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Impact evaluation of support to collective action for agricultural value chain development in Nepal

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ONLINE APPENDIX

ADB Economics Working Paper No. 661

**Impact Evaluation of Support to Collective Action
for Agricultural Value Chain Development in Nepal**

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June 2022

Appendix 1: Tables

Table A1: Baseline Balance Table without Weights: Selection into Group Membership

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Log of value of all crops (NRs)	945 [843]	10.13 [0.03]	113 [60]	10.26 [0.11]	-0.13
Log of travel time coop/farmer group (minutes)	945 [843]	2.44 [0.03]	113 [60]	2.63 [0.11]	-0.19*
Household self-reports as poor	945 [843]	0.29 [0.02]	113 [60]	0.24 [0.04]	0.05
Log of area cultivated by HH in hectares	945 [843]	0.61 [0.01]	113 [60]	0.65 [0.04]	-0.04
Percent of farm area owned by HH	945 [843]	0.78 [0.01]	113 [60]	0.83 [0.04]	-0.05
Share of area irrigated	945 [843]	0.58 [0.02]	113 [60]	0.46 [0.06]	0.12**
Rice intensity	945 [843]	0.21 [0.01]	113 [60]	0.19 [0.02]	0.03
HH has remittances	945 [843]	0.35 [0.02]	113 [60]	0.33 [0.05]	0.02
HH has nonfarm wages	945 [843]	0.32 [0.01]	113 [60]	0.40 [0.05]	-0.08
HH has machine for AG purposes	945 [843]	0.14 [0.01]	113 [60]	0.12 [0.04]	0.02
HH has savings account	945 [843]	0.49 [0.02]	113 [60]	0.52 [0.06]	-0.03
Household size	945 [843]	6.18 [0.09]	113 [60]	6.08 [0.24]	0.10
Education of farmer	945 [843]	2.42 [0.12]	113 [60]	2.81 [0.37]	-0.40
Age of farmer (years)	945 [843]	44.56 [0.43]	113 [60]	45.88 [1.40]	-1.32
Gender of farmer	945 [843]	0.49 [0.02]	113 [60]	0.44 [0.05]	0.04

continued on next page

2 Online Appendix

Table A1 continued

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Log of travel time to motorable road (minutes)	945 [843]	2.79 [0.05]	113 [60]	3.04 [0.20]	-0.25
Walking distance to plot (15 minute increments)	945 [843]	1.12 [0.01]	113 [60]	1.05 [0.02]	0.06**
HH has electricity: National grid	945 [843]	0.59 [0.02]	113 [60]	0.62 [0.07]	-0.03
Number of non-AG projects in village	945 [843]	0.06 [0.01]	113 [60]	0.03 [0.02]	0.03
HH rents out any land	945 [843]	0.08 [0.01]	113 [60]	0.04 [0.02]	0.03
HH does sharecropping	945 [843]	0.16 [0.01]	113 [60]	0.15 [0.04]	0.01
HH has business	945 [843]	0.21 [0.02]	113 [60]	0.21 [0.04]	0.00
F-test of joint significance (F-stat)					1.36
F-test, number of observations					1058

* = $p < .10$, ** = $p < 0.05$, AG = agriculture, HH = household, N = number of observations, SE = standard error.

Source: Authors' calculations using data from household baseline survey, 2014.

Table A2: Baseline Balance Table with Weights: Selection into Group Membership

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Log of value of all crops (NRs)	728 [646]	10.26 [0.05]	113 [60]	10.26 [0.11]	0.00
Log of travel time coop/farmer group (minutes)	728 [646]	2.63 [0.04]	113 [60]	2.63 [0.11]	0.00
Household self-reports as poor	728 [646]	0.25 [0.02]	113 [60]	0.24 [0.04]	0.01
Log of area cultivated by HH in hectares	728 [646]	0.64 [0.02]	113 [60]	0.65 [0.04]	-0.01
Percent of farm area owned by HH	728 [646]	0.83 [0.01]	113 [60]	0.83 [0.04]	0.00
Share of area irrigated	728 [646]	0.46 [0.02]	113 [60]	0.46 [0.06]	-0.01
Rice intensity	728 [646]	0.17 [0.01]	113 [60]	0.19 [0.02]	-0.02
HH has remittances	728 [646]	0.42 [0.02]	113 [60]	0.33 [0.05]	0.09*
HH has nonfarm wages	728 [646]	0.34 [0.02]	113 [60]	0.40 [0.05]	-0.06
HH has machine for AG purposes	728 [646]	0.13 [0.02]	113 [60]	0.12 [0.04]	0.02
HH has savings account	728 [646]	0.54 [0.02]	113 [60]	0.52 [0.06]	0.02
Household size	728 [646]	6.40 [0.12]	113 [60]	6.08 [0.24]	0.32
Education of farmer	728 [646]	2.67 [0.17]	113 [60]	2.81 [0.37]	-0.14
Age of farmer (years)	728 [646]	46.31 [0.63]	113 [60]	45.88 [1.40]	0.44
Gender of farmer	728 [646]	0.44 [0.02]	113 [60]	0.44 [0.05]	-0.00
Log of travel time to motorable road (minutes)	728 [646]	3.17 [0.07]	113 [60]	3.04 [0.20]	0.13

continued on next page

4 Online Appendix

Table A2 continued

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Walking distance to plot (15 minute increments)	728 [646]	1.02 [0.00]	113 [60]	1.05 [0.02]	-0.03
HH has electricity: National grid	728 [646]	0.58 [0.03]	113 [60]	0.62 [0.07]	-0.04
Number of non-AG projects in village	728 [646]	0.03 [0.01]	113 [60]	0.03 [0.02]	0.01
HH rents out any land	728 [646]	0.04 [0.01]	113 [60]	0.04 [0.02]	0.00
HH does sharecropping	728 [646]	0.13 [0.02]	113 [60]	0.15 [0.04]	-0.02
HH has business	728 [646]	0.27 [0.02]	113 [60]	0.21 [0.04]	0.06
F-test of joint significance (F-stat)					0.64
F-test, number of observations					841

* = $p < .10$, AG = agriculture, HH = household, N = number of observations, SE = standard error.

Source: Authors' calculations using data from household baseline survey, 2014.

Table A3: Baseline Balance Table without Weights: Selection into Receiving Any Support

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Log of value of all crops (NRs)	1,828 [1,221]	10.30 [0.05]	796 [140]	10.51 [0.08]	-0.20**
Log of travel time coop/farmer group (minutes)	1,828 [1,221]	2.50 [0.03]	796 [140]	2.68 [0.06]	-0.18***
Household self-reports as poor	1,828 [1,221]	0.26 [0.01]	796 [140]	0.27 [0.02]	-0.01
Log of area cultivated by HH in hectares	1,828 [1,221]	0.65 [0.02]	796 [140]	0.68 [0.03]	-0.03
Percent of farm area owned by HH	1,828 [1,221]	0.82 [0.01]	796 [140]	0.81 [0.02]	0.00
Share of area irrigated	1,828 [1,221]	0.58 [0.02]	796 [140]	0.61 [0.04]	-0.02
Rice intensity	1,828 [1,221]	0.20 [0.01]	796 [140]	0.19 [0.01]	0.01
HH has remittances	1,828 [1,221]	0.34 [0.01]	796 [140]	0.33 [0.02]	0.01
HH has nonfarm wages	1,828 [1,221]	0.36 [0.01]	796 [140]	0.38 [0.02]	-0.02
HH has machine for AG purposes	1,828 [1,221]	0.16 [0.02]	796 [140]	0.16 [0.03]	-0.00
HH has savings account	1,828 [1,221]	0.59 [0.01]	796 [140]	0.57 [0.03]	0.02
Household size	1,828 [1,221]	6.38 [0.08]	796 [140]	6.65 [0.12]	-0.27*
Education of farmer	1,828 [1,221]	2.81 [0.12]	796 [140]	3.13 [0.16]	-0.32
Age of farmer (years)	1,828 [1,221]	45.21 [0.32]	796 [140]	45.11 [0.57]	0.10
Gender of farmer	1,828 [1,221]	0.49 [0.01]	796 [140]	0.51 [0.02]	-0.03
Log of travel time to motorable road (minutes)	1,828 [1,221]	2.91 [0.05]	796 [140]	3.12 [0.14]	-0.21*

continued on next page

6 Online Appendix

Table A3 continued

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Walking distance to plot (15 minute increments)	1,828 [1,221]	1.13 [0.01]	796 [140]	1.16 [0.02]	-0.04*
HH has electricity: National grid	1,828 [1,221]	0.58 [0.02]	796 [140]	0.52 [0.05]	0.06
Number of non-AG projects in village	1,828 [1,221]	0.12 [0.02]	796 [140]	0.26 [0.07]	-0.14**
HH rents out any land	1,828 [1,221]	0.07 [0.01]	796 [140]	0.08 [0.01]	-0.01
HH does sharecropping	1,828 [1,221]	0.14 [0.01]	796 [140]	0.14 [0.02]	0.00
HH has business	1,828 [1,221]	0.23 [0.01]	796 [140]	0.23 [0.02]	-0.00
F-test of joint significance (F-stat)					2.29***
F-test, number of observations					2624

* = $p < .10$, ** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, HH = household, N = number of observations, SE = standard error.

Source: Authors' calculations using data from household baseline survey, 2014.

Table A4: Baseline Balance Table with Weights: Selection into Receiving Any Support

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Log of value of all crops (NRs)	1,450 [973]	10.40 [0.05]	796 [140]	10.51 [0.08]	-0.10
Log of travel time coop/farmer group (minutes)	1,450 [973]	2.67 [0.04]	796 [140]	2.68 [0.06]	-0.01
Household self-reports as poor	1,450 [973]	0.27 [0.01]	796 [140]	0.27 [0.02]	-0.01
Log of area cultivated by HH in hectares	1,450 [973]	0.65 [0.02]	796 [140]	0.68 [0.03]	-0.02
Percent of farm area owned by HH	1,450 [973]	0.81 [0.01]	796 [140]	0.81 [0.02]	-0.00
Share of area irrigated	1,450 [973]	0.59 [0.02]	796 [140]	0.61 [0.04]	-0.02
Rice intensity	1,450 [973]	0.19 [0.01]	796 [140]	0.19 [0.01]	-0.01
HH has remittances	1,450 [973]	0.38 [0.02]	796 [140]	0.33 [0.02]	0.05**
HH has nonfarm wages	1,450 [973]	0.34 [0.02]	796 [140]	0.38 [0.02]	-0.04
HH has machine for AG purposes	1,450 [973]	0.15 [0.02]	796 [140]	0.16 [0.03]	-0.01
HH has savings account	1,450 [973]	0.57 [0.02]	796 [140]	0.57 [0.03]	0.01
Household size	1,450 [973]	6.67 [0.10]	796 [140]	6.65 [0.12]	0.02
Education of farmer	1,450 [973]	2.95 [0.17]	796 [140]	3.13 [0.16]	-0.18
Age of farmer (years)	1,450 [973]	45.24 [0.40]	796 [140]	45.11 [0.57]	0.13
Gender of farmer	1,450 [973]	0.49 [0.02]	796 [140]	0.51 [0.02]	-0.03
Log of travel time to motorable road (minutes)	1,450 [973]	3.12 [0.07]	796 [140]	3.12 [0.14]	-0.00

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Table A4 continued

Variable	(1) No Change		(2) Selected into Treatment		t-test Difference (1)-(2)
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	
Walking distance to plot (15 minute increments)	1,450 [973]	1.15 [0.02]	796 [140]	1.16 [0.02]	-0.02
HH has electricity: National grid	1,450 [973]	0.51 [0.03]	796 [140]	0.52 [0.05]	-0.01
No. of non-AG projects in village	1,450 [973]	0.16 [0.03]	796 [140]	0.26 [0.07]	-0.10
HH rents out any land	1,450 [973]	0.08 [0.01]	796 [140]	0.08 [0.01]	0.00
HH does sharecropping	1,450 [973]	0.13 [0.01]	796 [140]	0.14 [0.02]	-0.01
HH has business	1,450 [973]	0.27 [0.02]	796 [140]	0.23 [0.02]	0.04*
F-test of joint significance (F-stat)					0.88
F-test, number of observations					2246

* = $p < .10$, ** = $p < 0.05$, AG = agriculture, HH = household, N = number of observations, SE = standard error.

Source: Authors' calculations using data from household baseline survey, 2014.

Table A5: Settlement Level Population Changes

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Number of people in village	162 [162]	393.79 [24.74]	162 [162]	328.55 [21.72]	65.24***
Number of households in village	162 [162]	64.03 [3.61]	162 [162]	52.67 [3.19]	11.36***
Number of AG households in village	162 [162]	57.44 [3.14]	162 [162]	45.09 [2.85]	12.35***
Number of landless households in village	162 [162]	3.96 [0.60]	162 [162]	3.43 [0.73]	0.52
Number of disadvantaged households in village	162 [162]	11.02 [1.31]	162 [162]	9.79 [1.34]	1.23**
Share of village involved in AG	162 [162]	0.93 [0.01]	162 [162]	0.90 [0.01]	0.03***
Share of village landless	162 [162]	0.05 [0.01]	162 [162]	0.07 [0.01]	-0.02
Share of village from disadvantaged group	162 [162]	0.17 [0.02]	162 [162]	0.17 [0.02]	-0.01
F-test of joint significance (F-stat)					6.31***
F-test, number of observations					324

** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, N = number of observations, SE = standard error.

Source: Authors' calculations using data from settlement baseline (2014) and endline (2018) surveys.

Table A6: Settlement Level Access to Facilities

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Village has: mill	162 [162]	0.94 [0.02]	162 [162]	0.85 [0.03]	0.09***
Village has: cold store	162 [162]	0.23 [0.03]	162 [162]	0.12 [0.03]	0.10***
Village has: cooperative office	162 [162]	0.90 [0.02]	162 [162]	0.97 [0.01]	-0.07***
Village has: agri-service provider	162 [162]	0.70 [0.04]	162 [162]	0.67 [0.04]	0.03
Village has: market to buy crops	162 [162]	0.76 [0.03]	162 [162]	0.85 [0.03]	-0.09***
Village has: market to sell crops	162 [162]	0.76 [0.03]	162 [162]	0.81 [0.03]	-0.05
Village has: grocery	162 [162]	0.96 [0.01]	162 [162]	0.96 [0.01]	0.00
Village has: <i>haat bazaar</i>	162 [162]	0.46 [0.04]	162 [162]	0.52 [0.04]	-0.07
Village has: microfinance office	162 [162]	0.68 [0.04]	162 [162]	0.65 [0.04]	0.02
Village has: bank	162 [162]	0.67 [0.04]	162 [162]	0.67 [0.04]	0.00
Village has: bus stop	162 [162]	0.79 [0.03]	162 [162]	0.81 [0.03]	-0.02
Village has: cyber cafe	162 [162]	0.64 [0.04]	162 [162]	0.48 [0.04]	0.17***
Village has: health center	162 [162]	0.87 [0.03]	162 [162]	0.88 [0.03]	-0.01
Village has: hospital	162 [162]	0.62 [0.04]	162 [162]	0.70 [0.04]	-0.08**
Village has: school	162 [162]	0.95 [0.02]	162 [162]	0.97 [0.01]	-0.02
Village has: government office	162 [162]	0.57 [0.04]	162 [162]	0.75 [0.03]	-0.18***
Village has: formal credit facility	162 [162]	0.70 [0.04]	162 [162]	0.72 [0.04]	-0.02
F-test of joint significance (F-stat)					410.70***
F-test, number of observations					324

** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, *haat bazaar* = open-air market, N = number of observations, SE = standard error.
Source: Authors' calculations using data from settlement baseline (2014) and endline (2018) surveys.

Table A7: Settlement Level Change in Prices and Wages

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Summer village price: fine rice (NRs)	162 [162]	64.60 [0.78]	162 [162]	53.75 [0.93]	10.85***
Summer market price: fine rice (NRs)	162 [162]	63.23 [0.64]	162 [162]	55.07 [0.94]	8.16***
Winter village price: fine rice (NRs)	162 [162]	59.93 [0.79]	162 [162]	49.65 [0.89]	10.28***
Winter market price: fine rice (NRs)	162 [162]	58.93 [0.71]	162 [162]	51.09 [0.89]	7.85***
Summer village price: coarse rice (NRs)	162 [162]	43.55 [0.52]	162 [162]	36.58 [0.59]	6.97***
Summer market price: coarse rice (NRs)	162 [162]	42.37 [0.48]	162 [162]	36.90 [0.55]	5.47***
Winter village price: coarse rice (NRs)	162 [162]	40.30 [0.54]	162 [162]	33.04 [0.57]	7.26***
Winter market price: coarse rice (NRs)	162 [162]	39.17 [0.50]	162 [162]	33.85 [0.51]	5.32***
Summer village price: wheat (NRs)	162 [162]	30.28 [0.51]	162 [162]	27.91 [0.71]	2.37***
Daily wage: land preparation (NRs)	162 [162]	596.30 [9.68]	162 [162]	406.11 [8.22]	190.19***
Daily wage: crop establishment (NRs)	162 [162]	525.31 [9.06]	162 [162]	359.81 [7.69]	165.49***
Daily wage: irrigation (NRs)	162 [162]	545.68 [8.47]	162 [162]	353.80 [7.56]	191.88***
Daily wage: weeding (NRs)	162 [162]	532.10 [8.30]	162 [162]	341.45 [7.36]	190.65***
Daily wage: chemical application (NRs)	162 [162]	544.44 [8.82]	162 [162]	351.64 [7.59]	192.81***
Daily wage: harvesting (NRs)	162 [162]	542.28 [8.01]	162 [162]	355.06 [6.99]	187.22***
Daily wage: threshing (NRs)	162 [162]	552.78 [8.22]	162 [162]	373.09 [8.38]	179.69***
F-test of joint significance (F-stat)					53.83***
F-test, number of observations					324

*** = $p < 0.01$, AG = agriculture, N = number of observations, SE = standard error.

Source: Authors' calculations using data from settlement baseline (2014) and endline (2018) surveys.

Table A8: Agricultural Group: Membership

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
Number of current members, female	87 [67]	89.30 [42.52]	87 [87]	33.40 [10.31]	55.90
Number of current members, male	87 [67]	40.76 [15.79]	87 [87]	27.06 [4.99]	13.70
Number of active members, female	87 [67]	63.03 [40.86]	87 [87]	13.53 [2.70]	49.51
Number of active members, male	87 [67]	19.72 [6.18]	87 [87]	15.47 [3.39]	4.25
Number of new members in last year, female	87 [67]	8.74 [4.62]	87 [87]	4.33 [1.81]	4.40
Number of new members in last year, male	87 [67]	1.67 [1.12]	87 [87]	3.93 [1.09]	-2.26**
Number of members exited in last year, female	87 [67]	0.54 [0.16]	87 [87]	0.32 [0.18]	0.22
Number of members exited in last year, male	87 [67]	0.32 [0.13]	87 [87]	0.23 [0.07]	0.09
Number of active leaders, female	87 [67]	46.92 [38.85]	87 [87]	5.61 [1.30]	41.31
Number of active leaders, male	87 [67]	7.56 [2.44]	87 [87]	5.91 [0.60]	1.66
F-test of joint significance (F-stat)					17.12***
F-test, number of observations					174

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$, N = number of observations, SE = standard error.

Notes: The value displayed for t-tests are the differences in the means across the groups.

Standard errors are clustered at variable cluster ID.

Source: Authors' calculations using data from farmers' group baseline (2014) and endline (2018) surveys.

Table A9: Agricultural Group: Services and Membership

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
AG group provided: agricultural loans	87 [67]	0.72 [0.05]	87 [87]	0.67 [0.05]	0.06
AG group provided: other loans	87 [67]	0.66 [0.06]	87 [87]	0.25 [0.05]	0.40***
AG group provided: storage	87 [67]	0.02 [0.02]	87 [87]	0.02 [0.02]	0.00
AG group provided: marketing stall	87 [67]	0.01 [0.01]	87 [87]	0.00 [0.00]	0.01
AG group provided: transport	87 [67]	0.01 [0.01]	87 [87]	0.00 [0.00]	0.01
AG group provided: machinery	87 [67]	0.01 [0.01]	87 [87]	0.00 [0.00]	0.01
AG group provided: other support	87 [67]	0.03 [0.02]	87 [87]	0.00 [0.00]	0.03*
AG group provided: collection center	87 [67]	0.03 [0.02]	87 [87]	0.00 [0.00]	0.03*
Number of members utilizing: agricultural loans	87 [67]	84.62 [30.13]	87 [87]	18.79 [4.51]	65.83**
Number of members utilizing: other loans	87 [67]	37.06 [17.78]	87 [87]	5.62 [1.81]	31.44*
Number of members utilizing: storage	87 [67]	0.18 [0.15]	87 [87]	1.43 [1.00]	-1.24
Number of members utilizing: transport	87 [67]	0.11 [0.11]	87 [87]	0.00 [0.00]	0.11
Number of members utilizing: machinery	87 [67]	0.46 [0.46]	87 [87]	0.00 [0.00]	0.46
Number of members utilizing: other support	87 [67]	0.67 [0.42]	87 [87]	0.00 [0.00]	0.67
Number of members utilizing: marketing stall	87 [67]	0.17 [0.17]	87 [87]	0.00 [0.00]	0.17
Number of members utilizing: collection center	87 [67]	3.79 [3.48]	87 [87]	0.00 [0.00]	3.79
F-test of joint significance (F-stat)					575.63***
F-test, number of observations					174

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, N = number of observations, SE = standard error.

Notes: The value displayed for t-tests are the differences in the means across the groups.

Standard errors are clustered at variable cluster ID.

Source: Authors' calculations using data from farmers' group baseline (2014) and endline (2018) surveys.

Table A10: Agricultural Group: Support

Variable	(1) Endline		(2) Baseline		t-test Difference
	N/[Clusters]	Mean/SE	N/[Clusters]	Mean/SE	(1)-(2)
AG group received: any external support	87 [67]	0.79 [0.05]	87 [87]	0.68 [0.05]	0.11
AG group received: training	87 [67]	0.52 [0.05]	87 [87]	0.33 [0.05]	0.18***
AG group received: financial support	87 [67]	0.52 [0.05]	87 [87]	0.39 [0.05]	0.13*
AG group received: material support	87 [67]	0.53 [0.06]	87 [87]	0.49 [0.05]	0.03
AG group received: comprehensive external funding support	87 [67]	0.15 [0.04]	87 [87]	0.02 [0.02]	0.13***
Number of programs group received: any external support	87 [67]	1.82 [0.17]	87 [87]	1.41 [0.14]	0.40*
Number of programs group received: training	87 [67]	1.44 [0.19]	87 [87]	0.47 [0.08]	0.97***
Number of programs group received: financial support	87 [67]	1.24 [0.18]	87 [87]	0.72 [0.12]	0.52**
Number of programs group received: material support	87 [67]	1.26 [0.18]	87 [87]	0.77 [0.11]	0.49**
Number of programs group received: comprehensive external support	87 [67]	0.53 [0.17]	87 [87]	0.03 [0.03]	0.49***
Number of programs group proposed but did not receive external support	87 [67]	0.18 [0.04]	87 [87]	0.71 [0.10]	-0.53***
F-test of joint significance (F-stat)					23.91***
F-test, number of observations					174

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, N = number of observations, SE = standard error.

Notes: The value displayed for t-tests are the differences in the means across the groups.

Standard errors are clustered at variable cluster ID.

Source: Authors' calculations using data from farmers' group baseline (2014) and endline (2018) surveys.

Table A11: Estimated Effects, Conditional Means in the Presence and Absence of Treatment, and Regression Characteristics for Interventions and Outcomes

Outcome Label	Group Membership						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	0.06	1630	0.28	0.22	0.04	0.00	0.00
Agricultural Practices							
Area under hybrid crops in hectares	0.01	1,630	0.06	0.05	0.05	0.05	0.06
Area with formal seed in hectares	0.00	1,630	0.09	0.09	0.08	0.05	0.05
Area with nonformal seed in hectares	0.24 ***	1,630	0.96	0.71	0.08	0.01	0.00
Area under sharecropping in hectares	0.06	1,630	0.17	0.11	0.05	0.02	0.02
Share of cultivated land that is sharecropped	0.04	1,630	0.11	0.07	0.03	0.03	0.03
Used phone to check price crops	0.00	1,630	0.12	0.12	0.14	0.03	0.03
Technical efficiency: value of all crops	0.00	1,595	0.67	0.67	0.14	0.00	0.01
Technical efficiency: value of all crops inflation adjusted	0.00	1,595	0.69	0.69	0.14	0.00	0.01
Crop Value							
Production costs per hectare log transformed (NRs)	0.46	1,630	7.71	7.25	0.68	0.46	0.33
Total crop production costs imputed log transformed (NRs)	0.43	1,630	6.63	6.19	0.60	0.24	0.06
Value of all crops log transformed (NRs)	0.31 ***	1,630	10.54	10.22	0.11	0.02	0.04
Value of all crops inflation adjusted log transformed (NRs)	0.31 ***	1,630	10.38	10.07	0.07	0.03	0.04
Value of all crops per hectare log transformed (NRs)	0.05	1,630	10.79	10.73	0.24	0.00	0.05
Sales							
Profit from sale of crops log transformed (NRs)	0.01	1,630	11.79	11.79	0.18	0.00	0.01
Revenue from sale of crops log transformed (NRs)	1.36 **	1,630	5.18	3.82	0.07	0.00	0.00
Income from selling cereals log transformed (NRs)	0.48	1,630	3.25	2.78	0.05	0.02	0.01
Income from selling high value crops log transformed (NRs)	0.63	1,630	1.60	0.97	0.05	0.01	0.00
Income from selling other crops log transformed (NRs)	0.70	1,630	1.65	0.95	0.08	0.01	0.02
Profit from sale of animals and animal products log transformed (NRs)	0.07	1,630	10.93	10.87	0.03	0.00	0.00
Share of crops sold via cooperatives	0.08 ***	1630	0.12	0.04	0.22	0.00	0.00

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Table A11 continued

Outcome Label	Group Membership							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Income								
Total income (NRs)	34,441	1,630	270,446	236,006	0.22	0.05	0.00	
Wage income (NRs)	-2,030	1,630	118,914	120,944	0.18	0.02	0.00	
Non-AG income (NRs)	-5,511	1,630	136,515	142,026	0.16	0.02	0.00	
Agricultural income (NRs)	6,503	1,630	27,092	20,588	0.07	0.01	0.01	
Consumption								
Per capita consumption log transformed (NRs)	0.13	*	1,630	10.05	9.92	0.13	0.07	0.05
Total value of self-consumed crops log transformed (NRs)	0.25	***	1,630	9.96	9.71	0.05	0.06	0.09
Total spending on nonfood items log transformed (NRs)	0.35	**	1,630	10.60	10.26	0.10	0.03	0.02
Total spending on food items log transformed (NRs)	0.04		1,630	10.60	10.56	0.03	0.02	0.04
Food Security								
Dietary diversity score	-0.12		1,630	6.30	6.42	0.18	0.05	0.01
Number of days of food insecurity	0.62		1,630	2.67	2.06	0.04	0.00	0.00
Assets Accumulation and Other Spending								
Asset index: all assets	0.31	**	1,630	3.65	3.34	0.09	0.09	0.10
Spending on school fees log transformed (NRs)	0.48		1,630	7.96	7.48	0.03	0.01	0.01
Spending on vocational training log transformed (NRs)	0.05		1,630	0.26	0.21	0.09	0.01	0.01
Spending on health log transformed (NRs)	0.16		1,630	9.07	8.91	0.14	0.00	0.04
Spending on AG assets log transformed (NRs)	-0.06		1,630	0.10	0.16	0.04	0.00	0.02
Child Labor								
Share of children working on farm	0.11	*	1,560	0.30	0.20	0.08	0.01	0.00
Share of children working off farm	0.09	**	1,453	0.05	-0.04	0.73	0.54	0.26

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Table A11 continued

Outcome Label	Any Support							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	0.03		2,159	0.35	0.32	0.04	0.00	0.00
Agricultural Practices								
Area under hybrid crops in hectares	0.04	*	2,159	0.08	0.04	0.06	0.01	0.00
Area with formal seed in hectares	0.07	*	2,159	0.21	0.15	0.12	0.07	0.06
Area with nonformal seed in hectares	0.39		2,159	0.91	0.52	0.09	0.00	0.00
Area under sharecropping in hectares	0.04	*	2,159	0.07	0.03	0.03	0.00	0.02
Share of cultivated land that is sharecropped	0.01		2,159	0.04	0.03	0.02	0.02	0.04
Used phone to check price crops	0.05	*	2,159	0.16	0.11	0.09	0.02	0.00
Technical efficiency: value of all crops	0.01		2,121	0.69	0.68	0.04	0.00	0.00
Technical efficiency: value of all crops inflation adjusted	0.01		2,121	0.71	0.70	0.04	0.00	0.00
Crop Value								
Production costs per hectare log transformed (NRs)	0.62	*	2,159	7.92	7.30	0.60	0.42	0.27
Total crop production costs imputed log transformed (NRs)	0.51	**	2,159	6.62	6.11	0.56	0.21	0.05
Value of all crops log transformed (NRs)	0.24	***	2,159	10.59	10.36	0.11	0.04	0.06
Value of all crops inflation adjusted log transformed (NRs)	0.25	***	2,159	10.45	10.20	0.06	0.04	0.06
Value of all crops per hectare log transformed (NRs)	0.00		2,159	10.83	10.83	0.18	0.00	0.04
Sales								
Profit from sale of crops log transformed (NRs)	0.01		2,159	11.83	11.82	0.15	0.02	0.00
Revenue from sale of crops log transformed (NRs)	0.44		2,159	5.92	5.48	0.02	0.05	0.06
Income from selling cereals log transformed (NRs)	0.19		2,159	3.66	3.47	0.03	0.13	0.14
Income from selling high value crops log transformed (NRs)	0.18		2,159	2.76	2.58	0.02	0.00	0.00
Income from selling other crops log transformed (NRs)	1.09	***	2,159	2.36	1.27	0.07	0.06	0.07
Profit from sale of animals and animal products log transformed (NRs)	0.07		2,159	10.97	10.90	0.04	0.00	0.00
Share of crops sold via cooperatives	0.06	**	2,159	0.12	0.05	0.08	0.01	0.00

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Table A11 continued

Outcome Label	Any Support							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income								
Total income (NRs)	48,961	**	2,159	311,467	262,506	0.18	0.06	0.01
Wage income (NRs)	20,845		2,159	143,723	122,877	0.18	0.07	0.01
Non-AG income (NRs)	25,733	*	2,159	160,722	134,989	0.16	0.06	0.01
Agricultural income (NRs)	7,240		2,159	35,010	27,770	0.05	0.01	0.00
Consumption								
Per capita consumption log transformed (NRs)	-0.02		2,159	10.02	10.04	0.08	0.03	0.00
Total value of self-consumed crops log transformed (NRs)	0.16	**	2,159	9.96	9.79	0.05	0.07	0.10
Total spending on nonfood items log transformed (NRs)	0.12		2,159	10.80	10.68	0.09	0.02	0.01
Total spending on food items log transformed (NRs)	0.08		2,159	10.63	10.55	0.02	0.01	0.01
Food Security								
Dietary diversity score	-0.13		2,159	6.11	6.24	0.28	0.11	0.05
Number of days of food insecurity	-0.12		2,159	2.42	2.54	0.02	0.01	0.02
Assets Accumulation and Other Spending								
Asset index: all assets	0.24	***	2,159	3.72	3.48	0.10	0.02	0.01
Spending on school fees log transformed (NRs)	-0.14		2,159	8.44	8.58	0.02	0.01	0.00
Spending on vocational training log transformed (NRs)	0.00		2,159	0.11	0.10	0.02	0.00	0.00
Spending on health log transformed (NRs)	0.11		2,159	8.94	8.83	0.10	0.00	0.02
Spending on AG assets log transformed (NRs)	0.04		2,159	0.28	0.24	0.01	0.00	0.01
Child Labor								
Share of children working on farm	0.03		2,084	0.33	0.30	0.03	0.00	0.00
Share of children working off farm	-0.05	*	1,965	0.01	0.06	0.80	0.62	0.39

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Table A11 continued

Outcome Label	Any Credit							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	0.26	*	1,490	0.70	0.44	0.08	0.00	0.00
Agricultural Practices								
Area under hybrid crops in hectares	0.02		1,490	0.05	0.02	0.05	0.02	0.05
Area with formal seed in hectares	0.15	*	1,490	0.29	0.14	0.21	0.00	0.00
Area with nonformal seed in hectares	0.57		1,490	1.14	0.57	0.12	0.02	0.01
Area under sharecropping in hectares	0.03		1,490	0.03	0.00	0.06	0.00	0.00
Share of cultivated land that is sharecropped	0.00		1,490	0.04	0.04	0.03	0.00	0.00
Used phone to check price crops	0.03		1,490	0.36	0.32	0.20	0.01	0.01
Technical efficiency: value of all crops	0.06	***	1,458	0.74	0.67	0.10	0.01	0.01
Technical efficiency: value of all crops inflation adjusted	0.06	***	1,458	0.75	0.69	0.09	0.01	0.01
Crop Value								
Production costs per hectare log transformed (NRs)	0.65		1,490	7.22	6.57	0.68	0.29	0.09
Total crop production costs imputed log transformed (NRs)	0.41		1,490	6.03	5.62	0.64	0.24	0.09
Value of all crops log transformed (NRs)	0.62	***	1,490	11.00	10.38	0.29	0.00	0.01
Value of all crops inflation adjusted log transformed (NRs)	0.63	***	1,490	10.87	10.23	0.23	0.01	0.01
Value of all crops per hectare log transformed (NRs)	0.23	**	1,490	10.90	10.67	0.34	0.00	0.03
Sales								
Profit from sale of crops log transformed (NRs)	0.04		1,490	11.85	11.82	0.30	0.03	0.00
Revenue from sale of crops log transformed (NRs)	1.46	**	1,490	8.35	6.89	0.12	0.01	0.01
Income from selling cereals log transformed (NRs)	0.48		1,490	5.89	5.41	0.08	0.12	0.14
Income from selling high value crops log transformed (NRs)	1.31		1,490	3.88	2.57	0.10	0.00	0.00
Income from selling other crops log transformed (NRs)	1.33	*	1,490	2.44	1.12	0.14	0.01	0.01
Profit from sale of animals and animal products log transformed (NRs)	0.01		1,490	10.83	10.83	0.15	0.00	0.01
Share of crops sold via cooperatives	0.08		1,490	0.38	0.30	0.07	0.00	0.00

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Table A11 continued

Outcome Label	Any Credit						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income							
Total income (NRs)	47,145	1,490	365,217	318,072	0.28	0.03	0.01
Wage income (NRs)	41,946	1,490	220,525	178,580	0.30	0.01	0.00
Non-AG income (NRs)	39,124	1,490	230,285	191,161	0.29	0.01	0.00
Agricultural income (NRs)	6,446	1,490	29,002	22,557	0.20	0.00	0.00
Consumption							
Per capita consumption log transformed (NRs)	0.08	1,490	10.10	10.02	0.06	0.00	0.03
Total value of self-consumed crops log transformed (NRs)	0.61 ***	1,490	10.26	9.65	0.21	0.04	0.08
Total spending on nonfood items log transformed (NRs)	0.11	1,490	10.81	10.70	0.10	0.00	0.01
Total spending on food items log transformed (NRs)	-0.04	1,490	10.49	10.53	0.08	0.02	0.02
Food Security							
Dietary diversity score	-0.80	1,490	5.44	6.23	0.50	0.05	0.01
Number of days of food insecurity	-1.01	1,490	1.75	2.76	0.07	0.00	0.00
Assets Accumulation and Other Spending							
Asset index: all assets	-0.18	1,490	4.35	4.53	0.12	0.13	0.13
Spending on school fees log transformed (NRs)	0.73	1,490	6.60	5.87	0.09	0.01	0.01
Spending on vocational training log transformed (NRs)	0.69 **	1,490	1.16	0.47	0.19	0.01	0.01
Spending on health log transformed (NRs)	-0.74	1,490	7.77	8.51	0.07	0.00	0.02
Spending on AG assets log transformed (NRs)	-0.04	1,490	0.64	0.68	0.02	0.02	0.02
Child Labor							
Share of children working on farm	-0.02	1,423	0.04	0.05	0.16	0.01	0.00
Share of children working off farm	-0.03	1,332	0.02	0.05	0.82	0.58	0.39

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Table A11 continued

Outcome Label	Any Production Training							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Household has loans	0.08	1,698	0.43	0.34	0.06	0.00	0.01	
Agricultural Practices								
Area under hybrid crops in hectares	0.05	1,698	0.14	0.09	0.03	0.02	0.05	
Area with formal seed in hectares	0.32	***	1,698	0.54	0.22	0.34	0.08	0.06
Area with nonformal seed in hectares	0.30		1,698	1.12	0.82	0.17	0.00	0.02
Area under sharecropping in hectares	0.01		1,698	0.06	0.05	0.06	0.03	0.05
Share of cultivated land that is sharecropped	-0.02		1,698	0.02	0.04	0.05	0.03	0.06
Used phone to check price crops	0.11		1,698	0.30	0.19	0.10	0.01	0.00
Technical efficiency: value of all crops	0.04	**	1,665	0.73	0.70	0.08	0.01	0.00
Technical efficiency: value of all crops inflation adjusted	0.03	**	1,665	0.74	0.71	0.07	0.01	0.00
Crop Value								
Production costs per hectare log transformed (NRs)	1.27	***	1,698	9.40	8.13	0.59	0.41	0.28
Total crop production costs imputed log transformed (NRs)	0.85	***	1,698	7.91	7.06	0.57	0.27	0.12
Value of all crops log transformed (NRs)	0.48	***	1,698	11.26	10.78	0.20	0.06	0.08
Value of all crops inflation adjusted log transformed (NRs)	0.49	***	1,698	11.12	10.63	0.15	0.06	0.08
Value of all crops per hectare log transformed (NRs)	0.17	***	1,698	11.16	10.99	0.28	0.01	0.01
Sales								
Profit from sale of crops log transformed (NRs)	0.10	***	1,698	11.91	11.82	0.35	0.04	0.00
Revenue from sale of crops log transformed (NRs)	0.95	*	1,698	7.86	6.92	0.04	0.04	0.05
Income from selling cereals log transformed (NRs)	0.27		1,698	5.06	4.79	0.05	0.11	0.13
Income from selling high value crops log transformed (NRs)	0.99		1,698	4.00	3.00	0.06	0.01	0.00
Income from selling other crops log transformed (NRs)	1.51	**	1,698	3.12	1.61	0.10	0.03	0.03
Profit from sale of animals and animal products log transformed (NRs)	0.05		1,698	11.01	10.96	0.14	0.00	0.00
Share of crops sold via cooperatives	0.14	**	1,698	0.19	0.05	0.12	0.02	0.02

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Table A11 continued

Outcome label	Any Production Training							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Income								
Total income (NRs)	127,096	***	1,698	396,469	269,372	0.27	0.06	0.01
Wage income (NRs)	55,228	**	1,698	180,389	125,161	0.24	0.06	0.01
Non-AG income (NRs)	70,038	***	1,698	203,056	133,018	0.23	0.05	0.00
Agricultural income (NRs)	23,154	**	1,698	55,462	32,308	0.22	0.01	0.00
Consumption								
Per capita consumption log transformed (NRs)	0.01		1,698	10.12	10.11	0.07	0.00	0.02
Total value of self-consumed crops log transformed (NRs)	0.33	***	1,698	10.44	10.11	0.11	0.08	0.12
Total spending on nonfood items log transformed (NRs)	0.10		1,698	10.87	10.76	0.11	0.02	0.01
Total spending on food items log transformed (NRs)	0.24	*	1,698	10.75	10.51	0.06	0.01	0.02
Food Security								
Dietary diversity score	-0.08		1,698	6.27	6.35	0.34	0.07	0.02
Number of days of food insecurity	0.40		1,698	2.03	1.64	0.04	0.00	0.00
Assets Accumulation and Other Spending								
Asset index: all assets	0.63	***	1,698	4.46	3.83	0.21	0.09	0.09
Spending on school fees log transformed (NRs)	-0.39		1,698	8.20	8.58	0.02	0.00	0.01
Spending on vocational training log transformed (NRs)	-0.19		1,698	-0.04	0.15	0.07	0.00	0.00
Spending on health log transformed (NRs)	0.02		1,698	9.25	9.23	0.11	0.00	0.02
Spending on AG assets log transformed (NRs)	0.59		1,698	0.89	0.30	0.03	0.00	0.01
Child Labor								
Share of children working on farm	-0.07		1,628	0.20	0.27	0.08	0.01	0.00
Share of children working off farm	0.00		1,524	0.00	0.01	0.78	0.57	0.33

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Table A11 continued

Outcome label	Any Inputs							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	0.03		2,119	0.34	0.32	0.04	0.00	0.00
Agricultural Practices								
Area under hybrid crops in hectares	0.04	*	2,119	0.08	0.03	0.05	0.00	0.00
Area with formal seed in hectares	0.06	*	2,119	0.21	0.15	0.12	0.08	0.07
Area with nonformal seed in hectares	0.42		2,119	0.91	0.50	0.08	0.00	0.00
Area under sharecropping in hectares	0.04	*	2,119	0.07	0.03	0.02	0.01	0.03
Share of cultivated land that is sharecropped	0.01		2,119	0.04	0.03	0.01	0.02	0.05
Used phone to check price crops	0.04		2,119	0.16	0.12	0.09	0.02	0.01
Technical efficiency: value of all crops	0.01		2,081	0.69	0.68	0.04	0.00	0.00
Technical efficiency: value of all crops inflation adjusted	0.01		2,081	0.71	0.69	0.04	0.00	0.00
Crop Value								
Production costs per hectare log transformed (NRs)	0.89	***	2,119	7.92	7.03	0.59	0.40	0.25
Total crop production costs imputed log transformed (NRs)	0.64	***	2,119	6.59	5.95	0.55	0.20	0.05
Value of all crops log transformed (NRs)	0.25	***	2,119	10.57	10.32	0.11	0.04	0.06
Value of all crops inflation adjusted log transformed (NRs)	0.27	***	2,119	10.43	10.16	0.06	0.04	0.06
Value of all crops per hectare log transformed (NRs)	0.06		2,119	10.86	10.80	0.19	0.00	0.03
Sales								
Profit from sale of crops log transformed (NRs)	0.02		2,119	11.83	11.82	0.16	0.02	0.00
Revenue from sale of crops log transformed (NRs)	0.41		2,119	5.92	5.51	0.02	0.05	0.05
Income from selling cereals log transformed (NRs)	0.13		2,119	3.54	3.41	0.04	0.12	0.14
Income from selling high value crops log transformed (NRs)	0.16		2,119	2.80	2.64	0.03	0.00	0.00
Income from selling other crops log transformed (NRs)	1.00	***	2,119	2.31	1.31	0.06	0.05	0.06
Profit from sale of animals and animal products log transformed (NRs)	0.07		2,119	10.96	10.89	0.04	0.00	0.00
Share of crops sold via cooperatives	0.05	**	2,119	0.11	0.06	0.08	0.00	0.00

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Table A11 continued

Outcome label	Any inputs							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income								
Total income (NRs)	58,049	***	2,119	314,068	256,019	0.18	0.06	0.01
Wage income (NRs)	23,213		2,119	145,626	122,413	0.18	0.07	0.02
Non-AG income (NRs)	28,114	*	2,119	162,751	134,637	0.16	0.06	0.01
Agricultural income (NRs)	8,226		2,119	34,509	26,282	0.05	0.01	0.00
Consumption								
Per capita consumption log transformed (NRs)	0.00		2,119	10.01	10.01	0.08	0.02	0.00
Total value of self-consumed crops log transformed (NRs)	0.18	**	2,119	9.93	9.75	0.05	0.07	0.10
Total spending on nonfood items log transformed (NRs)	0.16	*	2,119	10.79	10.63	0.08	0.02	0.00
Total spending on food items log transformed (NRs)	0.08		2,119	10.62	10.54	0.02	0.01	0.01
Food Security								
Dietary diversity score	-0.05		2,119	6.10	6.15	0.29	0.10	0.04
Number of days of food insecurity	0.70		2,119	2.61	1.90	0.01	0.01	0.01
Assets Accumulation and Other Spending								
Asset index: all assets	0.25	**	2,119	3.68	3.43	0.09	0.01	0.00
Spending on school fees log transformed (NRs)	0.00		2,119	8.47	8.47	0.02	0.01	0.01
Spending on vocational training log transformed (NRs)	0.00		2,119	0.11	0.11	0.01	0.00	0.00
Spending on health log transformed (NRs)	0.00		2,119	8.79	8.79	0.09	0.00	0.02
Spending on AG assets log transformed (NRs)	0.00		2,119	0.26	0.25	0.01	0.00	0.01
Child Labor								
Share of children working on farm	0.04		2,045	0.33	0.29	0.03	0.00	0.00
Share of children working off farm	-0.06	**	1,926	0.01	0.07	0.80	0.61	0.38

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Table A11 continued

Outcome label	Any Assets							
	Coefficient		N	TRT mean	CTRL mean	R2 within	R2 overall	R2 between
Household has loans	0.22	**	1,647	0.51	0.29	0.12	0.00	0.00
Agricultural Practices								
Area under hybrid crops in hectares	0.10		1,647	0.14	0.04	0.09	0.00	0.01
Area with formal seed in hectares	0.20	***	1,647	0.45	0.25	0.30	0.04	0.01
Area with nonformal seed in hectares	1.13		1,647	1.47	0.34	0.23	0.00	0.01
Area under sharecropping in hectares	0.07		1,647	0.12	0.05	0.08	0.03	0.05
Share of cultivated land that is sharecropped	0.02		1,647	0.05	0.03	0.04	0.04	0.06
Used phone to check price crops	0.10		1,647	0.25	0.15	0.10	0.00	0.00
Technical efficiency: value of all crops	0.00		1,614	0.72	0.73	0.07	0.01	0.02
Technical efficiency: value of all crops inflation adjusted	0.00		1,614	0.73	0.74	0.07	0.01	0.02
Crop Value								
Production costs per hectare log transformed (NRs)	1.25	***	1,647	9.52	8.27	0.57	0.49	0.42
Total crop production costs imputed log transformed (NRs)	0.83	***	1,647	8.11	7.28	0.52	0.37	0.28
Value of all crops log transformed (NRs)	0.39	***	1,647	11.27	10.88	0.15	0.08	0.09
Value of all crops inflation adjusted log transformed (NRs)	0.40	***	1,647	11.14	10.74	0.17	0.07	0.08
Value of all crops per hectare log transformed (NRs)	0.06		1,647	11.13	11.07	0.20	0.02	0.06
Sales								
Profit from sale of crops log transformed (NRs)	0.03		1,647	11.90	11.87	0.22	0.04	0.01
Revenue from sale of crops log transformed (NRs)	1.11	**	1,647	8.30	7.19	0.10	0.04	0.05
Income from selling cereals log transformed (NRs)	-0.12		1,647	4.74	4.87	0.10	0.12	0.14
Income from selling high value crops log transformed (NRs)	-0.10		1,647	3.59	3.69	0.09	0.00	0.00
Income from selling other crops log transformed (NRs)	1.72	**	1,647	3.99	2.27	0.11	0.02	0.02
Profit from sale of animals and animal products log transformed (NRs)	0.17	*	1,647	11.13	10.96	0.08	0.00	0.00
Share of crops sold via cooperatives	0.12	**	1,647	0.19	0.07	0.12	0.02	0.01

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Table A11 continued

Outcome label	Any Assets							
	Coefficient		N	TRT mean	CTRL mean	R2 within	R2 overall	R2 between
Income								
Total income (NRs)	8,1231	**	1,647	354,632	273,401	0.22	0.04	0.00
Wage income (NRs)	36,971		1,647	137,771	100,799	0.23	0.03	0.00
Non-AG income (NRs)	35,896		1,647	150,059	114,163	0.19	0.02	0.00
Agricultural income (NRs)	20,921	**	1,647	63,501	42,580	0.12	0.01	0.00
Consumption								
Per capita consumption log transformed (NRs)	0.17	*	1,647	10.21	10.04	0.14	0.00	0.01
Total value of self-consumed crops log transformed (NRs)	0.32	***	1,647	10.47	10.15	0.18	0.07	0.10
Total spending on nonfood items log transformed (NRs)	0.31	**	1,647	10.96	10.65	0.10	0.00	0.00
Total spending on food items log transformed (NRs)	0.43	***	1,647	10.81	10.38	0.11	0.01	0.02
Food Security								
Dietary diversity score	0.25		1,647	6.27	6.02	0.30	0.04	0.01
Number of days of food insecurity	-0.38		1,647	0.57	0.95	0.04	0.00	0.00
Assets Accumulation and Other Spending								
Asset index: all assets	0.36	**	1,647	4.08	3.72	0.18	0.07	0.08
Spending on school fees log transformed (NRs)	0.16		1,647	8.66	8.50	0.05	0.00	0.00
Spending on vocational training log transformed (NRs)	0.02		1,647	0.07	0.05	0.04	0.00	0.00
Spending on health log transformed (NRs)	-0.25		1,647	9.19	9.44	0.08	0.00	0.03
Spending on AG assets log transformed (NRs)	0.21		1,647	0.83	0.62	0.03	0.00	0.00
Child Labor								
Share of children working on farm	0.12	*	1,580	0.39	0.27	0.09	0.01	0.00
Share of children working off farm	-0.08	**	1,483	-0.01	0.06	0.82	0.58	0.33

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Table A11 continued

Outcome Label	Any Marketing Support							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Inputs support with production training	0.14	*	1,677	0.45	0.31	0.07	0.00	0.01
Agricultural Practices								
Area under hybrid crops in hectares	0.09	**	1,677	0.15	0.06	0.13	0.01	0.03
Area with formal seed in hectares	0.23	***	1,677	0.47	0.24	0.32	0.00	0.00
Area with nonformal seed in hectares	0.25		1,677	1.02	0.77	0.17	0.00	0.01
Area under sharecropping in hectares	0.02		1,677	0.10	0.07	0.10	0.03	0.05
Share of cultivated land that is sharecropped	-0.01		1,677	0.05	0.06	0.08	0.04	0.05
Used phone to check price crops	0.08		1,677	0.24	0.16	0.08	0.01	0.01
Technical efficiency: value of all crops	0.04	***	1,641	0.73	0.69	0.08	0.00	0.00
Technical efficiency: value of all crops inflation adjusted	0.03	***	1,641	0.74	0.71	0.08	0.00	0.01
Crop Value								
Production costs per hectare log transformed (NRs)	1.62	***	1,677	9.28	7.67	0.57	0.45	0.35
Total crop production costs imputed log transformed (NRs)	1.24	***	1,677	7.95	6.71	0.49	0.26	0.11
Value of all crops log transformed (NRs)	0.53	***	1,677	11.21	10.69	0.27	0.07	0.10
Value of all crops inflation adjusted log transformed (NRs)	0.53	***	1,677	11.07	10.54	0.20	0.07	0.09
Value of all crops per hectare log transformed (NRs)	0.23	***	1,677	11.16	10.94	0.30	0.01	0.04
Sales								
Profit from sale of crops log transformed (NRs)	0.12	***	1,677	11.93	11.82	0.34	0.07	0.02
Revenue from sale of crops log transformed (NRs)	1.87	***	1,677	8.18	6.32	0.10	0.03	0.03
Income from selling cereals log transformed (NRs)	0.22		1,677	4.82	4.60	0.06	0.13	0.15
Income from selling high value crops log transformed (NRs)	1.24	*	1,677	3.44	2.21	0.07	0.01	0.01
Income from selling other crops log transformed (NRs)	2.56	***	1,677	4.28	1.71	0.15	0.01	0.01
Profit from sale of animals and animal products log transformed (NRs)	-0.04		1,677	10.92	10.95	0.06	0.02	0.02
Share of crops sold via cooperatives	0.07		1,677	0.13	0.07	0.05	0.00	0.00

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Table A11 continued

Outcome label	Any Marketing Support							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income								
Total income (NRs)	78,398	***	1,677	345,513	267,114	0.23	0.03	0.00
Wage income (NRs)	35,901		1,677	142,301	106,401	0.24	0.04	0.01
Non-AG income (NRs)	29,513		1,677	151,591	122,078	0.19	0.03	0.00
Agricultural income (NRs)	15,955		1,677	48,848	32,893	0.08	0.02	0.01
Consumption								
Per capita consumption log transformed (NRs)	0.04		1,677	10.09	10.05	0.15	0.00	0.00
Total value of self-consumed crops log transformed (NRs)	0.27	**	1,677	10.36	10.09	0.13	0.09	0.13
Total spending on nonfood items log transformed (NRs)	0.08		1,677	10.71	10.63	0.15	0.00	0.00
Total spending on food items log transformed (NRs)	0.23	*	1,677	10.81	10.58	0.08	0.01	0.02
Food Security								
Dietary diversity score	0.13		1,677	6.63	6.50	0.30	0.01	0.00
Number of days of food insecurity	0.18		1,677	1.05	0.87	0.05	0.00	0.01
Assets Accumulation and Other Spending								
Asset index: all assets	0.55	***	1,677	4.16	3.62	0.23	0.00	0.00
Spending on school fees log transformed (NRs)	-0.72		1,677	7.82	8.54	0.06	0.00	0.00
Spending on vocational training log transformed (NRs)	-0.19		1,677	-0.05	0.14	0.08	0.00	0.00
Spending on health log transformed (NRs)	0.47		1,677	9.72	9.25	0.14	0.01	0.02
Spending on AG assets log transformed (NRs)	0.46		1,677	0.76	0.30	0.02	0.01	0.03
Child Labor								
Share of children working on farm	0.03		1,609	0.28	0.25	0.05	0.03	0.02
Share of children working off farm	-0.06		1,510	0.00	0.05	0.78	0.60	0.38

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Table A11 continued

Outcome Label	Inputs (only)							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Household has loans	-0.05	1860	0.32	0.36	0.06	0.01	0.00	
Agricultural Practices								
Area under hybrid crops in hectares	0.04	1,860	0.06	0.02	0.03	0.01	0.03	
Area with formal seed in hectares	0.02	1,860	0.14	0.12	0.04	0.06	0.06	
Area with nonformal seed in hectares	0.42	1,860	0.81	0.39	0.07	0.00	0.01	
Area under sharecropping in hectares	0.03	1,860	0.06	0.03	0.03	0.00	0.03	
Share of cultivated land that is sharecropped	0.01	1,860	0.03	0.03	0.02	0.03	0.05	
Used phone to check price crops	0.02	1,860	0.11	0.08	0.11	0.01	0.00	
Technical efficiency: value of all crops	0.00	1,825	0.66	0.66	0.07	0.00	0.00	
Technical efficiency: value of all crops inflation adjusted	0.01	1,825	0.68	0.68	0.07	0.00	0.00	
Crop Value								
Production costs per hectare log transformed (NRs)	0.70	*	1,860	7.39	6.69	0.62	0.45	0.33
Total crop production costs imputed log transformed (NRs)	0.50	*	1,860	5.92	5.42	0.57	0.20	0.03
Value of all crops log transformed (NRs)	0.15		1,860	10.19	10.04	0.09	0.06	0.08
Value of all crops inflation adjusted log transformed (NRs)	0.15	*	1,860	10.04	9.89	0.07	0.06	0.07
Value of all crops per hectare log transformed (NRs)	-0.02		1,860	10.72	10.74	0.20	0.01	0.01
Sales								
Profit from sale of crops log transformed (NRs)	0.00		1,860	11.82	11.81	0.13	0.00	0.01
Revenue from sale of crops log transformed (NRs)	0.23		1,860	5.05	4.82	0.02	0.04	0.05
Income from selling cereals log transformed (NRs)	0.17		1,860	2.86	2.69	0.04	0.07	0.09
Income from selling high value crops log transformed (NRs)	-0.51		1,860	2.27	2.79	0.05	0.00	0.00
Income from selling other crops log transformed (NRs)	0.53		1,860	1.73	1.20	0.06	0.02	0.03
Profit from sale of animals and animal products log transformed (NRs)	0.01		1,860	10.94	10.92	0.05	0.01	0.01
Share of crops sold via cooperatives	-0.01		1,860	0.07	0.08	0.09	0.00	0.00

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Table A11 continued

Outcome label	Inputs (only)						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income							
Total income (NRs)	54,118 **	1,860	284,939	230,821	0.18	0.03	0.00
Wage income (NRs)	22,705	1,860	137,430	114,724	0.17	0.04	0.00
Non-AG income (NRs)	30,631 *	1,860	157,176	126,544	0.16	0.03	0.00
Agricultural income (NRs)	693	1,860	26,095	25,402	0.05	0.01	0.00
Consumption							
Per capita consumption log transformed (NRs)	-0.06	1,860	9.92	9.97	0.06	0.03	0.01
Total value of self-consumed crops log transformed (NRs)	0.10	1,860	9.62	9.52	0.07	0.08	0.11
Total spending on nonfood items log transformed (NRs)	0.10	1,860	10.65	10.55	0.08	0.01	0.00
Total spending on food items log transformed (NRs)	0.01	1,860	10.57	10.55	0.00	0.02	0.04
Food Security							
Dietary diversity score	0.00	1,860	5.97	5.97	0.27	0.10	0.05
Number of days of food insecurity	0.96	1,860	3.26	2.30	0.01	0.01	0.01
Assets Accumulation and Other Spending							
Asset index: all assets	0.13	1,860	3.26	3.13	0.06	0.07	0.16
Spending on school fees log transformed (NRs)	-0.10	1,860	8.29	8.39	0.05	0.01	0.01
Spending on vocational training log transformed (NRs)	-0.02	1,860	0.01	0.03	0.03	0.00	0.00
Spending on health log transformed (NRs)	0.07	1,860	8.55	8.48	0.10	0.00	0.02
Spending on AG assets log transformed (NRs)	-0.15	1,860	-0.01	0.13	0.02	0.01	0.02
Child Labor							
Share of children working on farm	0.03	1,794	0.40	0.36	0.06	0.00	0.00
Share of children working off farm	-0.08 **	1,688	0.00	0.07	0.83	0.62	0.38

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Table A11 continued

Outcome Label	Credit from Any Source (only)						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Agricultural Practices							
Area under hybrid crops in hectares	-0.01	1,164	0.05	0.06	0.05	0.06	0.06
Area with formal seed in hectares	0.02	1,164	0.11	0.09	0.10	0.06	0.05
Area with nonformal seed in hectares	0.01	1,164	0.72	0.72	0.08	0.01	0.00
Area under sharecropping in hectares	0.07	1,164	0.13	0.06	0.04	0.03	0.03
Share of cultivated land that is sharecropped	0.03	1,164	0.09	0.06	0.03	0.03	0.03
Used phone to check price crops	-0.01	1,164	0.06	0.08	0.15	0.02	0.02
Technical efficiency: value of all crops	0.00	1,138	0.67	0.67	0.06	0.01	0.00
Technical efficiency: value of all crops inflation adjusted	0.00	1,138	0.69	0.69	0.06	0.00	0.00
Crop Value							
Production costs per hectare log transformed (NRs)	0.21	1,164	7.79	7.59	0.52	0.50	0.42
Total crop production costs imputed log transformed (NRs)	-0.02	1,164	6.36	6.39	0.46	0.42	0.35
Value of all crops log transformed (NRs)	-0.02	1,164	10.26	10.28	0.06	0.03	0.02
Value of all crops inflation adjusted log transformed (NRs)	-0.01	1,164	10.11	10.12	0.02	0.00	0.00
Value of all crops per hectare log transformed (NRs)	-0.03	1,164	10.77	10.80	0.22	0.03	0.00
Sales							
Profit from sale of crops log transformed (NRs)	-0.02	1,164	11.76	11.78	0.12	0.01	0.01
Revenue from sale of crops log transformed (NRs)	-0.43	1,164	3.79	4.22	0.06	0.07	0.08
Income from selling cereals log transformed (NRs)	0.09	1,164	2.93	2.84	0.07	0.13	0.16
Income from selling high value crops log transformed (NRs)	-0.18	1,164	1.18	1.36	0.05	0.00	0.00
Income from selling other crops log transformed (NRs)	-0.17	1,164	0.68	0.85	0.03	0.03	0.04
Profit from sale of animals and animal products log transformed (NRs)	-0.04	1,164	10.86	10.89	0.07	0.00	0.00
Share of crops sold via cooperatives	0.01	1,164	0.06	0.05	0.12	0.00	0.00

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Table A11 continued

Outcome Label	Credit from Any Source (only)						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income							
Total income (NRs)	-23,958	1,164	226,863	250,821	0.19	0.07	0.01
Wage income (NRs)	-26,594 **	1,164	88,183	114,778	0.20	0.06	0.01
Non-AG income (NRs)	-11,724	1,164	109,309	121,033	0.19	0.05	0.01
Agricultural income (NRs)	-5,690	1,164	15,360	21,050	0.08	0.01	0.00
Consumption							
Per capita consumption log transformed (NRs)	0.21 ***	1,164	10.09	9.88	0.23	0.12	0.10
Total value of self-consumed crops log transformed (NRs)	0.12	1,164	9.87	9.76	0.05	0.02	0.05
Total spending on nonfood items log transformed (NRs)	0.48 ***	1,164	10.71	10.23	0.19	0.04	0.02
Total spending on food items log transformed (NRs)	0.23 **	1,164	10.71	10.48	0.05	0.00	0.00
Food Security							
Dietary diversity score	0.88 **	1,164	7.09	6.21	0.15	0.06	0.02
Number of days of food insecurity	0.61	1,164	3.03	2.42	0.04	0.00	0.00
Assets Accumulation and Other Spending							
Asset index: all assets	0.19 *	1,164	3.47	3.28	0.09	0.02	0.02
Spending on school fees log transformed (NRs)	0.09	1,164	7.85	7.76	0.04	0.01	0.00
Spending on vocational training log transformed (NRs)	0.20	1,164	0.24	0.05	0.03	0.01	0.01
Spending on health log transformed (NRs)	0.53	1,164	9.23	8.70	0.14	0.01	0.01
Spending on AG assets log transformed (NRs)	0.27	1,164	0.39	0.12	0.03	0.02	0.03
Child Labor							
Share of children working on farm	0.03	1,118	0.31	0.28	0.06	0.01	0.00
Share of children working off farm	0.01	1,043	0.04	0.03	0.76	0.59	0.39

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Table A11 continued

Outcome Label	Inputs + Production Training + any except assets							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Household has loans	-0.11	1,725	0.23	0.34	0.10	0.00	0.01	
Agricultural Practices								
Area under hybrid crops in hectares	-0.02	1,725	0.07	0.09	0.03	0.01	0.01	
Area with formal seed in hectares	0.12	**	1,725	0.30	0.18	0.16	0.08	0.08
Area with nonformal seed in hectares	0.22		1,725	0.98	0.76	0.10	0.00	0.02
Area under sharecropping in hectares	-0.04		1,725	0.05	0.09	0.10	0.01	0.03
Share of cultivated land that is sharecropped	-0.05	**	1,725	0.01	0.07	0.10	0.02	0.04
Used phone to check price crops	0.03		1,725	0.19	0.16	0.10	0.02	0.01
Technical efficiency: value of all crops	0.04	***	1,692	0.72	0.69	0.11	0.02	0.02
Technical efficiency: value of all crops inflation adjusted	0.04	***	1,692	0.74	0.70	0.11	0.03	0.02
Crop Value								
Production costs per hectare log transformed (NRs)	0.15		1,725	8.02	7.87	0.59	0.35	0.17
Total crop production costs imputed log transformed (NRs)	0.40		1,725	7.05	6.65	0.57	0.30	0.17
Value of all crops log transformed (NRs)	0.44	***	1,725	10.99	10.55	0.26	0.01	0.04
Value of all crops inflation adjusted log transformed (NRs)	0.47	***	1,725	10.85	10.39	0.18	0.02	0.04
Value of all crops per hectare log transformed (NRs)	0.18	**	1,725	11.07	10.90	0.31	0.05	0.00
Sales								
Profit from sale of crops log transformed (NRs)	0.05	*	1,725	11.85	11.81	0.25	0.01	0.00
Revenue from sale of crops log transformed (NRs)	1.38	**	1,725	7.25	5.86	0.07	0.02	0.03
Income from selling cereals log transformed (NRs)	0.77		1,725	4.68	3.91	0.08	0.09	0.10
Income from selling high value crops log transformed (NRs)	1.52	**	1,725	4.06	2.54	0.07	0.01	0.01
Income from selling other crops log transformed (NRs)	1.51	***	1,725	2.72	1.21	0.09	0.01	0.00
Profit from sale of animals and animal products log transformed (NRs)	-0.06		1,725	10.91	10.97	0.07	0.00	0.00
Share of crops sold via cooperatives	0.04		1,725	0.10	0.06	0.10	0.00	0.00

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Table A11 continued

Outcome Label	Inputs + Production Training + Any Except Assets							
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between	
Income								
Total income (NRs)	47,693	*	1,725	321,623	273,930	0.23	0.08	0.04
Wage income (NRs)	21,636		1,725	151,375	129,739	0.23	0.05	0.02
Non-AG income (NRs)	35,031		1,725	172,765	137,735	0.23	0.04	0.01
Agricultural income (NRs)	3,559		1,725	35,400	31,842	0.10	0.03	0.01
Consumption								
Per capita consumption log transformed (NRs)	0.08		1,725	10.13	10.05	0.10	0.00	0.02
Total value of self-consumed crops log transformed (NRs)	0.36	***	1,725	10.30	9.94	0.11	0.05	0.09
Total spending on nonfood items log transformed (NRs)	0.11		1,725	10.81	10.70	0.09	0.01	0.01
Total spending on food items log transformed (NRs)	0.05		1,725	10.59	10.54	0.05	0.01	0.01
Food Security								
Dietary diversity score	0.12		1,725	6.49	6.37	0.27	0.08	0.02
Number of days of food insecurity	1.34		1,725	2.98	1.65	0.04	0.00	0.01
Assets Accumulation and Other Spending								
Asset index: all assets	0.33	**	1,725	4.16	3.83	0.18	0.09	0.09
Spending on school fees log transformed (NRs)	0.24		1,725	8.43	8.19	0.02	0.01	0.02
Spending on vocational training log transformed (NRs)	0.03		1,725	0.08	0.05	0.04	0.01	0.01
Spending on health log transformed (NRs)	-0.03		1,725	9.06	9.09	0.10	0.01	0.01
Spending on AG assets log transformed (NRs)	0.13		1,725	0.31	0.18	0.04	0.00	0.00
Child Labor								
Share of children working on farm	-0.10		1,655	0.17	0.28	0.12	0.01	0.00
Share of children working off farm	-0.02		1,547	0.00	0.03	0.80	0.57	0.32

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Table A11 continued

Outcome Label	Inputs + Production Training + Assets + Any							
	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	0.26	**	1,638	0.51	0.24	0.12	0.00	0.00
Agricultural Practices								
Area under hybrid crops in hectares	0.18	**	1,638	0.22	0.04	0.17	0.01	0.02
Area with formal seed in hectares	0.43	***	1,638	0.65	0.22	0.43	0.08	0.07
Area with nonformal seed in hectares	1.26		1,638	2.23	0.96	0.27	0.00	0.01
Area under sharecropping in hectares	0.03		1,638	0.14	0.12	0.18	0.01	0.03
Share of cultivated land that is sharecropped	-0.04		1,638	0.05	0.09	0.14	0.02	0.04
Used phone to check price crops	0.33	***	1,638	0.54	0.21	0.15	0.00	0.01
Technical efficiency: value of all crops	-0.01		1,605	0.75	0.76	0.11	0.01	0.02
Technical efficiency: value of all crops inflation adjusted	-0.01		1,605	0.76	0.77	0.11	0.01	0.02
Crop Value								
Production costs per hectare log transformed (NRs)	1.54	***	1,638	9.83	8.29	0.60	0.40	0.39
Total crop production costs imputed log transformed (NRs)	1.15	***	1,638	8.54	7.39	0.59	0.36	0.32
Value of all crops log transformed (NRs)	0.49	***	1,638	11.73	11.24	0.19	0.09	0.11
Value of all crops inflation adjusted log transformed (NRs)	0.50	***	1,638	11.61	11.11	0.24	0.08	0.10
Value of all crops per hectare log transformed (NRs)	0.08		1,638	11.33	11.25	0.39	0.02	0.06
Sales								
Profit from sale of crops log transformed (NRs)	0.11	**	1,638	11.96	11.84	0.44	0.04	0.01
Revenue from sale of crops log transformed (NRs)	2.32	***	1,638	9.82	7.50	0.11	0.03	0.05
Income from selling cereals log transformed (NRs)	1.91	***	1,638	7.16	5.25	0.11	0.10	0.13
Income from selling high value crops log transformed (NRs)	1.68	*	1,638	4.69	3.01	0.12	0.00	0.00
Income from selling other crops log transformed (NRs)	2.26	**	1,638	4.70	2.44	0.22	0.01	0.01
Profit from sale of animals and animal products log transformed (NRs)	0.14		1,638	10.98	10.84	0.20	0.01	0.01
Share of crops sold via cooperatives	0.23	**	1,638	0.23	0.00	0.18	0.01	0.01

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Table A11 continued

Inputs + Production Training + Assets +Any								
Outcome Label	Coefficient		N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Income								
Total income (NRs)	143,766 **		1,638	396,710	252,944	0.21	0.03	0.01
Wage income (NRs)	51,381		1,638	184,726	133,345	0.24	0.01	0.00
Non-AG income (NRs)	45,370		1,638	172,485	127,115	0.18	0.02	0.00
Agricultural income (NRs)	35,433 ***		1,638	58,841	23,407	0.27	0.01	0.01
Consumption								
Per capita consumption log transformed (NRs)	0.02		1,638	10.18	10.16	0.09	0.00	0.01
Total value of self-consumed crops log transformed (NRs)	0.26		1,638	10.74	10.48	0.23	0.08	0.11
Total spending on nonfood items log transformed (NRs)	0.13		1,638	10.79	10.66	0.15	0.02	0.01
Total spending on food items log transformed (NRs)	0.35 *		1,638	10.72	10.37	0.09	0.02	0.03
Food Security								
Dietary diversity score	0.17		1,638	5.85	5.68	0.29	0.05	0.01
Number of days of food insecurity	-0.45		1,638	0.41	0.86	0.06	0.00	0.00
Assets Accumulation and Other Spending								
Asset index: all assets	0.72 ***		1,638	4.47	3.75	0.22	0.13	0.16
Spending on school fees log transformed (NRs)	-0.19		1,638	7.53	7.72	0.07	0.00	0.00
Spending on vocational training log transformed (NRs)	-0.29		1,638	-0.24	0.05	0.10	0.00	0.00
Spending on health log transformed (NRs)	0.49		1,638	9.63	9.15	0.16	0.00	0.02
Spending on AG assets log transformed (NRs)	1.61 **		1,638	1.33	-0.29	0.07	0.02	0.02
Child Labor								
Share of children working on farm	-0.20 ***		1,570	0.24	0.43	0.20	0.00	0.00
Share of children working off farm	0.01		1,471	0.02	0.02	0.79	0.50	0.20

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Table A11 continued

Outcome Label	Joined Group and Got Any Support						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	-0.01	1,934	0.26	0.26	0.04	0.00	0.00
Agricultural Practices							
Area under hybrid crops in hectares	-0.01	1,934	0.07	0.08	0.03	0.00	0.02
Area with formal seed in hectares	0.04	1,934	0.20	0.16	0.11	0.08	0.07
Area with nonformal seed in hectares	0.32 **	1,934	1.00	0.68	0.09	0.00	0.00
Area under sharecropping in hectares	0.07	1,934	0.17	0.11	0.09	0.01	0.03
Share of cultivated land that is sharecropped	-0.02	1,934	0.09	0.10	0.08	0.00	0.01
Used phone to check price crops	0.02	1,934	0.12	0.10	0.05	0.03	0.02
Technical efficiency: value of all crops	0.01	1,899	0.69	0.69	0.06	0.00	0.00
Technical efficiency: value of all crops inflation adjusted	0.01	1,899	0.71	0.70	0.06	0.00	0.00
Crop Value							
Production costs per hectare log transformed (NRs)	0.52 *	1,934	8.08	7.56	0.56	0.47	0.37
Total crop production costs imputed log transformed (NRs)	0.54 **	1,934	6.99	6.44	0.49	0.33	0.22
Value of all crops log transformed (NRs)	0.22 **	1,934	10.68	10.45	0.11	0.03	0.07
Value of all crops inflation adjusted log transformed (NRs)	0.24 ***	1,934	10.53	10.29	0.07	0.05	0.07
Value of all crops per hectare log transformed (NRs)	0.06	1,934	10.91	10.85	0.27	0.00	0.03
Sales							
Profit from sale of crops log transformed (NRs)	0.00	1,934	11.80	11.80	0.16	0.01	0.00
Revenue from sale of crops log transformed (NRs)	0.97 *	1,934	5.80	4.83	0.03	0.01	0.02
Income from selling cereals log transformed (NRs)	-0.10	1,934	3.63	3.72	0.02	0.00	0.00
Income from selling high value crops log transformed (NRs)	0.67	1,934	2.53	1.85	0.02	0.00	0.00
Income from selling other crops log transformed (NRs)	1.30 ***	1,934	2.14	0.84	0.07	0.01	0.01
Profit from sale of animals and animal products log transformed (NRs)	0.00	1,934	10.94	10.94	0.04	0.02	0.02
Share of crops sold via cooperatives	0.03	1,934	0.07	0.04	0.08	0.00	0.00

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Table A11 continued

Outcome Label	Joined Group and Got Any Support						
	Coefficient	N	TRT mean	CTRL mean	R ² within	R ² overall	R ² between
Household has loans	-0.01	1,934	0.26	0.26	0.04	0.00	0.00
Income							
Total income (NRs)	16,619	1,934	260,441	243822	0.22	0.08	0.04
Wage income (NRs)	-8,365	1,934	100,376	108741	0.21	0.05	0.02
Non-AG income (NRs)	-3,973	1,934	113,839	117812	0.18	0.05	0.02
Agricultural income (NRs)	1,635	1,934	29,657	28022	0.07	0.02	0.02
Consumption							
Per capita consumption log transformed (NRs)	0.01	1,934	9.92	9.91	0.07	0.00	0.03
Total value of self-consumed crops log transformed (NRs)	0.09	1,934	10.00	9.91	0.04	0.05	0.09
Total spending on nonfood items log transformed (NRs)	0.19 *	1,934	10.62	10.42	0.08	0.00	0.02
Total spending on food items log transformed (NRs)	-0.09	1,934	10.30	10.39	0.04	0.01	0.02
Food Security							
Dietary diversity score	-0.03	1,934	5.78	5.81	0.22	0.01	0.00
Number of days of food insecurity	0.15	1,934	3.33	3.17	0.02	0.00	0.01
Assets accumulation and other spending							
Asset index: all assets	0.13	1,934	3.67	3.53	0.11	0.00	0.03
Spending on school fees log transformed (NRs)	0.56	1,934	8.35	7.80	0.03	0.01	0.01
Spending on vocational training log transformed (NRs)	0.23	1,934	0.26	0.03	0.03	0.00	0.00
Spending on health log transformed (NRs)	-0.08	1,934	8.78	8.85	0.10	0.00	0.02
Spending on AG assets log transformed (NRs)	0.11	1,934	0.49	0.38	0.01	0.01	0.02
Child Labor							
Share of children working on farm	0.02	1,862	0.32	0.29	0.07	0.02	0.01
Share of children working off farm	-0.04	1,749	0.00	0.05	0.80	0.53	0.23

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, CTRL = estimates in absence of treatment, N = number of observations, SE = standard error, TRT = estimates in presence of treatment.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A12: Coefficients Estimated for Interventions Evaluated Under Two-way Inverse Probability Weighted Fixed Effects Model

Variables	Group Membership		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.21** (0.10)	0.04 (0.03)	0.01 (0.01)
After	0.09 (0.50)	-0.08 (0.21)	0.04 (0.05)
Summer precipitation log transformed (mm)	0.29 (0.32)	0.16 (0.14)	-0.14*** (0.04)
Winter precipitation log transformed (mm)	-0.03 (0.18)	0.03 (0.07)	0.02 (0.02)
Spring precipitation log transformed (mm)	0.06 (0.20)	-0.11 (0.10)	-0.05* (0.03)
Summer sale price of rice in village (NRs)	0.00 (0.01)	-0.01*** (0.00)	-0.00 (0.00)
Urea price per liter in village (NRs)	0.01 (0.00)	0.00 (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	-0.03 (0.09)	-0.01 (0.06)	0.04** (0.02)
Number of non-AG development projects in village	-0.07 (0.05)	0.00 (0.02)	-0.00 (0.01)
Share of land damaged by drought	0.13 (0.13)	0.14* (0.07)	0.00 (0.02)
Share of land damaged by disease	-0.08 (0.12)	0.03 (0.06)	-0.02 (0.02)
Share of land damaged by animals	0.18 (0.14)	0.07 (0.06)	0.03 (0.03)
Constant	10.23*** (1.52)	11.40*** (0.72)	1.48*** (0.25)
Observations	1,630	1,630	1,595
R-squared	0.22	0.09	0.10
Number of HH	858	858	826

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Table A12 continued

Variables	Any Support		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.22** (0.09)	0.05 (0.04)	0.01 (0.01)
After	0.06 (0.39)	0.04 (0.12)	0.05 (0.04)
Summer precipitation log transformed (mm)	0.10 (0.24)	-0.03 (0.10)	-0.09** (0.04)
Winter precipitation log transformed (mm)	-0.15 (0.14)	-0.03 (0.04)	0.02 (0.01)
Spring precipitation log transformed (mm)	0.03 (0.18)	-0.03 (0.07)	-0.02 (0.02)
Summer sale price of rice in village (NRs)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Urea price per liter in village (NRs)	0.01 (0.00)	0.01*** (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.07 (0.14)	0.05 (0.04)	0.02 (0.01)
Number of non-AG development projects in village	-0.01 (0.04)	0.03* (0.02)	0.00 (0.01)
Share of land damaged by drought	-0.10 (0.13)	0.04 (0.05)	0.03** (0.01)
Share of land damaged by disease	-0.06 (0.11)	-0.00 (0.05)	0.02 (0.02)
Share of land damaged by animals	-0.09 (0.10)	0.05 (0.04)	0.02 (0.01)
Constant	11.66*** (1.26)	11.91*** (0.61)	1.03*** (0.21)
Observations	2,159	2,159	2,121
R-squared	0.15	0.06	0.06
Number of HH	1,165	1,165	1,131

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Table A12 continued

Variables	Joined Group and Got Support		
	(5) Total income Log Transformed	(6) Agricultural Income Log Transformed	(7) Technical Efficiency: Value of All Crops
Treatment	0.08 (0.08)	0.00 (0.04)	0.01 (0.01)
After	-0.29 (0.33)	-0.29** (0.13)	0.03 (0.04)
Summer precipitation log transformed (mm)	0.28 (0.25)	0.12 (0.11)	-0.07** (0.04)
Winter precipitation log transformed (mm)	-0.07 (0.12)	-0.15*** (0.05)	0.01 (0.02)
Spring precipitation log transformed (mm)	-0.30* (0.17)	-0.15** (0.07)	-0.01 (0.02)
Summer sale price of rice in village (NRs)	0.01** (0.01)	-0.00 (0.00)	0.00** (0.00)
Urea price per liter in village (NRs)	-0.00 (0.00)	0.00* (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.25*** (0.09)	0.04 (0.05)	0.04** (0.02)
Number of non-AG development projects in village	0.03 (0.04)	-0.00 (0.02)	0.01 (0.01)
Share of land damaged by drought	-0.12 (0.13)	-0.03 (0.07)	0.02 (0.02)
Share of land damaged by disease	0.07 (0.12)	-0.05 (0.06)	0.02 (0.02)
Share of land damaged by animals	-0.05 (0.10)	0.06 (0.04)	0.03* (0.02)
Constant	11.80*** (1.52)	12.16*** (0.67)	0.84*** (0.22)
Observations	1,934	1,934	1,899
R-squared	0.22	0.08	0.07
Number of HH	1,038	1,038	1,007

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Table A12 continued

Variables	Any Credit from AG Group		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.23 (0.15)	0.04 (0.07)	0.05** (0.02)
After	0.02 (0.48)	0.19 (0.24)	0.04 (0.07)
Summer precipitation log transformed (mm)	0.60 (0.55)	-0.39** (0.19)	-0.07 (0.07)
Winter precipitation log transformed (mm)	-0.11 (0.19)	-0.02 (0.09)	0.02 (0.03)
Spring precipitation log transformed (mm)	0.08 (0.26)	-0.15 (0.14)	-0.01 (0.04)
Summer sale price of rice in village (NRs)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.00)
Urea price per liter in village (NRs)	-0.00 (0.01)	-0.00 (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.42** (0.17)	0.27*** (0.06)	0.02 (0.01)
Number of non-AG development projects in village	-0.02 (0.07)	-0.01 (0.03)	-0.01 (0.01)
Share of land damaged by drought	-0.02 (0.41)	-0.00 (0.10)	0.03 (0.04)
Share of land damaged by disease	0.14 (0.23)	0.01 (0.10)	0.05 (0.03)
Share of land damaged by animals	-0.47*** (0.17)	0.02 (0.07)	-0.01 (0.03)
Constant	9.91*** (2.97)	14.42*** (1.31)	0.92** (0.45)
Observations	1,490	1,490	1,458
R-squared	0.32	0.22	0.18
Number of HH	803	803	774

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Table A12 continued

Variables	Credit from Any Source (only)		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.04 (0.09)	-0.04 (0.03)	-0.01 (0.01)
After	0.37 (0.35)	-0.04 (0.11)	-0.04 (0.05)
Summer precipitation log transformed (mm)	-0.05 (0.29)	0.02 (0.09)	-0.05 (0.04)
Winter precipitation log transformed (mm)	0.02 (0.13)	-0.03 (0.04)	-0.01 (0.02)
Spring precipitation log transformed (mm)	-0.12 (0.21)	-0.10 (0.07)	-0.05* (0.03)
Summer sale price of rice in village (NRs)	-0.00 (0.01)	-0.00*** (0.00)	-0.00* (0.00)
Urea price per liter in village (NRs)	0.00 (0.00)	0.01*** (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.17 (0.13)	0.06 (0.06)	0.04** (0.02)
Number of non-AG development projects in village	0.06 (0.05)	0.03* (0.02)	-0.00 (0.01)
Share of land damaged by drought	-0.18 (0.14)	-0.00 (0.04)	0.03 (0.02)
Share of land damaged by disease	-0.20 (0.15)	-0.07 (0.05)	0.01 (0.02)
Share of land damaged by animals	-0.19 (0.13)	0.08* (0.05)	0.00 (0.02)
Constant	12.74*** (1.91)	12.00*** (0.61)	1.16*** (0.24)
Observations	1,164	1,164	1,138
R-squared	0.21	0.08	0.05
Number of HH	623	623	599

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Table A12 continued

Variables	Any Production Training		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.34*** (0.10)	0.16*** (0.06)	0.04*** (0.01)
After	0.63* (0.33)	-0.13 (0.18)	-0.02 (0.06)
Summer precipitation log transformed (mm)	-0.26 (0.28)	0.09 (0.13)	-0.08* (0.05)
Winter precipitation log transformed (mm)	0.07 (0.11)	-0.08 (0.05)	0.01 (0.02)
Spring precipitation log transformed (mm)	0.13 (0.22)	-0.12 (0.13)	-0.06** (0.03)
Summer sale price of rice in village (NRs)	-0.01 (0.01)	-0.01*** (0.00)	0.00 (0.00)
Urea price per liter in village (NRs)	-0.00 (0.01)	0.00 (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.17 (0.13)	0.15*** (0.03)	-0.01 (0.01)
Number of non-AG development projects in village	-0.01 (0.05)	0.05** (0.02)	0.01 (0.01)
Share of land damaged by drought	0.03 (0.15)	0.14** (0.07)	0.03 (0.02)
Share of land damaged by disease	-0.04 (0.16)	-0.21*** (0.07)	0.03 (0.02)
Share of land damaged by animals	-0.11 (0.15)	0.08 (0.06)	0.04** (0.02)
Constant	12.82*** (2.02)	12.49*** (0.94)	1.24*** (0.27)
Observations	1,698	1,698	1,665
R-squared	0.26	0.23	0.10
Number of HH	918	918	888

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Table A12 continued

Variables	Any Inputs		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.26*** (0.09)	0.06 (0.04)	0.01 (0.01)
After	0.05 (0.37)	0.02 (0.13)	0.05 (0.04)
Summer precipitation log transformed (mm)	0.14 (0.22)	-0.02 (0.10)	-0.09** (0.04)
Winter precipitation log transformed (mm)	-0.15 (0.14)	-0.03 (0.05)	0.02 (0.01)
Spring precipitation log transformed (mm)	0.05 (0.18)	-0.03 (0.07)	-0.02 (0.02)
Summer sale price of rice in village (NRs)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Urea price per liter in village (NRs)	0.01 (0.00)	0.01*** (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.05 (0.14)	0.05 (0.04)	0.02* (0.01)
Number of non-AG development projects in village	-0.00 (0.04)	0.03* (0.02)	0.01 (0.01)
Share of land damaged by drought	-0.08 (0.13)	0.03 (0.05)	0.02* (0.01)
Share of land damaged by disease	-0.08 (0.11)	0.00 (0.05)	0.01 (0.02)
Share of land damaged by animals	-0.09 (0.10)	0.04 (0.04)	0.02 (0.02)
Constant	11.37*** (1.27)	11.89*** (0.60)	1.04*** (0.22)
Observations	2,119	2,119	2,081
R-squared	0.16	0.05	0.06
Number of HH	1,142	1,142	1,108

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Table A12 continued

Variables	Any Assets		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.25** (0.10)	0.13** (0.06)	0.00 (0.02)
After	0.26 (0.39)	0.36 (0.27)	0.05 (0.07)
Summer precipitation log transformed (mm)	0.10 (0.27)	0.10 (0.18)	-0.15** (0.07)
Winter precipitation log transformed (mm)	-0.02 (0.16)	0.09 (0.08)	0.03 (0.02)
Spring precipitation log transformed (mm)	0.06 (0.23)	0.23 (0.15)	-0.06 (0.04)
Summer sale price of rice in village (NRs)	-0.01* (0.01)	-0.01*** (0.00)	0.00 (0.00)
Urea price per liter in village (NRs)	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)
HH received AG support from non-AG groups	0.08 (0.11)	0.13* (0.07)	-0.01 (0.02)
Number of non-AG development projects in village	-0.04 (0.06)	0.04 (0.03)	0.00 (0.01)
Share of land damaged by drought	-0.10 (0.16)	0.24* (0.13)	0.03 (0.03)
Share of land damaged by disease	-0.40** (0.20)	-0.18* (0.10)	-0.05 (0.04)
Share of land damaged by animals	0.03 (0.15)	0.08 (0.09)	0.02 (0.03)
Constant	11.92*** (1.74)	10.01*** (0.99)	1.47*** (0.43)
Observations	1,647	1,647	1,614
R-squared	0.20	0.15	0.08
Number of HH	889	889	859

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Table A12 continued

Variables	Any Marketing Support		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.30*** (0.09)	0.11* (0.06)	0.04*** (0.01)
After	0.56* (0.30)	-0.30 (0.27)	0.08 (0.05)
Summer precipitation log transformed (mm)	0.07 (0.27)	0.13 (0.17)	-0.16*** (0.05)
Winter precipitation log transformed (mm)	0.10 (0.12)	-0.08 (0.09)	0.04** (0.01)
Spring precipitation log transformed (mm)	0.22 (0.22)	-0.24 (0.16)	-0.03 (0.03)
Summer sale price of rice in village (NRs)	-0.00 (0.01)	-0.01*** (0.00)	0.00*** (0.00)
Urea price per liter in village (NRs)	0.01 (0.01)	0.00 (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	-0.04 (0.15)	0.06 (0.08)	-0.01 (0.01)
Number of non-AG development projects in village	-0.00 (0.07)	0.04* (0.02)	0.01* (0.01)
Share of land damaged by drought	-0.15 (0.16)	-0.01 (0.11)	-0.03 (0.03)
Share of land damaged by disease	-0.11 (0.26)	-0.17 (0.12)	0.02 (0.03)
Share of land damaged by animals	0.17 (0.13)	0.05 (0.10)	0.05 (0.03)
Constant	10.24*** (1.72)	12.62*** (1.07)	1.31*** (0.29)
Observations	1,677	1,677	1,641
R-squared	0.25	0.11	0.10
Number of HH	903	903	870

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Table A12 continued

Variables	Inputs (Only)		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.25** (0.12)	0.00 (0.05)	0.00 (0.01)
After	-0.44 (0.58)	-0.14 (0.15)	0.07* (0.04)
Summer precipitation log transformed (mm)	0.19 (0.31)	-0.02 (0.12)	-0.08** (0.04)
Winter precipitation log transformed (mm)	-0.30 (0.22)	-0.06 (0.06)	0.03* (0.01)
Spring precipitation log transformed (mm)	-0.21 (0.24)	-0.17* (0.09)	-0.00 (0.02)
Summer sale price of rice in village (NRs)	0.01 (0.01)	-0.00 (0.00)	-0.00 (0.00)
Urea price per liter in village (NRs)	0.01 (0.01)	0.01*** (0.00)	0.00 (0.00)
HH received AG support from non-AG groups	0.06 (0.17)	0.02 (0.04)	0.03* (0.02)
Number of non-AG development projects in village	-0.06 (0.07)	0.00 (0.02)	0.01 (0.01)
Share of land damaged by drought	-0.12 (0.14)	-0.02 (0.07)	0.04** (0.02)
Share of land damaged by disease	-0.03 (0.13)	0.09* (0.05)	0.02 (0.02)
Share of land damaged by animals	-0.10 (0.13)	0.04 (0.05)	0.02 (0.02)
Constant	12.64*** (1.72)	12.58*** (0.77)	0.89*** (0.21)
Observations	1,860	1,860	1,825
R-squared	0.14	0.05	0.07
Number of HH	997	997	966

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Table A12 continued

Variables	Inputs + Production Training + Any Except Assets		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.12 (0.10)	0.03 (0.05)	0.04*** (0.01)
After	0.43 (0.39)	-0.25* (0.13)	-0.05 (0.05)
Summer precipitation log transformed (mm)	-0.03 (0.31)	0.10 (0.13)	-0.07* (0.04)
Winter precipitation log transformed (mm)	0.06 (0.13)	-0.11** (0.06)	-0.01 (0.02)
Spring precipitation log transformed (mm)	0.03 (0.26)	-0.18** (0.08)	-0.07** (0.03)
Summer sale price of rice in village (NRs)	0.00 (0.01)	-0.00 (0.00)	-0.00 (0.00)
Urea price per liter in village (NRs)	0.00 (0.01)	0.01** (0.00)	-0.00 (0.00)
HH received AG support from non-AG groups	0.23** (0.11)	0.10* (0.05)	0.03* (0.02)
Number of non-AG development projects in village	-0.02 (0.04)	0.02 (0.03)	0.01 (0.01)
Share of land damaged by drought	0.01 (0.14)	0.03 (0.09)	0.03 (0.03)
Share of land damaged by disease	0.18 (0.18)	-0.13* (0.08)	0.03 (0.02)
Share of land damaged by animals	-0.16 (0.14)	0.01 (0.04)	0.03* (0.02)
Constant	11.69*** (2.37)	12.34*** (0.82)	1.35*** (0.25)
Observations	1,725	1,725	1,692
R-squared	0.22	0.10	0.14
Number of HH	930	930	900

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Table A12 continued

Variables	Inputs + Production Training + Assets + Any		
	(1) Total Income Log Transformed	(2) Agricultural Income Log Transformed	(3) Technical Efficiency: Value of All Crops
Treatment	0.40** (0.16)	0.22*** (0.07)	-0.01 (0.02)
After	0.01 (0.53)	-0.36 (0.35)	0.19** (0.07)
Summer precipitation log transformed (mm)	0.19 (0.42)	0.54** (0.24)	-0.17** (0.07)
Winter precipitation log transformed (mm)	-0.10 (0.16)	-0.11 (0.10)	0.08*** (0.03)
Spring precipitation log transformed (mm)	0.06 (0.30)	0.03 (0.19)	0.02 (0.04)
Summer sale price of rice in village (NRs)	-0.01 (0.01)	-0.02*** (0.00)	0.00** (0.00)
Urea price per liter in village (NRs)	0.01 (0.01)	-0.00 (0.00)	0.00 (0.00)
HH received AG support from non-AG groups	0.18 (0.15)	0.17*** (0.04)	-0.02 (0.02)
Number of non-AG development projects in village	-0.01 (0.08)	0.02 (0.03)	0.01 (0.01)
Share of land damaged by drought	0.16 (0.31)	0.29* (0.15)	0.02 (0.05)
Share of land damaged by disease	0.20 (0.29)	-0.27** (0.12)	0.05 (0.03)
Share of land damaged by animals	-0.25 (0.21)	0.26** (0.11)	0.05* (0.03)
Constant	11.40*** (3.03)	9.88*** (1.50)	0.95* (0.49)
Observations	1,638	1,638	1,605
R-squared	0.23	0.31	0.17
Number of HH	881	881	851

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$, AG = agriculture, HH = household, mm = millimeters.

Robust standard errors in parenthesis.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A13: Quantile Fixed Effects: Technical Efficiency

Technical Efficiency: Value of All Crops (NRs)	Group Membership		Any Support		Joined Group and Got Support		Any Credit from AG Group		Any Production Training		Any Inputs		Any Assets		Any Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod Training + Assets + Any	
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
10	0.01	0.06***	0.00	0.17***	0.11***	0.07***	0.04	0.11***	0.04	0.04	0.04	0.04	0.04	0.04	0.11***	0.04	0.04	0.04	-0.02	0.12**	0.03	0.03
20	0.01	0.03	-0.01	0.06**	0.05**	0.03*	0.04*	0.06***	0.04*	0.04*	0.06***	0.02	0.06***	0.02	0.06***	0.02	0.02	0.02	-0.02	0.08***	0.04	0.04
30	0.00	0.02	0.00	0.07***	0.06***	0.02	0.04*	0.06***	0.04*	0.06***	0.02	0.04*	0.06***	0.01	0.06***	0.01	0.01	0.01	0.01	0.06**	0.05*	0.05*
40	0.01	0.02	0.01	0.07***	0.04**	0.02	0.00	0.03*	0.00	0.03*	0.02	0.00	0.03*	0.01	0.04**	0.01	0.00	0.04**	0.00	0.04**	0.03	0.03
50	0.00	-0.01	0.00	0.04	0.04**	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.01	-0.01	0.01	0.01	0.00	0.03	0.00	0.03	0.03	0.03
60	0.00	-0.01	0.03*	0.05	0.02	0.00	-0.01	0.01	0.01	0.01	0.00	-0.01	0.01	0.01	0.01	0.01	-0.01	0.03	-0.01	0.03	-0.02	-0.02
70	0.00	-0.01	0.02*	0.02	0.01	0.00	-0.01	0.03	0.01	0.03	0.00	-0.01	0.03	-0.01	0.03	0.03	-0.01	0.03	-0.01	0.03	0.01	0.01
80	0.00	-0.03**	0.02	0.03	0.03	-0.02	0.00	0.04*	0.00	0.04*	-0.02	0.00	0.04*	-0.02*	0.01	0.02	0.01	0.02	0.01	0.02	-0.01	-0.01
90	-0.02	-0.01	0.03*	0.03	0.02	-0.01	-0.03	0.02	0.02	-0.01	-0.01	-0.03	0.02	-0.05***	-0.02	0.00	-0.02	0.00	-0.02	0.00	0.00	0.03

* = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A14: Quantile Fixed Effects: Total Household Income

Total Household Income Log Transformed (NRs)	Group Membership	Any Support	Joined Group and Got Support	Any Credit from AG Group	Any Production Training	Any Inputs	Any Assets	Any Marketing Support	Inputs (only)	Credit from Any Source (only)	Inputs + Prod Training + Any Except Assets	Inputs + Prod Training + Assets + Any
Quantile	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
10	41%*	21%	37%***	40%*	30%	28%*	33%	79%***	29%	40%*	35%	100%***
20	40%**	17%	20%	33%	9%	28%**	30%*	54%***	17%	30%*	14%	106%***
30	40%***	13%	20%	21%	50%**	22%*	42%**	65%***	31%**	12%	6%	51%*
40	21%	17%	17%	27%	28%*	19%	31%**	30%*	4%	2%	19%	49%*
50	28%*	17%	4%	29%*	43%**	19%*	20%	27%**	17%	5%	23%	88%**
60	21%	11%	-10%	37%**	50%***	6%	22%	20%	6%	2%	39%*	92%***
70	0.	13%	-9%	61%**	58%***	14%	22%	36%***	7%	17%	57%***	65%***
80	7%	32%***	5%	10%	54%***	35%***	31%**	30%*	15%	0%	24%	46%
90	1%	36%***	12%	11%	40%**	45%***	20%	17%	44%**	-22%**	31%	86%**

* = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A15: Quantile Fixed Effects: Agricultural Income

Agricultural Income Log Transformed (NRs)	Group Membership		Any Support		Joined Group and Got Support		Any Credit from AG Group		Any Training Production		Any Assets		Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod Training + Any Except assets		Inputs + Prod Training + Assets + Any	
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
10	-5%	2%	2%	4%	3%	1%	-5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%
20	2%	-1%	0%	12%**	8%	-2%	11%*	6%	-2%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	20%
30	1%	0%	-2%	5%	22%***	-1%	22%***	19%***	-3%	19%***	22%***	18%**	27%***	2%	2%	2%	2%	2%	2%	2%	2%	31%***
40	2%	6%*	3%	9%	28%***	4%	18%**	27%***	4%	27%***	22%***	22%***	30%***	-6%	-6%	-6%	-6%	-6%	-6%	-6%	-6%	43%***
50	4%	4%	8%	17%*	27%***	2%	22%***	30%***	2%	30%***	22%***	22%***	30%***	-6%	-6%	-6%	-6%	-6%	-6%	-6%	-6%	50%***
60	9%	12%**	6%	23%**	26%***	10%*	23%**	24%***	10%*	24%***	23%**	23%**	24%***	-4%	-4%	-4%	-4%	-4%	-4%	-4%	-4%	56%***
70	14%**	17%***	7%	5%	32%***	17%***	13%	21%**	17%***	21%**	13%	13%	21%**	3%	3%	3%	3%	3%	3%	3%	3%	43%***
80	12%*	7%	8%	-3%	16%	11%	6%	15%	11%	15%	6%	6%	15%	0%	0%	0%	0%	0%	0%	0%	0%	68%***
90	23%	-1%	-12%	-1%	25%	4%	20%	3%	4%	3%	20%	20%	3%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	12%

* = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A16: Robustness Check: Conditional Logit Average Treatment Effect on the Treated Weighted

	Group Membership	Any Support	Group and Got Any Support	Any Credit from AG Group	Any Production Training	Any Inputs	Any Assets	Any Marketing Support	Inputs (only)	Credit from Any Source (only)	Inputs + Prod Training + Assets + Any	
Household has loans	0.32	0.21	0.01	1.18*	0.47	0.18	0.92*	0.40	-0.20	—	-0.07	0.94
Borrowed from an agricultural group or cooperative	1.68***	0.19	-0.35	3.32***	0.65	0.37	1.49**	0.98	-0.14	—	0.52	1.24
Used phone to check price crops	0.76	1.26**	0.41	0.37	2.01**	0.99*	1.64*	2.63***	-0.12	0.56	1.85**	5.40***
Used new rice variety in last 3 years	0.60	0.38	0.71*	-0.43	0.87*	0.58	0.55	0.71	0.64	-0.28	-0.29	2.04***
Household used paid labor	-0.06	0.03	0.02	-0.17	-0.16	0.28	-0.06	-0.37	0.35	0.05	2.23***	-1.29*
Household is commercialized	0.94**	0.37	0.61*	1.80**	1.21**	0.35	0.75	2.07***	0.21	-0.08	0.59	20.40***
Household self identifies as poor	0.31	-0.67**	-0.39	0.99	-0.62	-0.70**	0.17	-1.64*	-0.66	-0.28	-0.30	-2.69**

Model : Conditional Logit Average Treatment Effect on the Treated Weighted

— = undefined, * = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.
 Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A17: Robustness Check: Fixed Effects Average Treatment Effect on the Treated Weighted-Drop All Covariates

Outcome Label	Group Membership		Any Support		Any Credit from AG Group		Any Training Production		Any Assets		Any Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod Training + Assets		Inputs + Prod Training + Assets			
	Coefficient		Coefficient		Coefficient		Coefficient		Coefficient		Coefficient		Coefficient		Coefficient		Coefficient		Coefficient			
Household has loans	0.08		-0.01		-0.02		0.11		0.01		-0.02		0.16		0.11		-0.08		-0.14		0.18	
Total income log transformed (NRs)	26%***		23%***		18%***		35%***		45%***		26%***		29%***		34%***		23%*		11%		21%*	49%***
Wage income log transformed (NRs)	-17%		71%		22%		159%		179%		86%		21%		277%		15%		-8%		59%	192%
Agricultural income log transformed (NRs)	5%		4%		3%		7%		18%**		4%		13%*		11%*		-2%		-3%		4%	27%***
Non-agricultural income log transformed (NRs)	16%		159%**		103%*		823%**		461%***		134%*		230%		214%		21%		79%		150%	424%*
Livestock profit log transformed (NRs)	8%		7%		5%		1%		6%		5%		19%		3%		-1%		-1%		-5%	18%
Profit from sale of livestock log transformed (NRs)	234%**		166%*		143%*		-10%		65%		121%		572%*		19%		61%		3%		32%	90%
Profit from sale of crops log transformed (NRs)	2%		2%		1%		8%**		12%**		2%		6%		10%**		1%		-1%		6%*	18%***

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Table A17 continued

Outcome Label	Group Membership		Any Support		Group and Got Support		Any Credit from AG Group		Any Production Training		Any Inputs		Any Assets		Any Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod Training + Assets + Any	
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Revenue from sale of crops log transformed (NRs)	305%**	54%	86%*	427%**	153%*	55%	183%**	258%**	31%	-9%	350%**	653%**										
Other agricultural profit log transformed (NRs)	1%	4%	3%*	5%	2%	3%	2%	1%	2%	-3%	0%	6%										
Other agricultural revenue log transformed (NRs)	14%	32%	39%	125%	155%*	19%	13%	-6%	5%	137%**	-4%	412%*										
Income from renting out land log transformed (NRs)	-5%	-11%	-4%	-51%	-27%	-12%	-60%*	-37%*	6%	16%	3%	-71%*										
Income from remittances log transformed (NRs)	48%	102%	57%	470%	100%	107%	207%	38%	209%**	127%	71%	237%										
Business income log transformed (NRs)	133%*	33%	64%	13%	23%	61%	-31%	-23%	68%	389%**	25%	-13%										

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Table A17 continued

Outcome Label	Group Membership		Any Support		Joined Group and Got Support		Any Credit from AG Group		Any Production Training		Any Inputs		Any Assets		Any Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod Training + Assets + Any		
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	
Per capita agricultural income log transformed (NRs)	6%		4%		4%		5%		17%**		4%		9%		12%*		-3%		-3%		5%		21%*
Per hectare agricultural income log transformed (NRs)	2%		-1%		-1%		2%		6%*		0%		6%		2%		-1%		-1%		-2%		11%**
Production cost per hectare log transformed (NRs)	17%		45%		72%		-38%		149%		85%		584%***		615%**		78%		203%**		1%		371%**
Total production cost imputed log transformed (NRs)	39%		27%		61%*		-30%		72%		39%		242%**		335%**		25%		92%*		29%		175%*

— = undefined, * = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Table A18: Robustness Check: Poisson Fixed Effects Average Treatment Effect on the Treated Weighted–Drop All Covariates

Outcome Label	Group Membership	Any Support	Joined Group and Got Support	Any Credit from AG Group	Any Production Training	Any Inputs	Any Assets	Any Marketing Support	Inputs (only)	Credit from Any Source (only)	Inputs + Prod Training + Assets	Inputs + Prod Training + Assets + Any
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Revenue from sale of goats (NRs)	137%**	41%	29%	42%	92%**	30%	109%**	33%	-1%	-23%	44%	251%**
Income from remittances (NRs)	56%*	14%	-8%	68%	56%	24%	62%	37%	50%*	-8%	13%	127%
Income from wages, exclude AG worker wages (NRs)	17%	12%	17%	19%	14%	14%	27%	18%	25%	-7%	9%	16%
Revenue from all livestock sales (NRs)	42%	6%	-6%	-10%	41%	3%	89%*	30%	-26%	-8%	-33%	135%
Income from selling other crops (NRs)	69%	61%	153%**	193%**	77%	65%	54%	19%	13%	4%	163%**	407%**
Income from selling high value crops (NRs)	85%	24%	145%**	43%	114%**	59%**	2%	156%**	34%	29%	34%	239%**
Income from selling cereals (NRs)	42%	143%*	69%	72%	104%	157%*	211%**	144%**	304%**	-18%	23%	203%**
Revenue from sale of crops (NRs)	50%**	93%*	86%**	73%	103%**	109%**	143%*	118%**	121%*	-15%	29%	211%**

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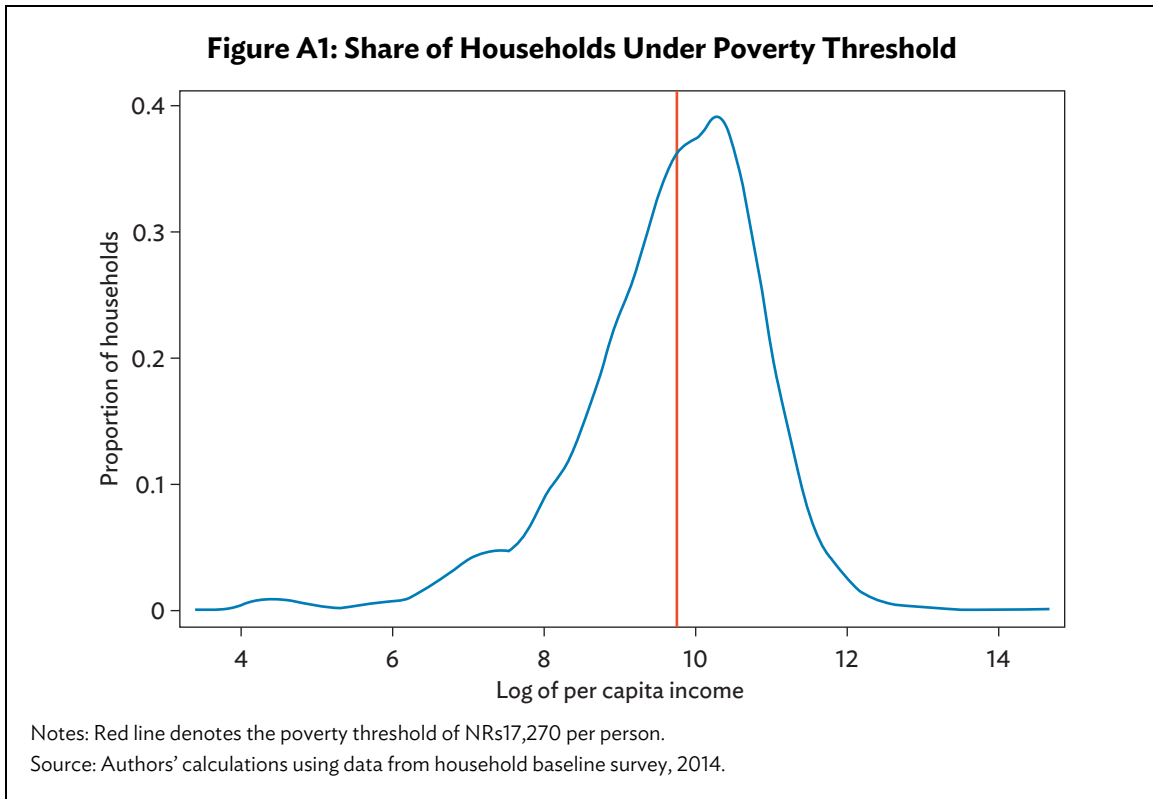
Table A18 continued

Outcome Label	Group Membership		Any Support		Joined Group and Got Support		Any Credit from AG Group		Any Production Training		Any Inputs		Any Marketing Support		Inputs (only)		Credit from Any Source (only)		Inputs + Prod + Training + Assets + Any	
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Other agricultural revenue (NRs)	-30%	60%	-12%	201%	47%	46%	44%	43%	45%	52%	-35%	187%								
Total wage income (NRs)	13%	10%	0%	12%	12%	19%	10%	23%	-8%	9%	9%									
Income from wages, exclude AG worker wages (NRs)	17%	12%	17%	19%	14%	27%	18%	25%	-7%	9%	16%									
Income from remittances (NRs)	56%*	14%	-8%	68%	56%	24%	62%	37%	50%*	-8%	13%	127%								
Business income (NRs)	49%	26%	64%	-66%	29%	17%	-28%	25%	2%	9%	3%	-6%								
Milk production - liters (NRs)	41%	28%	47%*	-23%	0%	2%	125%**	74%	16%	25%	-49%*	139%								
Area under hybrid crops in hectares (NRs)	137%**	96%**	-7%	-24%	49%	112%**	213%**	177%**	93%	6%	-53%	960%***								

* = p < 0.10, ** = p < 0.05, *** = p < 0.01, AG = agriculture.

Source: Authors' calculations using data from household baseline (2014) and endline (2018) surveys.

Appendix 2: Figures



Appendix 3: Variables Used to Predict Selection into Treatment

The following baseline variables were used to predict selection into agricultural groups and/or donor support.

- Travel time to cooperative office (minutes)
- Travel time to a motorable road (minutes)
- Walking distance to household's closest plot (15 minute increments)
- Binary for whether household considers itself poor
- Area cultivated in hectares
- Percent of total farm area owned by household
- Share of total farm that is irrigated
- Rice cultivation intensity
- Household has any remittances
- Household has any wages
- Binary for whether household has any agricultural machine
- Binary for whether household has a savings account
- Binary for whether household borrowed any money
- Education of person most involved in agriculture at baseline
- Age of person most involved in agriculture at baseline (years)
- Gender of person most involved in agriculture at baseline
- Binary for whether household is connected to electric grid
- Value of all crops produced (NRs)
- Number of non-agriculture groups that provided support to household
- Household did any sharecropping
- Household has any business

Appendix 4: Detailed Description of Matching Grant Projects

Project for Agriculture Commercialization and Trade (PACT) was implemented by the Ministry of Agriculture and Livestock Development with financing from the World Bank between 2008 and 2018. This was a nationwide competitive matching grants scheme covering 24 different value chains. PACT conducted six calls for proposals over the course of its implementation, each with a unique focus and covering different value chains. Maximum value of the matching grant was \$100,000. Each application consisted of a financial, technical, and an environmental section, which were scored separately using a double-blind methodology. PACT procured the experts who scored the applications independent of the project. The project provided basic orientation and business development to its applicants.

Agriculture Food Security Program (AFSP) was part of the Global Agriculture Food Security Program (GAFSP). Its implementation was supervised by the World Bank. This project is included because it covered many of the same districts and Village Development Committees in the coverage area of the Raising Incomes of Small and Medium Farmers Project (RISMFP). AFSP provided training and productive assets (inputs and livestock) to farmer groups and mother's groups.

The Rani Jamara Kulariya Irrigation Project is a large-scale irrigation modernization project in Kailali district, which is in our study sample. The project is funded by the World Bank and has been conducting civil works and agricultural extension support in one of our study districts. The project provides training, farmer field schools, and transfers of agricultural equipment and irrigation assets (boreholes and pumps) to farmer groups and cooperatives in its command area. The project does not have a systematic way of identifying beneficiaries for these productive asset transfers. Applications are announced in the local paper or thru the Province Agriculture Knowledge Centers. The applications are then graded by the project staff, and eligible beneficiaries are provided with a 50% subsidy on purchase of large equipment and inputs.

High Value Agriculture Project in Hill and Mountain Areas (HVAP) project was active between 2010 and 2017. This project was financed by the International Fund for Agricultural Development. The project conducted productive asset transfers via matching grants to farmer groups and producer organizations in five "Hilly" districts of Far-Western Development Region in Nepal. The project's main goal was to support marginalized and minority groups with technical and business skills training, transfer of productive assets via matching grants, and facilitate marketing of high-value crops with support from the local chamber of commerce.

Knowledge-Based Integrated Sustainable Agriculture in Nepal (KISAN) began implementation in 2013 and will continue implementation until 2022. This project is financed by the United States Agency for International Development and provides agricultural farmer groups, cooperatives, and private firms with productive asset transfers via matching grants. This project aimed to support cereal seed production in four provinces of Nepal, including the Far-Western Development Region. The project provides grants to farmer groups to purchase irrigation pumps and grants to seed production cooperatives to buy seed grading and packaging equipment.

Prime Minister Agriculture Modernization Project (PMAMP) is funded and operated fully by the Government of Nepal. The project began in 2017 and provides farmer groups and cooperatives with subsidies on inputs, construction of collection centers, livestock, and crop insurance. Before this project the main government office that provided training and support to farmer groups and cooperatives was the District Agriculture Development Office, which was later renamed to Agriculture

Knowledge Center (AKC), and placed under the provincial Ministry of Land Management, Agriculture, and Cooperatives after federalization in 2018. This office provides registered farmer groups and cooperatives with technical advice, crop demonstrations, and grants to purchase equipment and inputs. These offices are in every province, and their services are open to all registered farmer groups and cooperatives. AKC publishes notices for available grants but does not utilize a transparent scoring methodology to select applicants.

Raising Incomes of Small and Medium Farmers Project (RISMFP) was funded by ADB and aimed to support small and medium-sized farmers with competitive matching grants and promote their diversification into high-value commodities (HVCs) in selected districts in Nepal's Karnali, Sudurpashchim, and Lumbini provinces. The project was active from 2011 to 2020.

These districts were selected due to their high poverty rates and potential for *high value crop* production. Project areas cover the *Terai*, a lowland region with potential for year-round crop cultivation, and *Hill* regions, which have limited road accessibility and colder temperatures. The RISMFP project aimed to help small and medium-sized farmers diversify into HVCs by establishing backward and forward value chain linkages and providing capital for inputs and better technology. The project provided matching grants to farmer groups, agricultural cooperatives, and private firms to:

- establish supply agreements for initial inputs and farm technology;
- construct infrastructure for post-harvest processing of crops;
- procure technical capacity development services; and
- procure new machinery and construct warehouses.

The project utilized the services of nongovernment organizations (NGOs) and the private sector for farmer mobilization, training, and business planning. NGOs were tasked to review the applications from farmers groups and cooperatives to establish their eligibility and score their proposals. By the end of implementation, the project supported the following value chains with competitive matching grants: fruits, ginger, honey, lentil, mushroom, potato, cereal seeds, spices, and high value vegetables. The value of the grant varied by the value chain and size of the activity described in the proposal, the average value of the grant was around \$20,000 while the maximum amount can be over \$100,000. Grantees were also provided with general business literacy training, after grant agreements were signed.