Appendix: For Online Publication

Table A1: Listing Balance by Treatment Arm

	Training =UCT early (1)	Training =CCT (2)	Training =UCT late (3)	UCT early =CCT (4)	UCT early =UCT late (5)	CCT =UCT late (6)
Respondent is female	0.41	0.83	0.40	0.43	0.19	0.53
No. of adult household members	0.58	0.31	0.83	0.72	0.74	0.46
Owns a mobile phone	0.92	0.16	0.46	0.22	0.54	0.69
No. of hectares owned	0.76	0.56	0.47	0.44	0.38	0.91
No. of degraded hectares owned	0.64	0.75	0.85	0.44	0.76	0.62
Demi-lune experience	0.41	0.64	0.33	0.17	0.83	0.13

Notes: The table includes household data from 2861 survey participants during a listing exercise conducted across 180 villages. Each row shows the p-value from a pairwise comparison of each treatment assignment for each variable.

Table A2: Baseline Balance by Treatment Arm

	(1) Training =UCT early	(2) Training =CCT	(3) Training =UCT late	(4) UCT early =CCT	(5) UCT early =UCT late	(6) CCT =UCT late
Respondent age	0.13	0.48	0.93	0.39	0.16	0.50
Respondent is Hausa	0.84	0.60	0.45	0.44	0.34	0.76
Received some schooling	0.63	0.76	0.73	0.44	0.45	0.94
Household size at baseline	0.63	0.82	0.66	0.82	0.39	0.54
Asset index	0.73	0.55	0.74	0.75	0.53	0.41
No. of fields owned or rented	0.93	0.76	0.57	0.68	0.53	0.78
No. of crops cultivated	0.76	0.33	0.84	0.44	0.94	0.46
Total quantity of output	0.32	0.07	0.77	0.33	0.26	0.06
No. of household members who have migrated	0.55	0.45	0.90	0.81	0.45	0.37
Household experienced hunger	0.51	0.85	0.79	0.65	0.38	0.66
Adult did not eat for an entire day	0.93	0.88	0.06	0.82	0.08	0.05
Built demi-lunes prior season	0.72	0.61	0.86	0.35	0.91	0.55
Demi-lune test score	0.04	0.76	0.00	0.09	0.13	0.01

Notes: The table includes household data from 2,143 survey participants during the baseline survey conducted across 180 villages. Each row shows the p-value from a pairwise comparison of each treatment for each variable.

Table A3: Attrition, by Survey Round

	(1) Baseline	(2) Midline	(3) DL 2018	(4) DL 2019	(5) DL 2020	(6) Endline
Panel A						
Any treatment	0.00	-0.04*	-0.01	-0.00	0.00	-0.03
	(0.02)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)
Panel B						
Training	0.00	-0.03	-0.00	-0.01	0.01	-0.01
	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)	(0.02)
UCT early	0.02	-0.02	-0.00	0.00	0.00	-0.03
	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)	(0.03)
CCT	-0.01	-0.04	-0.01	-0.00	-0.00	-0.04*
	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)	(0.02)
UCT late	-0.01	-0.06**	-0.01	-0.01	-0.01	-0.04*
	(0.02)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)
Training=UCT early	0.43	0.46	0.75	0.12	0.27	0.33
Training=CCT	0.53	0.89	0.38	0.17	0.21	0.06
Training=UCT late	0.48	0.20	0.45	0.99	0.04	0.05
UCT early=CCT	0.17	0.34	0.55	0.79	0.88	0.47
UCT early=UCT late	0.16	0.02	0.61	0.15	0.31	0.44
CCT=UCT late	0.89	0.22	0.98	0.18	0.29	0.92
Mean in control	0.06	0.14	0.01	0.02	0.01	0.16
No. of observations	2,155	2,861	2,861	2,861	2,861	2,861
R squared	0.02	0.05	0.01	0.01	0.01	0.02

Notes: Each column presents the results from a regression of a dependent binary variable for *attrition* on a binary variable for *any treatment* (Panel A) or binary variables for each treatment (Panel B), as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Robust standard errors clustered at the village level are provided in parentheses. P-values from pairwise F-tests of the coefficients are provided below the regression results. The dependent variable in all specifications is a binary variable equal to one if the respondent or household was not present for a particular data collection round, 0 otherwise. Asterisks denote a statistically significant effect at the 1% ***, 5% **, or 10% * levels.

Table A4: Compliance

	(1) Any HH member attended training	(2) Respondent attended training	(3) Another HH member attended training	(4) No. of respondents who attended training	(5) Cash transfer recieved	(6) Amount of cash transfer recieved in CFA
Panel A						
Any treatment	0.94***	0.73***	0.54***	14.91***		
	(0.01)	(0.02)	(0.02)	(0.13)		
Any cash transfer					0.94***	10,125.37***
					(0.01)	(414.95)
Panel B						
Training	0.97***	0.76***	0.53***	15.31***	-0.00	-52.08
	(0.01)	(0.03)	(0.03)	(0.15)	(0.00)	(272.99)
UCT early	0.94***	0.71***	0.53***	14.96***	0.95***	9,756.97***
	(0.01)	(0.03)	(0.03)	(0.20)	(0.01)	(269.93)
CCT	0.94***	0.75***	0.55***	14.68***	0.94***	10,347.97***
	(0.01)	(0.02)	(0.03)	(0.25)	(0.01)	(1,083.78)
UCT late	0.93***	0.70***	0.56***	14.61***	0.93***	10,206.47***
	(0.02)	(0.03)	(0.03)	(0.44)	(0.02)	(285.32)
Female	-0.01*	-0.00	0.04**	-0.00	-0.00	-402.26*
	(0.01)	(0.02)	(0.02)	(0.05)	(0.01)	(217.01)
Mean in control	0.00	0.00	0.00	0.00	0.00	0.00
No. of observations	2861	2861	2861	2861	2861	2861
R squared	0.75	0.33	0.18	0.91	0.86	0.30
Training=UCT early	0.07	0.18	0.99	0.16	0.00	0.00
Training=CCT	0.05	0.83	0.66	0.03	0.00	0.00
Training=UCT late	0.09	0.18	0.43	0.14	0.00	0.00
UCT early=CCT	0.69	0.21	0.68	0.38	0.63	0.59
UCT early=UCT Late	0.57	0.94	0.45	0.48	0.60	0.10
CCT=UCT late	0.80	0.22	0.67	0.89	0.88	0.89

Notes: Each column presents the results from a regression of a dependent variable on a binary variable for *any treatment* (Panel A) or binary variables for each treatment (Panel B), as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Columns 1-4 use administrative data on training attendance in all treatment villages in February 2018, whereas Columns 5 and 6 use administrative data on cash transfer receipt from all cash transfer villages between March and June 2018. For all dependent variables, zero values were imputed for control villages (Columns 1-4), as well as training villages (Columns 5-6). Robust standard errors clustered at the village level are provided in parentheses. P-values from pairwise F-tests of the coefficients are provided below the regression results. Asterisks denote a statistically significant difference with the control group at the 1% ***, 5% **, or 10% * levels.

Table A5: Correlates of Adoption

	(1) Constructed any demi-lune	(2) No. of verified demi-lunes constructed
Any treatment	0.92***	34.79***
	(0.02)	(2.86)
Kantche cluster	0.00	-25.00***
	(0.02)	(5.65)
Female	-0.00	-3.45**
	(0.01)	(1.59)
Owns mobile phone	0.01	1.59
	(0.01)	(2.21)
No. of adults in HH	0.00	0.91*
	(0.00)	(0.53)
Total no. of hectares owned	0.00	0.02
	(0.00)	(0.54)
Had previous experience with demi-lunes	0.01	3.91
	(0.01)	(2.40)
Z-score of total value of production	-0.00	6.19
	(0.00)	(3.85)
Percentage of crops failed in terms of crops attempted	-0.06	-0.65
	(0.05)	(6.00)
Demi-lune test	-0.01**	-0.54
	(0.00)	(0.60)
Mean in control	0.10	5.32
No. of observations	2138	2138
R squared	0.75	0.20

Notes: Each column presents the results from a regression of the dependent variables on a binary variable for *any treatment*, as well as listing and baseline characteristics. Robust standard errors clustered at the village level are provided in parentheses. The sample is restricted to households included in the baseline survey. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A6: Demi-lune Adoption, Year 3

	(1) Constructed any demi-lunes	(2) No. of verified demi-lunes constructed	(3) No. of verified demi-lunes constructed per degraded ha	(4) Ratio of verified to total no. of demi-lunes constructed	(5) Demi-lunes were operational
Panel A					
Any treatment	0.79***	32.48***	25.69***	0.68***	0.74***
	(0.05)	(5.70)	(4.72)	(0.04)	(0.05)
Panel B					
Training	0.78***	31.60***	25.61***	0.69***	0.74***
	(0.05)	(6.97)	(6.17)	(0.04)	(0.05)
UCT early	0.80***	27.19***	22.61***	0.67***	0.76***
	(0.05)	(6.01)	(5.42)	(0.04)	(0.05)
CCT	0.78***	39.95***	30.34***	0.67***	0.73***
	(0.05)	(7.79)	(6.81)	(0.04)	(0.05)
UCT late	0.81***	30.73***	23.71***	0.70***	0.77***
	(0.05)	(9.17)	(7.77)	(0.04)	(0.05)
Mean in control	0.17	10.21	6.96	0.14	0.16
No. of observations	2834	2834	2834	2834	2834
R squared	0.62	0.13	0.10	0.50	0.47
Training=UCT Early	0.42	0.45	0.62	0.32	0.44
Training=CCT	0.79	0.28	0.52	0.38	0.69
Training=UCT late	0.16	0.93	0.82	0.41	0.21
UCT Early=CCT	0.23	0.06	0.25	1.00	0.27
UCT Early=UCT late	0.41	0.67	0.88	0.09	0.65
CCT=UCT late	0.07	0.34	0.44	0.13	0.12

Notes: Each column presents the results from a regression of the dependent variables on a binary variable for *any treatment* (Panel A) or binary variables for each treatment (Panel B), as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Robust standard errors clustered at the village level are provided in parentheses. P-values from pairwise F-tests of the coefficients are provided below the regression results. The outcome variable in column (4) is only defined for households that constructed a positive number of demi-lunes. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A7: Wages

	(1) Average daily wages paid for demi-lunes family labor (CFA)	(2) Average daily wages paid for non-family demi-lunes labor	(3) Average daily wages earned by family labor sold	(4) Average daily wages for non demi-lunes labor (CFA)
Panel A				
Any treatment	-9.85	-12.66	6.45	-14.95
	(33.19)	(80.31)	(25.38)	(41.66)
Panel B				
Training	-47.27	-18.98	-9.78	-49.12
	(35.38)	(84.15)	(29.92)	(45.90)
UCT early	-12.56	6.06	54.26	28.55
	(36.85)	(82.45)	(37.23)	(59.52)
CCT	54.99	-37.73	-12.59	-5.44
	(84.74)	(82.35)	(28.73)	(47.89)
UCT late	-36.70	9.91	-7.07	-34.17
	(39.07)	(84.20)	(35.16)	(46.25)
Mean in control	217.41	615.42	880.48	933.34
No. of observations	1590	824	1315	1044
R squared	0.02	0.04	0.04	0.04
Training=UCT early	0.15	0.51	0.08	0.11
Training=CCT	0.24	0.61	0.92	0.27
Training=UCT late	0.67	0.47	0.94	0.69
UCT early=CCT	0.45	0.16	0.06	0.54
UCT early=UCT late	0.37	0.92	0.13	0.23
CCT=UCT late	0.34	0.17	0.86	0.50

Notes: Each column presents the results from a regression of the dependent variables on a binary variable for *any treatment* (Panel A) or binary variables for each treatment (Panel B), as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Data are from the midline survey in February 2019. The number of observations varies in each column as these are conditional measures. Robust standard errors clustered at the village level are provided in parentheses. P-values from pairwise F-tests of the coefficients are provided below the regression results. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A8: Labor Expenditures

	(1) Total amount spent on labor for demi-lunes	(2) Total amount spent on non-family labor for demi-lunes	(3) Total amount spent on family labor for demi-lunes	(4) Total amount spent on non-demi-lune labor	(5) Total amount spent on labor	(6) Total revenue from selling family labor
Panel A						
Any treatment	7,521.33***	3,313.35***	4,207.98***	1,124.47	4,437.82**	-2,153.02
	(1,600.14)	(471.13)	(1,397.11)	(1,748.72)	(1,997.83)	(1,617.19)
Panel B						
Training	8,802.84***	3,930.22***	4,872.61	1,457.61	5,387.84**	-1,105.43
	(2,964.23)	(771.66)	(2,961.79)	(2,087.71)	(2,482.20)	(1,914.23)
UCT early	6,145.07***	2,866.83***	3,278.24***	698.01	3,564.84	-2,301.59
	(1,531.79)	(565.36)	(1,229.34)	(2,054.31)	(2,325.03)	(1,812.55)
CCT	9,415.74**	3,230.81***	6,184.93	2,277.29	5,508.11**	-3,200.07
	(3,747.54)	(671.94)	(3,754.20)	(2,113.94)	(2,412.04)	(2,096.36)
UCT late	5,216.59***	3,183.35***	2,033.25	-218.75	2,964.60	-1,998.01
	(1,660.54)	(759.03)	(1,294.06)	(2,125.27)	(2,472.22)	(1,829.43)
Mean in control	1,098.87	357.84	741.03	7,987.82	8,345.66	15,590.10
No. of observations	2537	2537	2537	2537	2537	2537
R squared	0.03	0.05	0.02	0.02	0.03	0.03
Training=UCT early	0.33	0.19	0.57	0.68	0.41	0.45
Training=CCT	0.90	0.42	0.79	0.67	0.96	0.26
Training=UCT late	0.21	0.43	0.33	0.35	0.28	0.58
UCT early=CCT	0.40	0.61	0.46	0.43	0.38	0.60
UCT early=UCT late	0.50	0.69	0.25	0.63	0.79	0.84
CCT=UCT late	0.31	0.96	0.32	0.19	0.26	0.51

Notes: Each column presents the results from a regression of the dependent variables on a binary variable for *any treatment* (Panel A) or binary variables for each treatment (Panel B), as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Robust standard errors clustered at the village level are provided in parentheses. P-values from pairwise F-tests of the coefficients are provided below the regression results. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A9: Production by Crop

	(1) Millet produced in kg	(2) Sorghum produced in kg	(3) Cowpea produced in kg	(4) Peanuts produced in kg	(5) Sesame produced in kg	(6) Total production in kg	(7) Total value of production in CFA
Panel A: Year 1							
Any treatment	41	26	5.3	.55	7.2***	81	17,035
	(31)	(18)	(4)	(17)	(2.8)	(53)	(11,884)
Mean in control	461	185	52	85	13	797	164,702
No. of observations	2,535	2,535	2,535	2,535	2,535	2,535	2,535
R squared	0.11	0.08	0.07	0.05	0.08	0.11	0.11
	(1) Millet produced in kg	(2) Sorghum produced in kg	(3) Cowpea produced in kg	(4) Peanuts produced in kg	(5) Sesame produced in kg	(6) Total production in kg	(7) Total value of production in CFA
Panel B: Year 3							
Any treatment	44*	35*	4.2	.14	7*	90**	18,469*
	(25)	(18)	(5.9)	(16)	(3.7)	(44)	(10,262)
Mean in control	336	154	50	81	21	643	139,316
No. of observations	2,486	2,486	2,486	2,486	2,486	2,486	2,486
R squared	0.10	0.13	0.03	0.03	0.02	0.11	0.08

Notes: Each column presents the results from a regression of the dependent variables on binary variables for *any treatment* and stratification fixed effects and variables used to check balance in the min-max t-statistic method. Robust standard errors clustered at the village level are provided in parentheses. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A10: Welfare Measures

	(1) IHS of weekly income	(2) Z-score of productive assets	(3) HH did not experience food insecurity	(4) HH diet diversity score	
Panel A: Year 1					
Any treatment	0.12	0.16**	0.03**	0.20	
	(0.09)	(0.08)	(0.01)	(0.14)	
Mean in control	8.72	2.58	0.06	5.81	
No. of observations	2,535	2,535	2,535	2,535	
R squared	0.03	0.11	0.01	0.05	
	(1) IHS of weekly non-ag income	(2) Z-score of productive assets	(3) HH did not experience food insecurity	(4) HH diet diversity score	(5) No. of livestock raised
Panel B: Year 3					
Any treatment	0.02	0.25***	-0.01	0.01	1.76
	(0.09)	(0.09)	(0.02)	(0.14)	(1.11)
Mean in control	11.41	2.43	0.10	5.57	15.32
No. of observations	2,486	2,486	2,486	2,486	2,486
R squared	0.07	0.10	0.01	0.04	0.10

Notes: Each column presents the results from a regression of the dependent variables on binary variables for *any treatment*, as well as stratification fixed effects and variables used to check balance in the min-max t-statistic method. Robust standard errors clustered at the village level are provided in parentheses. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A.11: ANCOVA

	Year 1			Year 3		
	Control mean	Any treatment	N	Control mean	Any treatment	N
	(1)	(2)	(3)	(4)	(5)	(6)
Constructed any demi-lune	0.04	0.92***	2139	0.17	0.80***	2125
		(0.02)			(0.05)	
No. of verified demi-lunes constructed	1.26	34.65***	2139	10.88	32.83***	2125
		(2.81)			(6.23)	
Percentage crops failed of crops attempted	0.04	−0.01	1964	0.11	−0.02	1905
		(0.01)			(0.01)	
Z-score of production (kg) of crops	−0.01	0.14*	1964	0.02	0.16**	1905
		(0.08)			(0.07)	
Z-score of value (CFA) of crops	0.00	0.12	1964	0.03	0.12	1905
		(0.08)			(0.07)	
No. of migrants	1.21	−0.21**	1965	1.06	−0.10	1905
		(0.09)			(0.07)	
Hired any non-family non-DL labor	0.37	0.05	1964	0.40	0.08**	1905
		(0.03)			(0.03)	
Z-score of productive assets	−0.02	0.17***	1964	0.01	0.26***	1905
		(0.05)			(0.07)	
Demi-lune test score	5.91	0.84***	1965	3.33	0.44***	1905
		(0.09)			(0.09)	

Notes: Columns (1) and (4) provide the mean of the outcome variable for the control group in the midline (Year 1) and the endline (Year 3). Columns (2) and (5) show the results from a regression of the dependent variables on binary variables for *any treatment*, as well as stratification fixed effects, variables used to check balance in the min-max t-statistic method and the baseline value of the dependent variable. Robust standard errors clustered at the village level are provided in parentheses. Asterisks denote a statistically significant Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A.12: Lee Bounds

	Year 1			Year 3		
	Any treatment	Lower bound	Upper bound	Any treatment	Lower bound	Upper bound
	(1)	(2)	(3)	(4)	(5)	(6)
Percentage crops failed of crops attempted	−0.02*	−0.02***	−0.01**	−0.01	−0.02	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Z-score of production (kg) of crops	0.12	0.02	0.15***	0.15**	0.04	0.18***
	(0.08)	(0.11)	(0.05)	(0.07)	(0.09)	(0.06)
Z-score of value (CFA) of crops	0.12	0.00	0.15**	0.12*	0.01	0.15**
	(0.08)	(0.08)	(0.06)	(0.07)	(0.08)	(0.05)
Self-reported soil quality	0.04*	0.00	0.08**			
	(0.02)	(0.03)	(0.04)			
Renewed cultivation on any land				0.33***	0.33***	0.37***
				(0.04)	(0.03)	(0.03)
Stopped cultivating any land				−0.07***	−0.09***	−0.07***
				(0.03)	(0.02)	(0.02)
No. of migrants	−0.21**	−0.30**	−0.17**	−0.05	−0.13	−0.02
	(0.09)	(0.11)	(0.07)	(0.07)	(0.12)	(0.07)
Hired any non-family non-DL labor	0.06*	0.05	0.09**	0.10***	0.08***	0.12***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Sold family labor	−0.08**	−0.10***	−0.06**	−0.02	−0.03	0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)

Notes: Each row presents the results from a regression of the dependent variables on a binary variable for *any treatment* for midline and endline, using Lee bounds to estimate the lower and upper bounds. Robust standard errors clustered at the village level are provided in parentheses for Columns 1 and 4, whereas bootstrapped standard errors are provided for the lower and upper bounds. Asterisks denote a statistically significant difference at the 1% ***, 5% **, or 10% * levels.

Table A.13: Robustness: Sharpened FDR q-values

	Any treatment (1)	Unadjusted p-val (2)	Adjusted p-val (3)
Constructed any DL (Year 1)	0.910***	(0.00)	(0.00)
No. of verified DL constructed (Year 1)	34.454***	(0.00)	(0.00)
No. of verified DL constructed per degraded ha (Year 1)	25.936***	(0.00)	(0.00)
Ratio of verified to total no. of DL constructed (Year 1)	0.044	(0.56)	(0.26)
Sowed in DL (Year 1)	0.775***	(0.00)	(0.00)
Used manure in DL (Year 1)	0.196***	(0.00)	(0.00)
Person-days of DL family labor used (Year 1)	15.046***	(0.00)	(0.00)
Person-days of DL non-family labor used (Year 1)	6.027***	(0.00)	(0.00)
No. of migrants (Year 1)	-0.211**	(0.02)	(0.02)
No. of family members selling labor (Year 1)	-0.117	(0.13)	(0.11)
Hired any non-family non-DL labor (Year 1)	0.063*	(0.07)	(0.07)
No. of migrants (Year 3)	-0.054	(0.46)	(0.24)
No. of family members selling labor (Year 3)	-0.122	(0.26)	(0.16)
Hired any non-family non-DL labor (Year 3)	0.101***	(0.00)	(0.00)
No. of crops planted (Year 1)	0.056	(0.45)	(0.24)
Percentage of crops failed of crops attempted (Year 1)	-0.016*	(0.09)	(0.08)
Z-score of production (kg) of crops (Year 1)	0.120	(0.13)	(0.11)
Z-score of value (CFA) of crops (Year 1)	0.116	(0.15)	(0.13)
No. of crops planted (Year 3)	0.003	(0.97)	(0.40)
Percentage of crops failed of crops attempted (Year 3)	-0.005	(0.63)	(0.28)
Z-score of production (kg) of crops (Year 3)	0.151**	(0.04)	(0.05)
Z-score of value (CFA) of crops (Year 3)	0.123*	(0.07)	(0.07)
No. of fields owned or rented (Year 1)	0.010	(0.94)	(0.40)
Ha. of land cultivated (Year 1)	0.036	(0.87)	(0.38)
Ha. of degraded land cultivated (Year 1)	0.080	(0.64)	(0.28)
Self-reported soil quality (Year 1)	0.043*	(0.07)	(0.07)
No. of fields owned or rented (Year 3)	-0.080	(0.52)	(0.25)
Renewed cultivation on any land (Year 3)	0.333***	(0.00)	(0.00)
Ha. of renewed cultivation (Year 3)	0.288***	(0.00)	(0.00)
Stopped cultivating any land (Year 3)	-0.073**	(0.01)	(0.01)
Ha. of land no longer cultivated (Year 3)	-0.039	(0.25)	(0.16)
Knows about DL (Year 3)	0.012*	(0.06)	(0.07)
Knows about DL from training (Year 3)	0.368***	(0.00)	(0.00)
DL test score (Year 3)	0.470***	(0.00)	(0.00)
Knows about DL from neighbors (Year 3)	0.075***	(0.00)	(0.01)
Knows about DL from another village (Year 3)	-0.188***	(0.00)	(0.00)
Helped build DL in village (Year 3)	0.067***	(0.00)	(0.00)

Notes: FDR sharpened q-values follow Benjamini, Krieger and Yekutieli (2006). Sharpened FDR q-vals can be less than unadjusted p-vals when many hypotheses are rejected.

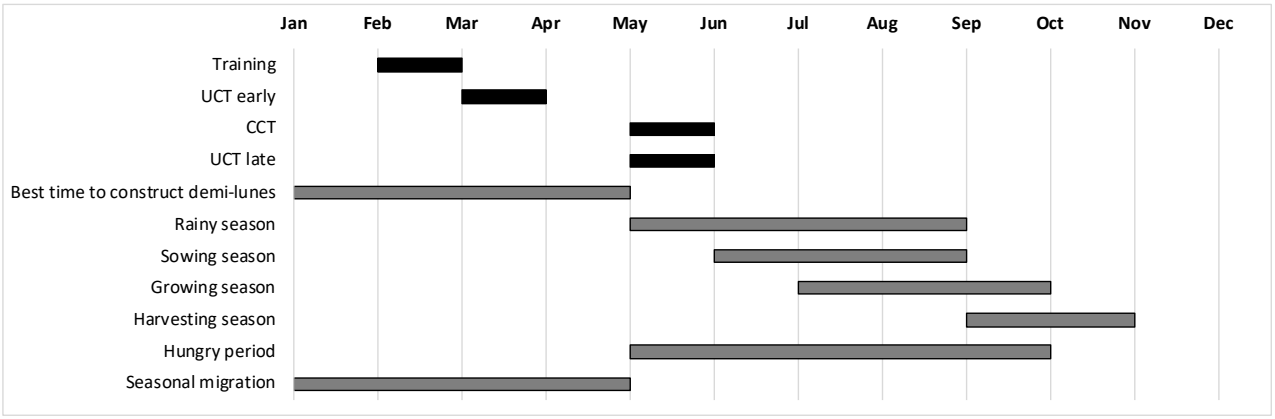

Figure A.1: Agricultural Calendar and Treatment Timing

Notes: Figure shows the timeline for implementation of the treatments relative to the agricultural calendar.

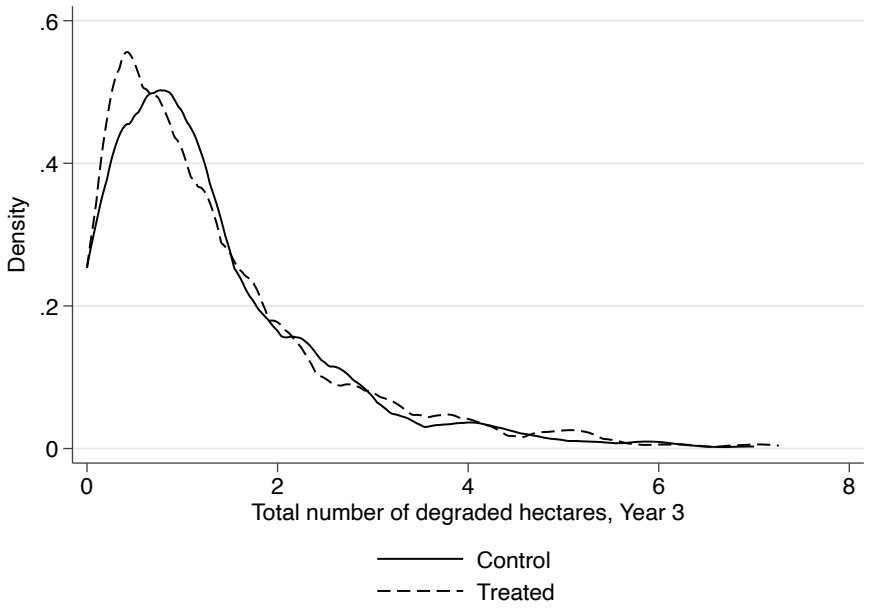

Figure A.2: Land Quality, Year 3

Notes: Data on the number of degraded hectares of land are from the 2020 field visits, based on enumerator observations.

A.1. Training details

The trainings were held in each treatment village, and the 16 selected participants were invited in advance. Farmers first participated in a "classroom" portion of the training, during which the training objectives were explained. Specifically, the training would explain why demi-lunes are useful for degraded land, where to construct them, and how to construct them, and to practice together putting the lessons into practice.

Following the description of training objectives, farmers were asked if they knew what a demi-lune is, and asked them to explain. The group was then given the training booklets and each of the details of construction was discussed. This was broken down into five steps:

- Find a degraded land (glacis) with a gentle slope
- Remove the earth
- Make the half-moons
- Make the half-moons
- Plant the crops within or between the half-moons

For each step, additional technical details were described. The costs and benefits of demi-lune construction were also discussed. Then, farmers were shown, as a group, how to implement each step. Finally, they were asked to construct three demi-lunes together, and were corrected on details of implementation.

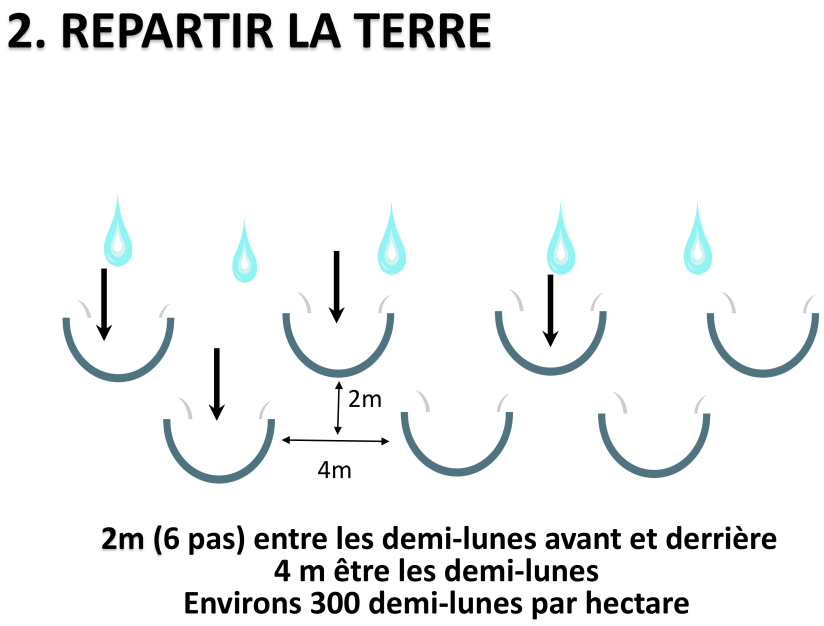

Figure A.3: Training Manual

Notes: Example from training manual used to guide the classroom portion of the training and provided to farmers after the training. This diagram outlines the dimensions and spacing recommendations for demi-lunes.

A.2. Transfer scripts

Early UCT Greetings! My name is [NAME] and I am part of the team working with Sahel Consulting, CRS and the Ministry of Environment on the recuperation of degraded lands in Niger. As you know, we have been working in your village since November, selecting 16 beneficiaries and conducting a training on demi-lunes.

You have also been selected to receive a cash transfer of 10.000 CFA. This will be delivered to you via mobile money, at the cell phone number that you provided, and you must go and pick it up at the nearest agent. We will send this money to you by early April.

This money is for you; you are free to do with it what you wish. You do not need use it for anything related to demi-lunes. For example, if you need to spend it on food or clothing or medical expenses, you should. We will only be making this cash transfer one time, this year, and there will be no future cash transfers as part of this program. Please note that only those households who had a member who attended the training will be eligible for this.

We will be visiting some of your households over the next few months to ask you questions about your land and the agricultural season.

Do you understand? Do you have any questions?

Late UCT Greetings! My name is [NAME] and I am part of the team working with Sahel Consulting, CRS and the Ministry of Environment on the recuperation of degraded lands in Niger. As you know, we have been working in your village since November, selecting 16 beneficiaries and conducting a training on demi-lunes.

You have also been selected to receive a cash transfer of 10.250 CFA. This will be delivered to you via mobile money, at the cell phone number that you provided, and you must go and pick it up at the nearest agent. We will send this money to you by the end of May/early June, right before the rainy season.

This money is for you; you are free to do with it what you wish. You do not need use it for anything related to demi-lunes. For example, if you need to spend it on food or clothing or medical expenses, you should. We will only be making this cash transfer one time, this year, and there will be no future cash transfers as part of this program. Only those households who had a member who attended the training will be eligible for this.

We will be visiting some of your households over the next few months to ask you questions about your land and the agricultural season.

Do you understand? Do you have any questions?

CCT Greetings! My name is [NAME] and I am part of the team working with Sahel Consulting, CRS and the Ministry of Environment on the recuperation of degraded lands

in Niger. As you know, we have been working in your village since November, selecting 16 beneficiaries and conducting a training on demi-lunes.

You have also been selected to receive a cash transfer of 250 CFA for every demi-lune that you construct that meets the norms outlined in the training. This will be delivered to you via mobile money, at the cell phone number that you provided, and you must go and pick it up at the nearest agent. We will send this money to you by the end of May/early June, right before the rainy season and after we have verified how many demi-lunes that you constructed on your land.

While you will be paid for every demi-lune constructed, this money is for you; you are free to do with it what you wish. You do not need use it for anything related to demi-lunes. We will only be making this cash transfer one time, this year, and there will be no future cash transfers as part of this program. Only those households who had a member who attended the training will be eligible for this.

We will be visiting some of your households over the next few months to ask you questions about your land and the agricultural season.

Do you understand? Do you have any questions?