

Annex: GRAD Sustainability Study Tables, household survey

Table 1. Respondent household demographics

	Total N=1066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Sex of Household Head										
Male	67	713	77	273	46	166	78	237	37	37
Female	33	353	23	82	55	199	22	68	10	4
Age of Household Head (years)										
Median [IQR]	39	[35,48]	40	[31,45]	45	[38,53]	43	[37,50]	39	[35,48]
18 - 30	15	162	23	81	9	33	13	38	24	10
31 - 45	50	534	55	195	42	154	54	166	46	19
46 - 60	29	310	21	76	38	138	28	84	29	12
> 60	6	60	1	3	11	40	6	17	0	0
Literacy of Household Head										
Unable to Read/Write	56	594	83	294	32	118	49	148	83	34
Labor Capacity of Household Head										
Too Young to Work	1	6	1	3	1	3	0	0	0	0
Working Child	2	18	2	6	1	4	3	8	0	0
Adult	68	728	36	129	82	298	86	261	98	40
Working Elderly	28	303	61	217	14	52	11	33	2	1
Partially Disabled	1	8	0	0	1	5	1	3	0	0
Permanently Unable to Work	0	3	0	0	1	3	0	0	0	0
Any work	78	834	66	235	80	293	88	268	100	41
Type of work										
Agriculture	87	728	86	203	83	242	92	243	98	40
Waged employment	10	83	4	10	15	45	7	19	22	9
Trading	23	193	27	63	23	67	15	41	54	22
Sale of natural products	4	32	1	2	6	19	4	10	1	2
Small handicrafts	5	45	4	9	6	19	5	12	12	5
Manual labor	14	115	3	7	29	85	3	7	39	16
Rental	15	126	0	0	11	31	7	18	7	3
Process food & drink	7	62	4	10	11	31	7	18	7	3

Table 2. Post-project financial status of GRAD participant households

	Total N=1066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
PSNP (N=1026)										
Graduated	57	582	63	203	40	143	69	209	66	27
Reentered	6	58	8	26	5	19	4	12	2	1
Not graduated	38	386	29	91	55	198	28	84	32	13
Household status since project										
Better Off	73	774	74	264	75	272	69	210	68	28
Worse Off	14	150	19	68	6	21	16	48	32	13
Same	13	142	6	23	20	72	15	47	0	0
Able to send children to school year-round	89	951	96	341	81	296	90	276	93	38
No children	3	32	0	0	6	21	4	11	0	0
Able to meet food needs year-round	72	766	73	259	78	285	68	207	37	15
Able to meet unforeseen household costs	63	672	75	265	72	263	44	134	24	10
Informal assistance received										
Any received	32	344	27	96	37	135	84	28	71	29
# types, Median [IQR]	0	[0,1]	0	[0,1]	0	[0,1]	0	[0,1]	2	[0,4]
Type of informal assistance										
Free use of oxen or plough (farming)	14	148	0	0	19	68	18	54	63	26
Free labor	13	134	3	10	16	60	14	44	49	20
Cash loan (no interest)	12	123	25	87	5	17	5	14	12	5
Free use of pack animals (transport)	8	84	1	2	3	10	20	60	29	12
Seed loan	6	68	2	6	7	26	8	25	27	11
Other cash gift	5	48	1	2	9	33	3	9	10	4
Remittances (from relative)	4	39	3	10	6	22	1	2	12	5
Grain loan (no interest)	3	35	3	9	3	12	3	8	15	6
Food or grain gift	3	27	1	2	4	16	3	8	2	1
Seed gift	3	27	0	0	5	20	1	4	7	3
Government assistance received										
Any received	64	63.6	25	87	87	319	77	234	93	38
# types, Median [IQR]	1	[0,3]	0	[0,0]	2	[1,3]	2	[1,3]	2	[1,3]
Type of government assistance										
Cash transfer	28	197	15	54	18	66	21	63	34	14
Extension services	28	303	1	5	20	74	62	188	88	36
Credit or loan	27	286	2	6	40	145	39	120	37	15
Food-for-work employment	25	269	0	0	53	194	21	64	27	11
Market information	18	191	0	0	19	70	30	93	68	28
Cash-for-work employment	17	176	0	0	38	138	7	22	39	16
Free seeds or tools	11	114	4	14	18	64	10	30	15	6
Free food aid	9	93	8	30	12	44	6	18	2	1
Livestock	4	40	2	6	5	19	4	13	5	2
Free fertilizer	1	14	0	0	2	8	2	5	2	1

Proportionate

Table 3a. Value chain activities during project

	Total N=1,066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Value chain activity										
Shoat	37	390	50	175	24	86	29	88	100	41
Cattle	17	181	15	54	13	49	19	58	49	20
Potato	26	275	32	113	1	4	44	135	56	23
Pepper	5	53	12	44	0	1	1	2	15	6
White beans	2	26	7	24	1	2	0	0	0	0
Red kidney beans	10	102	29	102	0	0	0	0	0	0
Malt barley	18	195	23	80	0	0	37	113	5	2
Honey	0	1	0	0	0	1	0	0	0	0
Total VCA										
0	24	261	1	2	63	231	9	28	0	0
1	50	520	54	191	35	126	61	187	39	16
2	17	183	30	108	2	7	20	62	15	6
3	7	71	9	31	0	1	9	27	29	12
4	3	31	6	23	0	0	0	1	17	7
Median	1	[1,2]	1	[1,2]	0	[0,1]	1	[1,2]	2	[1,3]
Mean	1.1	1.0	1.7	0.9	0.4	0.5	1.3	0.8	2.2	1.2

Table 3b. Value chain activity after project

	Total N=1,066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Value chain activity										
Shoat	28	296	40	143	21	76	17	53	59	24
Cattle	12	131	13	45	9	32	11	34	29	20
Potato	19	203	21	75	1	2	35	108	44	18
Pepper	4	40	10	36	0	0	0	0	10	4
White beans	2	19	5	19	0	0	0	0	0	0
Red kidney beans	9	93	26	93	0	0	0	0	0	0
Malt barley	14	150	17	61	0	0	29	89	0	0
Honey	0	1	0	0	0	1	0	0	0	0
Total VCA										
0	40	428	14	50	72	263	34	105	24	10
1	40	428	54	191	26	93	43	132	30	12
2	13	135	13	66	2	9	17	53	17	7
3	6	65	12	43	0	0	5	14	20	8
4	1	10	1	5	0	0	0	1	10	4
Median	1	[0,1]	1	[1,2]	0	[0,1]	1	[0,1]	1	[1,3]
Mean	0.9	0.9	1.3	0.9	0.3	0.5	0.9	0.8	1.6	1.3

Table 4a. Change in value chain activities between end of project and follow-up study

	During		Maintained		Dropped		New	
	%	n	%	n	%	n	%	n
Value chain activity								
Shoat	37	390	26	275	11	115	7	21
Cattle	17	181	11	120	34	61	9	11
Potato	26	275	19	202	7	73	7	1
Pepper	5	53	3	37	2	16	4	3
White beans	2	26	2	19	1	7	2	0
Red kidney beans	10	102	8	85	2	17	3	8
Malt barley	18	195	14	147	5	48	3	3

Table 4b. Value chain activities maintained, dropped, or added post-GRAD, by region

Maintained value chain activity post-GRAD										
	Total		Sidama		Tigray		Amhara		Gurage	
	N=1,066		N=355		N=365		N=305		N=41	
	%	n	%	n	%	n	%	n	%	n
Value chain activity										
Shoat	26	275	39	140	17	61	16	50	59	24
Cattle	11	120	13	45	7	27	10	31	41	17
Potato	19	202	21	75	1	2	35	107	44	18
Pepper	3	37	9	33	0	0	0	0	10	4
White beans	2	19	5	19	0	0	0	0	0	0
Red kidney beans	8	85	24	85	0	0	0	0	0	0
Malt barley	14	147	61	17.18	0	0	28	86	0	0
Dropped value chain activity post-GRAD										
	%	n	%	n	%	n	%	n	%	n
Value chain activity										
Shoat	11	115	10	35	7	25	12	38	41	17
Cattle	6	61	3	9	6	22	9	27	7	3
Potato	7	73	11	38	1	2	9	28	12	5
Pepper	2	16	3	11	0	1	1	2	5	2
White beans	1	7	1	5	1	2	0	0	0	0
Red kidney beans	2	17	5	17	0	0	0	0	0	0
Malt barley	5	48	5	19	0	0	9	27	5	2
Added value chain activity post-GRAD (includes those currently participating and stopped)*										
	%	n	%	n	%	n	%	n	%	n
Value chain activity										
Shoat	7	76	7	25	5	20	10	31	0	0
Cattle	9	94	20	71	2	8	4	12	7	3
Potato	7	77	18	63	0	1	4	12	2	1
Pepper	4	45	12	42	0	0	1	2	2	1
White beans	2	18	5	16	0	1	0	0	2	1
Red kidney beans	3	29	8	29	0	0	0	0	0	0
Malt barley	3	31	5	17	0	0	5	14	0	0

* NOTE: Respondent could have reported participating in new VCA since GRAD but not be currently participating in that VCA.

Table 4c. Reason why maintained or dropped VCA (by VCA)

	All (N=604)		Shoat (N=275)		Cattle (N=120)		Potato (N= 202)		Pepper (N=37)		White Beans (N=19)		Red kidney beans (N= 85)		Malt barley (N=147)	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Reasons <u>still</u> involved in VCA																
Profitable business	72	43	72	199	52	62	73	146	76	28	89	17	92	78	78	115
Good quality inputs	28	171	25	70	21	25	30	60	32	12	16	3	49	42	35	52
What I know	26	158	26	71	7	3	34	69	54	20	0	0	80	68	37	54
Access to loans	22	135	24	67	24	29	26	53	8	3	0	0	27	23	22	32
No weather-related shocks	13	76	13	35	2	1	16	33	35	13	36	5	42	36	22	32
Have outlet where can sell	10	58	7	19	6	7	19	38	0	0	0	0	2	2	24	36
Adequate technical advice	8	46	9	26	2	1	13	26	30	11	0	0	8	7	10	14
Already made investments	5	33	8	22	0	0	6	13	0	0	0	0	12	10	3	4
Reasons <u>not</u> involved in VCA																
Not profitable	24	72	30	35	8	5	32	23	25	4	29	2	0	0	21	10
Couldn't find market	20	60	28	32	11	7	25	18	6	1	29	2	0	0	23	11
Couldn't get inputs	18	53	20	23	16	10	16	12	19	3	29	2	0	0	21	10
Other profitable business	9	27	10	11	3	2	14	10	31	5	0	0	0	0	8	4
Weather-related shocks	8	25	12	14	7	4	5	4	13	2	0	0	0	0	8	4
Inadequate technical advice	7	21	10	11	7	4	11	8	13	2	0	0	0	0	6	3
Lost livestock to disease	7	21	1	1	3	2	1	1	0	0	0	0	0	0	38	18
Crops failed (weather shock)	5	15	4	5	0	0	8	6	25	4	0	0	0	0	8	4
VCA manager died/migrated	4	11	3	4	0	0	10	7	0	0	0	0	0	0	6	3
Lost the land	4	12	2	2	3	2	8	6	19	3	0	0	0	0	6	3
Lost livestock to theft/other	1	3	0	0	2	1	1	1	0	0	0	0	0	0	4	2

Table 4d. Reason why maintained or dropped VCA (by region)*

	All (N=604)		Sidama (N=296)		Tigray (N=85)		Amhara (N=195)		Gurage (N= 28)	
	%	n	%	n	%	n	%	n	%	n
Reasons <u>still</u> involved in VCA										
Profitable business	72	43	86	253	69	59	62	121	0	
Good quality inputs	28	171	23	67	44	37	34	67	0	
Access to loans	26	158	17	50	34	29	29	56	0	
Have outlet where can sell	22	135	2	6	6	5	24	47	0	
No weather-related shocks	13	76	19	57	4	3	8	16	0	
Adequate technical advice	10	58	6	18	8	7	11	21	0	
Already made investments	8	46	9	26	1	1	3	6	0	
What I know	5	33	43	128	0	0	15	30	0	
	All (N=299)		Sidama (N=122)		Tigray (N=50)		Amhara (N=106)		Gurage (N= 21)	
	%	n	%	n	%	n	%	n	%	n
Reasons <u>not</u> involved in VCA										
Not profitable	24	72	27	33	12	6	31	33	0	
Couldn't find market	20	60	2	3	30	15	39	41	5	1
Couldn't get inputs	18	53	4	5	16	8	37	39	5	1
Other profitable business	9	27	11	13	6	3	10	11	0	
Weather-related shocks	8	25	3	4	14	7	8	9	24	5
Inadequate technical advice	7	21	0		16	8	8	8	24	5
VCA manager died/migrated	7	21	2	2	2	1	8	8	0	
Lost the land	5	15	5	6	2	1	5	5	0	
Crops failed (weather shock)	4	11	2	3	2	1	8	8	14	3
Lost livestock to theft/other	4	12	0		0		3	3	0	
Lost livestock to disease	1	3	14	17	2	1	3	3	0	

* It is possible that a respondent dropped on VCA and maintained another VCA.

Table 5a. Proportion of households purchasing value chain inputs (by region)

	Total N=1,066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Purchased input	86	916	95	336	76	278	86	262	98	40
Fertilizer	66	706	68	241	60	218	77	236	27	11
Seed (grain)	44	465	69	244	32	67	33	101	5	2
Feed (livestock)	31	331	40	143	22	13	22	67	95	39
Seed (vegetable)	29	316	51	182	19	69	18	54	27	11
Improved agriculture tools	27	290	35	125	19	69	24	74	54	22
Chemicals	19	201	4	15	18	82	32	98	51	21
Feed (poultry)	10	107	17	61	4	13	5	16	41	17

Table 5b. Where purchased value chain input (by region)

Input	N	Coop		Agro-dealer		Other		Don't know	
		%	n	%	n	%	n	%	n
Fertilizer	706	81	574	8	58	5	35	6	39
Seed (grain)	465	66	305	18	83	10	47	6	30
Feed (livestock)	331	17	57	45	148	12	40	26	86
Seed (vegetable)	316	48	153	25	80	5	35	6	39
Improved agriculture tools	290	30	87	26	75	33	95	11	33
Chemicals	201	39	79	18	37	27	55	15	30
Feed (poultry)	107	19	20	53	57	17	18	11	12

Table 5c. Use of input sources (by region)

Input source	Total N=916		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Anything from cooperative	76	696	61	204	87	243	95	248	3	1
Anything from agro-dealer	31	285	48	162	15	41	17	44	95	38
Anything from other	20	185	25	85	5	15	32	83	3	2

Table 5d. Where purchased value chain input (by input and region)

Input	Total		Sidama		Tigray		Amhara		Gurage	
	%	n	%	n	%	n	%	n	%	n
Fertilizer (N=706)										
<i>Coop</i>	81	574	66	160	88	191	94	223	0	
<i>Agro-dealer</i>	8	58	18	44	0	1	2	4	82	9
<i>Other</i>	5	35	14	31	0		2	4	0	
<i>Don't know</i>	6	39	2	6	12	26	2	5	18	2
Seed (grain) (N=465)										
<i>Coop</i>	66	305	54	132	80	94	78	79	0	
<i>Agro-dealer</i>	18	83	30	72	8	9	1	1	50	1
<i>Other</i>	10	47	13	32	1	1	14	14	0	
<i>Don't know</i>	6	30	3	8	12	14	7	7	50	1

	Total		Sidama		Tigray		Amhara		Gurage	
	%	n	%	n	%	n	%	n	%	n
Input										
Feed (livestock) (N=331)										
<i>Coop</i>	17	57	7	10	27	22	36	24	3	1
<i>Agro-dealer</i>	45	148	43	61	38	31	30	20	92	36
<i>Other</i>	12	40	17	24	1	1	21	14	3	1
<i>Don't know</i>	26	86	34	48	34	28	13	9	3	1
Seed (vegetable) (N=316)										
<i>Coop</i>	48	153	41	74	72	50	54	29	0	
<i>Agro-dealer</i>	25	80	31	56	6	4	17	9	100	11
<i>Other</i>	5	35	13	31	0		2	4	82	9
<i>Don't know</i>	6	39	2	6	12	26	2	5	18	2
Improved ag tools (N=290)										
<i>Coop</i>	30	87	9	11	77	53	30	22	5	1
<i>Agro-dealer</i>	26	75	34	43	0		16	12	90	20
<i>Other</i>	33	95	42	52	13	9	45	33	5	1
<i>Don't know</i>	11	33	15	19	10	7	9	7	0	
Chemicals (N=201)										
<i>Coop</i>	39	79	0		61	41	38	37	5	1
<i>Agro-dealer</i>	18	37	13	2	13	9	7	7	90	19
<i>Other</i>	27	55	20	3	9	6	47	46	0	
<i>Don't know</i>	15	30	67	10	16	11	8	8	5	1
Feed (poultry) (N=107)										
<i>Coop</i>	19	20	16	10	62	8	13	2	0	
<i>Agro-dealer</i>	53	57	52	32	15	2	38	6	100	17
<i>Other</i>	17	18	18	11	0		44	7	0	
<i>Don't know</i>	11	12	13	8	23	3	6	1	0	

Table 6a. Loans during and after GRAD

	Any		VESA		MFI		RuSACCO		Bank	
	%	n	%	n	%	n	%	n	%	n
Received a loan										
During GRAD	88	934	74	784	62	658	8	82	0.5	5
After GRAD	65	688	58	615	35	372	3	35	0	4
Median [IQR]	2	[0-4]	1	[0-3]	0	[0,1]	0	[0,0]	0	[0,0]
Mean (SD)	3	(3)	2	(3)	0	(1)	0	(1)	0	(0)
Larger than GRAD loan	n/a	n/a	74	(321/432)	82	(192/235)	70	(19/27)	0	
Unpaid MFI					25	(172/697)				

Table 6b. Loans during and after GRAD (by region)

	Total N=1066		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
During GRAD										
Any	88	934	74	346	97	355	91	277	93	38
VESA	74	784	52	195	90	329	77	234	93	38
MFI	62	658	47	165	92	334	43	130	71	29
RuSACCO	2	82	0	0	6	22	20	60	0	0
Bank	5	0.5	1	2	1	2	0	1	0	0
After GRAD										
Any	65	688	37	132	89	326	69	210	49	20
Median [IQR]	2	[0-4]	0	[0-2]	3	[1-6]	3	[1-5]	0	[0-4]
VESA	58	615	35	126	82	298	57	174	41	17
MFI	35	372	4	15	66	240	32	99	44	18
RuSACCO	3	35	0	0	5	19	5	16	0	0
Bank	0.5	5	0	0	1	3	0	1	0	0
Unpaid MFI	20	194	12	34	20	65	27	79	40	16

Table 7a. Involvement in VESA, by region

	Total N=1047		Sidama N=347		Tigray N=358		Amhara N=302		Gurage N=40	
	%	n	%	n	%	n	%	n	%	n
VESA active	80	833	86	297	69	246	96	289	3	1
Active member	92	767/833	89	263/297	94	232/246	94	271/289	100	1/1

* Whether VESA active missing for 19 (1.8%).

** Whether still an active member missing for 13 (1.6%).

Table 7b. Involvement in FEMA, by region*

	Total N=1036*		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Participated in during GRAD	31	323	24	84	11	37	54	164	95	38
Still involved or active	87	281	88	74	73	27	87	143	97	37
Primary benefit, if active**										
Technical advice	92	259	85	63	100	27	92	132	100	37
Access to market	51	143	42	31	89	24	46	66	46	17
Access to inputs	43	130	7	5	85	23	60	86	43	16
Reason not involved***										

* Whether participated missing for 30 respondents (2.8%); for participants, whether still active missing for 18 respondents (5.6%).

** Could state more than one benefit.

*** Did not calculate; available only for 24 of 41 respondents. Figures too small and missing for too great a proportion of the population to be meaningful.

Table 7c. Involvement in Cooperatives, by region*

	Total N=1036*		Sidama N=355		Tigray N=365		Amhara N=305		Gurage N=41	
	%	n	%	n	%	n	%	n	%	n
Participated in during GRAD	69	710	80	274	56	201	71	202	83	33
Still involved or active	83	592	73	202	84	169	94	189	97	32
Primary benefit, if active**										
Technical advice	86	511	96	194	91	153	70	132	100	32
Access to market	89	528	90	182	99	168	85	161	53	17
Access to inputs	43	252	20	40	41	70	70	132	31	10
Reason not involved***	N=92		N=51		N=29		N=12			
Did not get any benefits	35	32	39	20	3	1	92	11	n/a	
Not worth it to me	20	18	4	2	28	8	67	8	n/a	
Dissolved/no longer exists	54	50	51	26	62	18	50	6	n/a	

* Whether participated missing for 40 respondents (3.8%); for participants in coops, whether still active missing for 26 respondents (3.5%).

** Could state more than one benefit.

*** Among participants no longer involved, reason why missing for 92 (22%).