Appendix C - Additional Results

Figure C.1
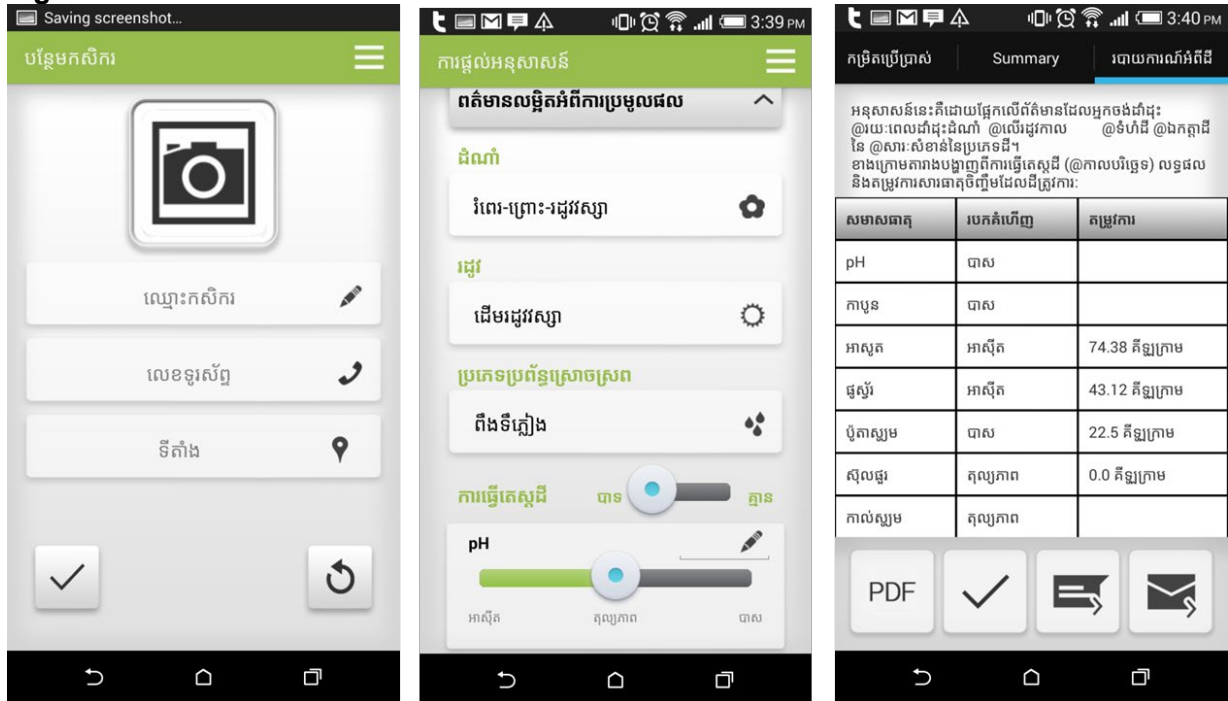
Table C.1 Impact on soil deficiency identification (proportion area identified)

	(1)	(2)	(3)	(4)	(5)	(6)
	Identified as being deficient	identified as being urea deficient	Identified as being phos-phorous deficient	Identified as being nitrogen deficient	Identified as being iron deficient	Identified as being compost deficient
Treatment: ICT	-0.025	0.020	0.008	0.012	0.005	-0.021
	(0.040)	(0.025)	(0.018)	(0.008)	(0.005)	(0.025)
Treatment: ICT plus	0.002	0.002	-0.015	0.017	-0.000	-0.038
	(0.038)	(0.027)	(0.017)	(0.008)**	(0.005)	(0.027)
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,127	1,127	1,127	1,127	1,127	1,127
R-squared	0.032	0.052	0.061	0.010	0.021	0.098
Control Group Mean	0.484	0.125	0.0948	0.0108	0.00824	0.202
P-val: ICT = ICT plus	0.518	0.472	0.146	0.616	0.339	0.542

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Controls include household head's age, gender, dummies for education level, asset index, and household non-agricultural income at baseline.

Table C.2. Impacts of direct calls to ASPIRE groups receiving advice and sharing it on about long bean messages, by treatment status

	(1)	(2)	(3)	(4)
	Knows someone who received message	Number of people known who received message	Learned techniques from others who received message	Shared techniques learned from others
Treatment: Basic	0.010	0.017	0.005	0.000
	(0.006)	(0.011)	(0.004)	(0.002)
Treatment: Enhanced	0.007	0.007	-0.000	-0.002
	(0.004)	(0.009)	(0.003)	(0.002)
Treatment: Enhanced plus	0.009	0.016	0.009	0.003
	(0.005)**	(0.010)	(0.004)**	(0.003)
CEW fixed effects	Yes	Yes	Yes	Yes
Observations	1,687	1,687	1,687	1,687
R-squared	0.011	0.013	0.015	0.016
Control Group Mean	0.00236	0.00709	0.00236	0.00236

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.3. Impacts of direct calls to ASPIRE groups receiving advice and sharing it on about cucumber messages, by treatment status

	(1)	(2)	(3)	(4)
	Knows someone who received message	Number of people known who received message	Learned techniques from others who received message	Shared techniques learned from others
Treatment arm: Basic	0.009	0.005	0.003	0.000
	(0.005)*	(0.011)	(0.003)	(0.002)
Treatment arm: Enhanced	0.009	-0.001	0.002	-0.002
	(0.005)**	(0.013)	(0.004)	(0.002)
Treatment arm: Enhanced plus	0.011	0.007	0.009	0.002
	(0.006)*	(0.014)	(0.004)*	(0.003)
CEW fixed effects	Yes	Yes	Yes	Yes
Observations	1,687	1,687	1,687	1,687
R-squared	0.014	0.015	0.011	0.016
Mean in Control Group	0.00236	0.0142	0.00236	0.00236

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.4. Impacts of direct calls to ASPIRE groups on input expenditures (in 0000 Riels) for rice, by treatment status

	(1) Expenditure on seed	(2) Expenditure on NPK	(3) Expenditure on urea	(4) Expenditure on pesticide	(5) Expenditure on labor	(6) Expenditure on agricultural inputs
Treatment: Basic	-0.710 (4.577)	-6.207 (5.955)	-0.098 (3.153)	-7.768 (4.653)*	-1.615 (2.401)	-36.451 (27.590)
Treatment: Enhanced	9.363 (5.503)*	11.554 (8.148)	8.621 (3.821)**	4.032 (5.956)	2.663 (2.722)	38.680 (32.697)
Treatment: Enhanced plus	8.962 (6.318)	-1.739 (6.699)	8.339 (4.019)**	1.594 (4.797)	0.689 (1.942)	26.809 (29.112)
CEW fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,687	1,687	1,687	1,687	1,687	1,687
R-squared	0.134	0.609	0.533	0.505	0.343	0.658
Control Group Mean	17.66	72.45	37.13	42.45	13.30	348.3

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.5. Impacts of direct calls to ASPIRE groups on rice productivity, by treatment status

	(1)	(2)	(3)	(4)	(5)	(6)
	Rice yield (Kg/ha)	Rice yield (kg/ha) in wet season	Rice yield (kg/ha) in dry season	Value of production per hectare of rice	Value of production per hectare of rice in wet season	Value of production per hectare of rice in dry season
Treatment:	-83.132	-88.437	-33.446	-11.749	-12.796	-2.486
Basic	(69.029)	(68.348)	(90.165)	(6.959)*	(7.019)*	(8.052)
Treatment:	-8.571	9.666	96.273	-5.227	-2.523	6.492
Enhanced	(68.554)	(69.659)	(81.161)	(6.982)	(7.070)	(7.036)
Treatment:	13.110	18.919	27.937	1.753	3.019	3.368
Enhanced plus	(81.039)	(81.464)	(71.092)	(7.853)	(7.857)	(6.968)
CEW fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,687	1,687	1,687	1,687	1,687	1,687
R-squared	0.551	0.541	0.554	0.538	0.541	0.542
Control Group Mean	2221	2222	344.3	211.7	213.2	30.78

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.6. Impacts of direct calls to ASPIRE groups on logged yield and income, by treatment status, at intensive margin

	(1) Rice yield (Kg/ha)	(2) Value of production per hectare of rice	(3) Total HH wage income for last 12 months	(4) Total HH agricultural income	(5) Agricultural net income per hectare	(6) Agricultural gross income per hectare
Treatment: Basic	-0.050 (0.025)**	-0.068 (0.027)**	-0.022 (0.081)	-0.074 (0.064)	-0.059 (0.053)	-0.025 (0.046)
Treatment: Enhanced	-0.035 (0.027)	-0.056 (0.031)*	-0.089 (0.088)	0.032 (0.060)	-0.022 (0.051)	0.025 (0.045)
Treatment: Enhanced plus	-0.001 (0.025)	0.000 (0.028)	-0.008 (0.106)	0.035 (0.067)	0.066 (0.055)	0.044 (0.051)
CEW fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,410	1,410	866	1,674	1,567	1,674
R-squared	0.449	0.435	0.375	0.756	0.561	0.679
Control Mean	7.862	14.71	15.13	15.10	14.04	14.45

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.7. Impacts of direct calls to ASPIRE groups on yield and income, by treatment status, median regressions, at intensive margin

	(1)	(2)	(3)	(4)	(5)	(6)
	Rice yield (Kg/ha)	Value of production per hectare of rice	Total HH wage income for last 12 months	Total HH agricultural income	Agricultural net income per hectare	Agricultural gross income per hectare
Panel A: Level						
Treatment:	-88.822	-5.622	-0.000	-21.507	-19.230	-29.707
Basic	(84.761)	(6.267)	(10.052)	(21.137)	(10.076)*	(10.208)***
Treatment:	-104.703	-13.668	0.000	-0.614	-8.762	1.687
Enhanced	(87.157)	(6.338)**	(9.815)	(17.921)	(9.300)	(9.684)
Treatment:	-11.069	2.078	0.000	7.020	3.357	-1.430
Enhanced plus	(87.877)	(7.535)	(9.765)	(25.423)	(12.433)	(16.955)
CEW fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,410	1,410	1,687	1,674	1,599	1,674
R-squared	0.480	0.458	0.433	0.628	0.570	0.238
Control Group Mean	2847	271.3	330.2	1060	239.2	351
Panel B: Log						
Treatment:	-0.027	-0.032	-0.046	-0.074	-0.143	-0.098
Basic	(0.027)	(0.028)	(0.092)	(0.066)	(0.069)**	(0.053)*
Treatment:	-0.043	-0.061	-0.035	-0.027	-0.086	-0.010
Enhanced	(0.030)	(0.028)**	(0.100)	(0.054)	(0.061)	(0.047)
Treatment:	-0.005	-0.002	0.023	-0.017	-0.031	-0.058
Enhanced plus	(0.028)	(0.031)	(0.115)	(0.059)	(0.063)	(0.060)
CEW fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,410	1,410	866	1,674	1,567	1,674
R-squared	0.441	0.427	0.365	0.753	0.554	0.674
Control Group Mean	7.862	14.71	15.13	15.10	14.04	14.45

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Baseline controls include household head's age, gender, whether the head is literate, and household's non-agricultural wage income.

Table C.8. Impacts of ePADEE intervention on logged yield and income, by treatment status, at intensive margin

	(1) Expenditure on agricultural input & labor per hectare of land	(2) Value of production per hectare of rice	(3) Agricultural gross income per hectare - CPI Prices	(4) Agricultural net income per hectare- CPI Prices	(5) Total rice harvest per hectare of land (kg/ha)
Treatment arm: ICT	0.090	0.133	0.251	0.269	0.054
	(0.067)	(0.150)	(0.170)	(0.171)	(0.057)
Treatment arm: ICT plus	-0.008	-0.139	0.000	0.007	-0.004
	(0.056)	(0.147)	(0.123)	(0.130)	(0.055)
Province dummies	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes
Baseline controls	Yes	Yes	Yes	Yes	Yes
Observations	975	974	1,032	1,027	974
R-squared	0.242	0.342	0.511	0.505	0.326
Mean in Control Group	13.89	13.42	14.96	14.80	7.873
P-value: ICT = ICT plus	0.0796	0.0414	0.203	0.184	0.291

Note: Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Controls include household head's age, gender, dummies for education level, asset index, and household non-agricultural income at baseline.

Table C.9. Impacts of ePADEE intervention on yield and income, by treatment status, median regressions, at intensive margin

	(1)	(2)	(3)	(4)	(5)
	Expend-iture on agricultural input & labor per hectare of land	Value of production per hectare of rice	Agricultural gross income per hectare - CPI Prices	Agricultural net income per hectare- CPI Prices	Total rice harvest per hectare of land (kg/ha)
Panel A: Level[1]					
Treatment arm: ICT	5.831	2.891	61.221	52.487	69.999
	(7.722)	(7.555)	(58.212)	(58.608)	(147.566)
Treatment arm: ICT plus	-4.466	-3.983	37.310	37.549	23.013
	(7.549)	(7.787)	(42.247)	(41.064)	(153.389)
Province dummies	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes
Baseline controls	Yes	Yes	Yes	Yes	Yes
Observations	976	974	1,032	1,032	976
R-squared	0.157	0.222	0.027	0.024	0.346
Mean in Control Group	124.7	117	707	624.1	2973
P-value: ICT = ICT plus	0.0853	0.337	0.665	0.769	0.755
Panel B: Log					
Treatment arm: ICT	0.058	0.077	0.154	0.157	0.049
	(0.058)	(0.134)	(0.094)	(0.116)	(0.055)
Treatment arm: ICT plus	-0.024	-0.048	0.050	0.068	0.010
	(0.058)	(0.148)	(0.086)	(0.099)	(0.060)
Province dummies	Yes	Yes	Yes	Yes	Yes
Control for outcome at baseline	Yes	Yes	Yes	Yes	Yes
Baseline controls	Yes	Yes	Yes	Yes	Yes
Observations	975	974	1,032	1,027	974
R-squared	0.232	0.332	0.498	0.492	0.322
Mean in Control Group	13.89	13.42	14.96	14.80	7.873
P-value: ICT = ICT plus	0.0792	0.388	0.300	0.456	0.499

Note: Table reports coefficient from median regressions. Standard errors are clustered at the village level. ***, **, and * indicate significance at 1, 5 and 10 percent respectively. Controls include household head's age, gender, dummies for education level, asset index, and household non-agricultural income at baseline.
[1]All the expenditure and income outcomes are in 0000 Riels.