0.41	-0.04 (0.10)
	planted OFSP	0.31	-0.09 (0.09)	0.33	-0.12 (0.09)

Note: Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A3d: Individual characteristics - differences across treatment and control groups; for both baseline and post-treatment samples (continued)

		baseline sample		endline sample	
		control	treatment	control	treatment
children basic demographics and anthropometric	age months	29.46	2.95 (2.89)	45.94	4.05 (2.95)
	gender	1.60	-0.14 (0.09)	1.60	-0.09 (0.09)
	weight-for-age Z-score	-0.61	0.04 (0.26)	-0.61	0.05 (0.30)
	height-for-age Z-score	-1.43	0.15 (0.30)	-1.41	0.08 (0.33)
	weight	11.63	0.53 (0.58)	11.52	0.71 (0.62)
	height	83.82	1.92 (2.52)	83.04	2.81 (2.67)
children health	fever	0.31	-0.02 (0.08)	0.32	-0.01 (0.09)
	diarrhea	0.07	-0.03 (0.04)	0.07	-0.01 (0.05)
	respiratory illness	0.32	-0.02 (0.08)	0.31	0.03 (0.09)
	other illness	0.13	-0.06 (0.05)	0.14	-0.04 (0.06)

Note: Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

3. Planting and consumption patterns: robustness

This section presents additional results for planting and consumption patterns. In Table A4, we report the overall treatment effects on the planting patterns. The planting patterns index represents the average standardized effect across the three planting indicators (planted OFSP at post-treatment, planted OFSP at endline and OFSP harvested). As for the consumption outcomes, Table A5a shows treatment effects on the consumption patterns of OFSP for the previous month. In Table A5b we present the treatment effects on the consumption index of all the consumption outcomes.

Table A4: Planting patterns

dependent variable ------>		index		
		one-difference		
		(1)	**(2)**	**(3)**
treatment	Coeficiente	1.15***	1.14***	1.13***
	standard error	(0.16)	(0.16)	(0.16)
mean dep. variable (control)		0.00	0.00	0.00
r-squared adjusted		0.34	0.31	0.34
number of observations		100	100	100
village dummies		no	yes	yes
demographic controls		no	no	yes

Note: All regressions are OLS. The dependent variable is an average of z-scores. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A5a: Consumption patterns endline

dependent variable ------>		has consumed OFSP in the past month (0-1)			quantity of OFSP consumed in the past month		
		one-difference			one-difference		
		(1)	(2)	(3)	(4)	(5)	(6)
treatment	coeficiente	0.06	0.05	0.07	1.10	1.03	1.01
	standard error	(0.08)	(0.08)	(0.08)	(0.98)	(0.93)	(0.83)
	adjusted p-value	[0.89]	[0.87]	[0.77]	[0.70]	[0.74]	[0.74]
mean dep. variable (control)		0.14	0.14	0.14	0.55	0.55	0.55
r-squared adjusted		-0.00	0.06	0.02	0.00	0.00	-0.03
number of observations		93	93	93	93	93	93
village dummies		no	yes	yes	no	yes	yes
demographic controls		no	no	yes	no	no	yes

Note: All regressions are OLS. The dependent variable has consumed OFSP is binary. The dependent variables quantity of OFSP consumed are expressed in Kg. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. Romano-Wolf p-values are presented in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A5b: Consumption patterns

dependent variable ------>		index		
		one-difference		
		(1)	(2)	(3)
Treatment	coeficiente	0.177	0.160	0.156
	standard error	(0.162)	(0.155)	(0.160)
mean dep. variable (control)		0.00	0.00	0.00
r-squared adjusted		0.00	0.03	-0.00
number of observations		93	93	93
village dummies		no	yes	yes
demographic controls		no	no	yes

Note: All regressions are OLS. The dependent variable is an average of z-scores. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.

4. Anthropometric outcomes: additional results

Finally, we analyze the effects of the intervention on child anthropometric outcomes. The anthropometric measures were collected during the baseline and endline surveys. Specifically, we measured and weighted all the children up to five years old in 2013 whose primary caretakers were the farmers in our sample. These measurements were then processed using the height-for-age z-score and weight-for-age classification system,[1] where z-scores reflect the standard deviation from the mean of the WHO reference population[2] of the same age and gender. At the time of the baseline data collection the children's sample amounted to 134, 68 belonging to the control and 66 to the treatment group. From the baseline to the endline surveys, 93 baseline children remained in the sample and 12 new children joined the sample (6 in the control and 6 in the treatment group).[3]

Tables A6a and A6b, report the results for the anthropometric outcomes: height-for-age and weight-for-age z-scores. In Table A6c we estimate the overall treatment effect on anthropometrics outcomes.

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[1] Biologically implausible values were excluded from the analyses, as recommended by the WHO. For some children, age in months was not available (only in years): in these cases, the z-scores were computed using the average age in months that the child would have had at the timing of data collection.
[2] The anthropometric measures were calculated using 2006 WHO Child Growth Standards (WHO, 2006).
[3] The attrition rate relative to the baseline was not significantly different between the treatment and control groups of children. This attrition was due to the timing of the final data collection effort, which was contemporaneous to school holidays: for that reason, some children were away from their home village visiting relatives.

Table 6a: Anthropometric outcomes endline

dependent variable ------>		height-for-age z-score					
		one-difference			difference-in-difference		
		(1)	(2)	(3)	(4)	(5)	(6)
treatment	coefficient	0.60**	0.53*	0.51*	0.15	0.13	0.09
	standard error	(0.28)	(0.28)	(0.30)	(0.30)	(0.30)	(0.32)
	adjusted p-value	[0.09]	[0.11]	[0.16]			
time	coefficient				-0.06	-0.02	-0.03
	standard error				(0.31)	(0.31)	(0.31)
time*treatment	coefficient				0.46	0.42	0.45
	standard error				(0.41)	(0.41)	(0.41)
	adjusted p-value				[0.42]	[0.45]	[0.36]
mean dep. variable (control)		-1.49	-1.49	-1.49	-1.43	-1.43	-1.43
r-squared adjusted		0.04	0.04	0.03	0.01	0.02	0.02
number of observations		99	99	99	222	222	222
village dummies		no	Yes	yes	no	yes	yes
demographic controls		no	No	yes	no	no	yes

Note: All regressions are OLS. All dependent variable are z-scores. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. Romano-Wolf p-values are presented in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6b: Anthropometric outcomes endline

dependent variable ------>		weight-for-age z-score					
		one-difference			difference-in-difference		
		(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
treatment	coefficient	0.41	0.37	0.41	0.04	0.02	0.01
	standard error	(0.30)	(0.31)	(0.33)	(0.26)	(0.27)	(0.27)
	adjusted p-value	[0.15]	[0.22]	[0.21]			
time	coefficient				0.86***	0.89***	0.82***
	standard error				(0.29)	(0.30)	(0.30)
time*treatment	coefficient				0.37	0.38	0.47
	standard error				(0.40)	(0.40)	(0.39)
	adjusted p-value				[0.42]	[0.45]	[0.36]
mean dep. variable (control)		0.26	0.26	0.26	-0.61	-0.61	-0.61
r-squared adjusted		0.01	0.00	0.01	0.10	0.11	0.13
number of observations		102	102	102	233	233	233
village dummies		no	Yes	yes	no	yes	yes
demographic controls		no	No	yes	no	no	yes

Note: All regressions are OLS. All dependent variable are z-scores. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. Romano-Wolf p-values are presented in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6c: Anthropometric outcomes

dependent variable ------>		index		
		one-difference		
		(1)	(2)	(3)
treatment	coefficient	0.33**	0.28*	0.29
	standard error	(0.16)	(0.16)	(0.17)
mean dep. variable (control)		-0.00	-0.00	-0.00
r-squared adjusted		0.03	0.05	0.03
number of observations		102	102	102
village dummies		no	yes	yes
demographic controls		no	no	yes

Note: All regressions are OLS. The dependent variable is an average of z-scores. Controls are village dummies and demographic characteristics, which include age, years of education, marital status dummies, occupation and farmers' association membership. Robust standard errors reported in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%.