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MAIZE CROP CUT SURVEY REPORT | WET SEASON 2017

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Contents

Introduction.....	1
Sample Size and Random Sampling of UDP-Adopting Direct Beneficiary Farmers	1
Number of Sample Crop Cut Farmers	2
Cultivation Method of Sample Crop Cut Farmers	2
Maize Variety by Gender.....	2
Cropping Pattern of Sample Crop Cut Farmers	3
Basal Fertilizer Use in Maize Production	3
Prilled Urea Use in Non-UDP Plots.....	4
Mean Total Cost of Fertilizer in UDP and Non-UDP Plots.....	5
Mechanization in Maize Production by Gender	5
Average Maize Land Area With and Without UDP and Farm Size Groups of Sample Farmers	6
Mean Yield of UDP and Non-UDP, Percentage Yield Increase, and Percentage of Total Production Sold by Gender.....	7
Mean Yield of UDP and Non-UDP and Percentage of Yield Increase With Basal Fertilizer Use	8
Seed Rate and Seed Cost by Gender.....	8
Mean Costs of Labor, Threshing Machine, and Total Production by Gender	9
Five Data Points and Gross Margin for Sample Crop Cut Farmers by Gender.....	10
Five Data Points and Gross Margin for Sample Crop Cut Farmers With Respect to Basal Fertilizer Use.....	10
Appendix 1. List of Direct Beneficiaries UDP Farmers in Maize Production (Wet Season 2017)	12

List of Tables

Table 1.	Number of Sample Maize Farmers in Wet Season 2017	2
Table 2.	Cultivation Practices by Gender	2
Table 3.	Maize Variety Planted by Gender.....	3
Table 4.	Cropping Pattern of Sample Farmers by Gender	3
Table 5.	Basal Fertilizer Use in UDP and Non-UDP Plots by Gender	4
Table 6.	Prilled Urea Use in Non-UDP Plots.....	4
Table 7.	Mean Total Cost of Fertilizer in UDP and Non-UDP Plots.....	5
Table 8.	Mechanization in Maize Production by Gender	5
Table 9.	Average Maize Land Area (ha) With and Without UDP by Gender	6
Table 10.	Farm Size by Gender	6
Table 11.	UDP and Non-UDP Yield, Percentage Yield Increase, and Percentage of Total Production Sold by Gender	7
Table 12.	UDP and Non-UDP Yield and Percentage of Yield Increase With Basal Fertilizer Use	8
Table 13.	Seed Rate and Seed Cost by Gender.....	9
Table 14.	Mean Costs of Labor, Threshing Machine, and Total Production by Gender	9
Table 15.	Five Data Points and GM for Sample Crop Cuts Farmers by Gender	10
Table 16.	Five Data Points and Gross Margin for Sample Crop Cut Farmers With Respect to Basal Fertilizer Use.....	11
Table A1.	Direct Beneficiary UDP Male Farmers in Pindaya Township.....	12
Table A2.	Direct Beneficiary UDP Female Farmers in Pindaya Township	16

Figure and Photos

Figure 1.	Average UDP and Non-UDP Yield With Respect to Basal Fertilizer Use.....	11
Photo 1.	Farmers Participate in Husk Removal for Maize Crop Cuts in Lay Htoe Kone village, Pindaya township on September 26, 2017	17
Photo 2.	Farmers Participate in Husk Removal for Maize Crop Cuts in Phaung Pyar village, Pindaya township on September 26, 2017	17

Acronyms

BU	briquette urea
FSI	Fertilizer Sector Improvement
GM	gross margin
ha	hectare
IFDC	International Fertilizer Development Center
kg	kilogram
m	meter
t	ton
UDP	urea deep placement
USAID	United States Agency for International Development

Fertilizer Sector Improvement (FSI+)

Maize Crop Cut Survey Report Wet Season 2017

Introduction

The Fertilizer Sector Improvement (FSI) project, implemented by the International Fertilizer Development Center (IFDC), is funded by the United States Agency for International Development (USAID) for five years. Following the introduction of maize with urea deep placement (UDP) demonstrations conducted with Syngenta in 2016, farmers requested to know more about the technology. The wet season 2017 was the first time FSI delivered farmer training and established demonstrations with the Shwe Danu Self-Help Development Organization in Pindaya Township. In this first year, 182 farmers applied UDP in their maize crop, and data was collected from a sample of 17 to assess the benefits derived. To measure the impact of the technology on maize yield, the project conducted crop cuts with a survey on a random sample of direct beneficiary maize farmers who used UDP in wet season 2017. A crop cut area (60 square meters [m²]) was harvested in each field with UDP and without UDP, threshed, weighed, and moisture measured to calculate yield per hectare at 14% moisture.

Sample Size and Random Sampling of UDP-Adopting Direct Beneficiary Farmers

The list of direct beneficiary farmers¹ who applied UDP in maize was received from the FSI extension team. The UDP-adopting beneficiary farmers were sorted by gender and then by using a random integer generator (non-repeating); the random sample numbers were obtained (in ascending number order) by gender. In total, 14 male UDP farmers and three female UDP farmers were randomly selected in Pindaya Township for the crop cut survey (Table 1). The detailed list of direct beneficiary farmers by gender is presented in Appendix 1.

¹ Direct beneficiary farmers are those who attended training. Their names were recorded on attendance sheets.

Table 1. Number of Sample Maize Farmers in Wet Season 2017

Sl. No.	Region	Project Township	UDP-Adopting Direct Beneficiary Farmers			Sample Farmers (10% of total UDP-adopting farmers)		
			Male	Female	Total	Male	Female	Total
1	Shan (South)	Pindaya	152	30	182	14	3	17

Number of Sample Crop Cut Farmers

The crop cut survey was conducted during September and October 2017. On October 25, the maize crop cut data were collected from 17 sample farmers (14 males and three females) out of 182 UDP-adopting farmers in Pindaya Township (Table 1).

Cultivation Method of Sample Crop Cut Farmers

All UDP-adopting farmers used line sowing as the cultural practice. The spacing is 1 foot (0.3048 m) and row space is 2 feet (0.6096 m). It was observed that some maize farmers used a row-intercropping system with pigeon pea. Seventy-five percent of UDP-adopting farmers practiced intercropping with pigeon pea (Table 2). There were a higher percentage of male farmers practicing row-intercropping in Pindaya Township. One female and three male farmers planted only maize.

Table 2. Cultivation Practices by Gender

Region Name				Cultivation Method		
				Maize Only	Maize with Pigeon Pea	Total
Shan (South)	Farmer gender	Female	Number %	1 (33.33%)	2 (66.67%)	3 (100%)
		Male	Number %	3 (21.43%)	11 (78.57)	14 (100%)
		Total	Number %	4 (23.53%)	13 (76.47%)	17 (100%)

Maize Variety by Gender

The majority of the sample (94%) used a hybrid variety. Only one female farmer used a local variety (Table 3). The main source of seeds was purchasing from various companies.

Table 3. Maize Variety Planted by Gender

Region Name		Type of Variety				
		Hybrid	Local	Total		
Shan (South)	Farmer gender	Female	Number %	2 (66.7%)	1 (33.3 %)	3 (100%)
		Male	Number %	14 (100%)	0 (0%)	14 (100%)
	Total	Number %	16 (94.1%)	1 (5.9%)	17 (100%)	

Cropping Pattern of Sample Crop Cut Farmers

The sample maize farmers practiced nine different cropping patterns. Thirty-five percent of farmers did not grow a crop after harvesting maize. One female farmer grew onion and gram after maize and one female grew wheat, gram, and niger after maize (Table 4). Fourteen percent of male farmers grew garlic and onion after maize. One each of the male sample farmers planted either wheat; niger; gram, niger, and mustard; gram and niger; wheat and niger; or wheat, gram, and niger after the maize.

Table 4. Cropping Pattern of Sample Farmers by Gender

Region Name (Shan South)		Cropping Pattern of Sample Farmers											Total
		M+W	M+Gar+ O	M+Nig	M & F	M+O+ Gram	M+Gram+ Nig+Must	M+Gram +Nig	M+ Gram+ Nig+F	M+W+ Nig	M+W+ Gram+ Nig		
Farmer gender	Female	Number %	0	0	0	1 (33.3)	1 (33.3)	0	0	0	0	1 (33.3)	3 (100%)
	Male	Number %	1 (7.1)	2 (14.3)	1 (7.1)	5 (35.7)	0	1 (7.1)	1 (7.1)	1 (7.1)	1 (7.1)	1 (7.1)	14 (100%)
	Total	Number %	1 (5.9)	2 (11.8)	1 (5.9)	6 (35.3)	1 (5.9)	1 (5.9)	1 (5.9)	1 (5.9)	1 (5.9)	2 (11.8)	17 (100%)

M=maize, W=wheat, Gar=garlic, Gram=grams, O=onion, Must=mustard, Nig=niger, F=fallow.

Basal Fertilizer Use in Maize Production

Table 5 indicates that 67% of female and 86% of male farmers applied basal fertilizer on wet season maize in 2017. One female and two male farmers did not use basal fertilizer. Both male and female farmers used compound fertilizer basally.

Table 5. Basal Fertilizer Use in UDP and Non-UDP Plots by Gender

		Basal Use			
		Yes	No	Total	
Farmer gender	Female	Number	2	1	3
		%	66.7%	33.3%	100.0%
	Male	Number	12	2	14
		%	85.7%	14.3%	100.0%
	Total	Number	14	3	17
		%	82.4%	17.6%	100.0%

A total of 10 kilograms (kg) of briquette urea (BU) was applied to 0.015 acres or 0.006 hectares (ha) of maize by all sample farmers. Therefore, one female and two male farmers used BU only (no basal).

Regardless of gender, all basal users applied compound fertilizer as a basal fertilizer in both UDP and non-UDP plots.

Prilled Urea Use in Non-UDP Plots

All female farmers used prilled urea in non-UDP plots in wet season 2017. Half of the male farmers used prilled urea (Table 6). Both male and female farmers used prilled urea when they did earthing up.

Only one male farmer did not use either basal (compound fertilizer) or prilled urea fertilizer in wet season maize.

Table 6. Prilled Urea Use in Non-UDP Plots

		Prilled Urea Use			
		Yes	No	Total	
Farmer gender	Female	Number	3	0	3
		%	100.0%	.0%	100.0%
	Male	Number	7	7	14
		%	50.0%	50.0%	100.0%
	Total	Number	10	7	17
		%	58.8%	41.2%	100.0%

Mean Total Cost of Fertilizer in UDP and Non-UDP Plots

The sample maize farmers used 58 kg of BU per acre (or 143.26 kg/ha). On average, the sample farmers used 64 kg/ha of prilled urea in wet season maize. Because the BU price was higher than that of prilled urea (U.S. \$0.42/kg [Ks. 560/kg] for BU vs. U.S. \$0.38 [Ks. 456/kg] for prilled urea), the total cost of fertilizer for UDP was higher than the cost of fertilizer for non-UDP (UDP \$88/ha vs. non-UDP \$45/ha) (Table 7).

Table 7. Mean Total Cost of Fertilizer in UDP and Non-UDP Plots

		Total Fertilizer Cost in UDP (\$/h)	Total Fertilizer Cost in Non-UDP (\$/h)
Female	Mean	77.4367	39.3400
	N	3	3
	Std. Deviation	17.20303	17.10267
Male	Mean	90.9907	45.9562
	N	14	13
	Std. Deviation	23.97559	30.70653
Total	Mean	88.5988	44.7156
	N	17	16
	Std. Deviation	23.07398	28.29180

Mechanization in Maize Production by Gender

All male and female sample farmers used tractors for land preparation. No farmers used a harvesting machine (Table 8). The process of hiring laborers for the maize harvest is ongoing.

Table 8. Mechanization in Maize Production by Gender

				Tractor Use in Land Preparation		
				Yes	No	Total
I. Shan (south)	Gender	Female	Count	3 (100%)	0	3 (100%)
		Male	Count	14 (100%)	0	14 (100%)
		Total	Count	17 (100%)	0	17 (100%)
				Harvester Use		
				Yes	No	Total
I. Shan (south)	Gender	Female	Count	0	3 (100%)	3 (100%)
		Male	Count	0	14 (100%)	14 (100%)
		Total	Count	0	17 (100%)	17 (100%)

Average Maize Land Area With and Without UDP and Farm Size Groups of Sample Farmers

The average farm size of female and male farmers was 2.16 ha and 2.69 ha, respectively (Table 9). The average UDP land size was the same (0.006 ha) for both female and male farmers. The non-UDP farm size of male farmers (2.68 ha) was greater than the farm size of female farmers (2.15 ha).

Table 9. Average Maize Land Area (ha) With and Without UDP by Gender

Region Name			UDP (ha)	Non-UDP (ha)	Total Maize Land Area (ha)	
Shan (South)	Farmer gender	Female	Mean	0.006	2.15	2.16
			Number	3	3	3
			Std. Deviation	-	1.30	1.30
	Male	Mean	0.006	2.68	2.69	
		Number	14	14	14	
		Std. Deviation	-	1.92	1.92	

Six percent of farmers were marginal land holders, 47% were small land holders, 29% were medium land holders, and 18% were large land holders (Table 10). By gender, 67% of female farmers and 43% of male farmers were small land owners for maize. Only three male farmers owned a large farm area.

Table 10. Farm Size by Gender

Region Name		Farm Size						
			Marginal	Small	Medium	Large	Total	
Shan (South)	Farmer gender	Female	Number	0	2	1	0	3
			%	(0%)	(66.6%)	(33.4%)	(0%)	(100%)
		Male	Number	1	6	4	3	14
	%	(7.1)	(42.9%)	(28.6%)	(21.4%)	(100%)		
	Total	Number	1	8	5	3	17	
	%	(5.9)	(47.1)	(29.4)	(17.6)	(100%)		

Land size categories: marginal – 0.04-0.81 ha; small – 0.82-2.02 ha; medium – 2.03-4.05 ha; large – above 4.05 ha.

Mean Yield of UDP and Non-UDP, Percentage Yield Increase, and Percentage of Total Production Sold by Gender

Yields of male farmers were higher than yields of female farmers for UDP and non-UDP in 2017 wet season maize. The average yields of UDP and non-UDP for male sample farmers were 5.2 tons per hectare (t/ha) and 3.9 t/ha, respectively, while average yields for female farmers were 4.9 t/ha and 3.3 t/ha, respectively (Table 11).

With the application of UDP (applied at 143.26 kg urea/ha), maize yield increased by 34% for male farmers and by 51% for female farmers when compared with application of prilled urea (applied at 64 kg urea/ha). Thus, this response could be due to the rate of urea application in addition to deep placement.

All female sample farmers sold their entire maize production and male sample farmers sold 97% of their total production (Table 11).

Table 11. UDP and Non-UDP Yield, Percentage Yield Increase, and Percentage of Total Production Sold by Gender

Region Name				UDP Yield (t/ha)	Non-UDP Yield (t/ha)	% of Increase in Yield	% of Total Production Sold
Shan (South)	Farmer gender	Female	Mean	4.89	3.30	51.54	100
			N	3	3	3	3
			Std. Deviation	1.0750	0.9487	20.35	0
		Male	Mean	5.29	3.99	34.67	96.93
			N	14	14	14	14
			Std. Deviation	2.2654	1.5017	41.5436	8.4894
		Total	Mean	5.22	3.87	37.65	97.47
			N	117	17	17	17
			Std. Deviation	2.0831	1.4216	38.7045	7.7469

Mean Yield of UDP and Non-UDP and Percentage of Yield Increase With Basal Fertilizer Use

Yields were higher when basal fertilizer was applied, irrespective of UDP or non-UDP, although yields with UDP with and without basal fertilizer were higher than non-UDP with and without basal fertilizer. For example, UDP yield with and without basal fertilizer was 5.25 t/ha and 5.05 t/ha (Table 12). The average non-UDP yield with and without basal fertilizer was 4.03 t/ha and 3.15 t/ha. The percentage yield increase due to UDP was higher without basal fertilizer (74% increase) than with basal fertilizer (30% increase). This suggests that the nitrogen in the basal fertilizer is the significant element, although there is the danger that without the phosphorus (P) and potassium (K) from the basal application, the UDP will extract more from the soil reserve. This needs to be observed.

Table 12. UDP and Non-UDP Yield and Percentage of Yield Increase With Basal Fertilizer Use

		UDP Yield (t/ha)	Non-UDP Yield (t/ha)	% Yield Increase
Basal used	Mean	5.2557	4.0300	29.7893
	N	14	14	14
	Std. Deviation	2.26792	1.43252	30.07611
Basal not used	Mean	5.0567	3.1500	74.3133
	N	3	3	3
	Std. Deviation	1.11051	1.36847	60.46271
Total	Mean	5.2206	3.8747	37.6465
	N	17	17	17
	Std. Deviation	2.08310	1.42162	38.70448

Seed Rate and Seed Cost by Gender

The female sample farmers used a slightly higher seed rate (12.35 kg/ha) than the male sample farmers (11.96 kg/ha), making the average seed cost \$57.12/ha for female farmers and \$45.63/ha for male farmers (Table 13).

Table 13. Seed Rate and Seed Cost by Gender

Region Name			Seed Rate (kg/ha)	Seed Cost (\$/ha)
Shan (South)	Female	Mean	12.35	57.12
		N	3	3
		Std. Deviation	0	14.73415
	Male	Mean	11.96	45.63
		N	14	14
		Std. Deviation	1.782156	12.28751
	Total	Mean	12.03	47.66
		N	17	17
		Std. Deviation	1.61384	13.0455

Mean Costs of Labor, Threshing Machine, and Total Production by Gender

Table 14 illustrates labor cost, threshing machine cost, and total production cost for UDP and non-UDP by gender. It was noted that the average labor cost for female farmers (\$145.8/ha) was higher than that for male farmers (\$94.6/ha). The female sample farmers had a higher cost for machine threshing than male sample farmers (\$32.7/ha vs. \$16.8/ha). No farmers in this area used pesticides for maize production.

Table 14. Mean Costs of Labor, Threshing Machine, and Total Production by Gender

Region Name			Labor Cost (\$/ha)	Threshing Cost (\$/ha)	Total Production Cost for UDP Plots (\$/ha)	Total Production Cost for Non-UDP Plots (\$/ha)
Shan (South)	Female	Mean	145.83	32.70	352.89	314.79
		N	3	3	3	3
		Std.Deviation	63.56	25.86	126.93	127.36
	Male	Mean	94.60	16.81	291.98	243.66
		N	14	14	14	14
		Std.Deviation	61.15	17.92	97.10	104.96
Total	Mean	103.64	19.62	302.73	256.22	
	N	17	17	17	17	
	Std.Deviation	62.83	20.06	101.23	108.45	

Overall, the average total cost of maize production (seed, fertilizer, labor, land preparation, and threshing machine costs) with UDP for female and male farmers was \$352/ha and \$292/ha, respectively. For non-UDP, the female sample farmers had a higher total cost of production (\$314/ha for female farmers vs. \$244/ha for male farmers). Female farmers had a higher cost of production than male farmers, but yields for both UDP and non-UDP plots were lower than for male farmers, leading to a lower gross margin (see below).

Five Data Points and Gross Margin for Sample Crop Cut Farmers by Gender

The gross margin (GM) for male farmers was higher than for female farmers in both UDP and non-UDP production. The male farmers received \$700/ha, while female farmers received \$549/ha when using UDP technology in maize production (Table 15), to be compared with \$605/ha for male farmers and \$358 for female farmers when not using UDP. The GM increase with application of UDP was 53% for female farmers and 16% for male farmers in wet season 2017.

Table 15. Five Data Points and GM for Sample Crop Cuts Farmers by Gender

	Gender	UP	TP	QS	VS	IC	GM \$/ha	%GM Increase
UDP	Male (14)	0.085	0.45	0.44	82.03	24.82	700	15.7
	Female (3)	0.018	0.09	0.09	16.43	6.43	549	53.4
	Combined (17)	0.10	0.54	0.53	98.46	31.25	673	18.3
Non-UDP	Male (14)	37.57	172.09	166.75	31,735.21	10,013.18	605	
	Female (3)	6.46	22.47	22.47	4,191.64	1,876.94	358	
	Combined (17)	44.03	194.56	189.21	35,926.85	11,890.11	569	
Whole	Male (14)	37.65	172.54	167.18	31,817.23	10,038.00	606	
	Female (3)	6.48	22.56	22.56	4,208.07	1,883.37	359	
	Combined (17)	44.13	195.09	189.74	36,025.31	11,921.37	569	

Five Data Points and Gross Margin for Sample Crop Cut Farmers With Respect to Basal Fertilizer Use

The GM for farmers using basal fertilizer was higher than the GM of non-user farmers (Table 16). Therefore, the GM received by basal fertilizer users with and without UDP was \$678 and \$593/ha, respectively. The non-user farmers received a lower GM both with and without

UDP (\$654 and \$374/ha) in wet season 2017. The increase in GM with application of UDP was 14% for basal user farmers and 75% for non-user farmers in wet season 2017.

The average yield for both UDP and NUDP was higher in basal fertilizer users than non-users (Figure 1).

Table 16. Five Data Points and Gross Margin for Sample Crop Cut Farmers With Respect to Basal Fertilizer Use

	Gender	UP	TP	QS	VS	IC	GM \$/ha	% GM Increase
UDP	User (14)	0.085	0.447	0.435	81.804	26.511	678	14.3
	Non-user (3)	0.018	0.09	0.09	16.654	4.743	654	74.9
	Combined (17)	0.103	0.536	0.524	98.459	31.254	673	18.3
Non-UDP	User (14)	39.19	178.864	173.521	33,090.130	10,862.614	593	
	Non-user (3)	4.84	15.692	15.692	2,836.717	1,027.498	374	
	Combined (17)	44.030	194.555	189.213	35,926.847	11,890.112	569	
Whole	User (14)	39.275	179.31	173.96	33,171.93	10,889.12	606	
	Non-user (3)	4.858	15.78	15.78	2,853.37	1,032.24	359	
	Combined (17)	44.133	195.091	189.736	36,025.306	11,921.366	569	

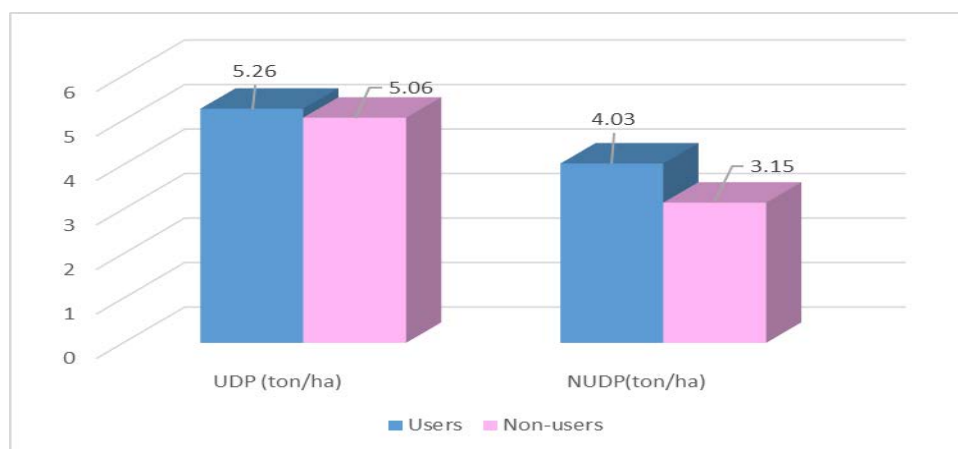


Figure 1. Average UDP and Non-UDP Yield With Respect to Basal Fertilizer Use

Appendix 1. List of Direct Beneficiaries UDP Farmers in Maize Production (Wet Season 2017)

Table A1. Direct Beneficiary UDP Male Farmers in Pindaya Township

Sr. No	Name	Village Tract	Village
1.	U Zaw Htoo	Ta Me	Ta Me
2.	U San Wai	Ta Me	Ta Me
3.	U Ohm Myint	Ta Me	Ta Me
4.	U Poe Zaw	Ta Me	Ta Me
5.	U Myo Thin	Ta Me	Ta Me
6.	U Aung Man	Ta Me	Ta Me
7.	U Lun Tin	Ta Me	Ta Me
8.	U Phay Saing	Ta Me	Ta Me
9.	U Chan Thar	Ta Me	Ta Me
10.	U Khin Mg	Ta Me	Ta Me
11.	U Kyaw Khin	Ta Me	Ta Me
12.	U Kyaw Thu	Pin Pyaw	Lay Htoe Kone
13.	U Nyunt Han	Pin Pyaw	Lay Htoe Kone
14.	U Win Mg	Pin Pyaw	Lay Htoe Kone
15.	U Zaw Lwin	Pin Pyaw	Lay Htoe Kone
16.	U Bo Wai	Pin Pyaw	Lay Htoe Kone
17.	U Ba Saung	Pin Pyaw	Lay Htoe Kone
18.	U Ba Maung	Pin Pyaw	Lay Htoe Kone
19.	U Aung Chein	Pin Pyaw	Lay Htoe Kone
20.	U Ba Aye	Pin Pyaw	Lay Htoe Kone
21.	U Aung Naing	Pin Pyaw	Lay Htoe Kone
22.	U Aung Than	Pin Pyaw	Lay Htoe Kone
23.	U Ye Nandar	Pin Pyaw	Lay Htoe Kone
24.	U Shwe Man	Pin Pyaw	Shauk Cho
25.	U Myo Min	Pin Pyaw	Shauk Cho
26.	U Soe Win	Pin Pyaw	Lay Htoe Kone
27.	U Zaw Min	Pin Pyaw	Lay Htoe Kone
28.	U Naung Naung	Pin Pyaw	Lay Htoe Kone
29.	U Ni Man Dra	Mong Li	Hphawng Pyar
30.	U Ba Maw	Mong Li	Hphawng Pyar (Ywar Thit)
31.	U San Ni	Mong Li	Hphawng Pyar (Win So)
32.	U Kan Char	Mong Li	Hphawng Pyar
33.	U Bay Toe	Mong Li	Hphawng Pyar
34.	U Yoe San	Mong Li	Hphawng Pyar

35.	U Suri Jae	Mong Li	Hphawng Pyar
36.	U Tin Phay	Mong Li	Hphawng Pyar
37.	U Shar Nai	Mong Li	Hphawng Pyar
38.	U Aung Min	Mong Li	Hphawng Pyar
39.	U Mg Raj	Mong Li	Hphawng Pyar
40.	U Shine Naung	Mong Li	Hphawng Pyar
41.	U Aung Thein	Mong Li	Hphawng Pyar
42.	U Ba Sein	Mong Li	Hphawng Pyar (Ywar Thit)
43.	U Char Be Lar	Mong Li	Hphawng Pyar
44.	U Ba Thin	Mong Li	Hphawng Pyar (Ywar Thit)
45.	U Eit Tar	Mong Li	Hphawng Pyar
46.	U Ein Drain	Mong Li	Hphawng Pyar
47.	U Myint Wai	Mong Li	Hphawng Pyar
48.	U Kyaw San	Mong Li	Hphawng Pyar
49.	U D Lone	Mong Li	Mong In (Ni Paw)
50.	U Thet Naing Oo	Mong Li	Hphawng Pyar
51.	U Gyt Tu	Mong Li	Hphawng Pyar
52.	U Bistsanu	Mong Li	Hphawng Pyar
53.	U Hla Min	Mong Li	Mong In (Da Nu)
54.	U Khin Mg	Mong Li	Mong In (Da Nu)
55.	U Tun Yi	Mong Li	Mong In (Da Nu)
56.	U Mg Soe	Mong Li	Mong In (Da Nu)
57.	U Thein Win	Mong Li	Mong In (Da Nu)
58.	U Ye Myo	Mong Li	Mong In (Da Nu)
59.	U Ba Thaung	Mong Li	Mong In (Da Nu)
60.	U San Tin	Mong Li	Mong In (Da Nu)
61.	U Than Aung	Mong Li	Mong In (Da Nu)
62.	U Sew	Mong Li	Mong In (Da Nu)
63.	U Pawt Kar	Mong Li	Mong In (Da Nu)
64.	U Tun Wai	Mong Li	Mong In (Da Nu)
65.	U Aung San	Mong Li	Mong In (Da Nu)
66.	U Paw San	Mong Li	Mong In (Da Nu)
67.	U Aung Pan	Mong Li	Mong In (Da Nu)
68.	U Tun Hla	Mong Li	Mong In (Da Nu)
69.	U Tun Mg	Mong Li	Mong In (Da Nu)
70.	U Soe Lwin	Mong Li	Mong In (Da Nu)
71.	U Aung ROUNG	Mong Li	Mong In (Da Nu)
72.	U Kyaw Htoo	Taung Shey	Tha Pyay Kone
73.	U San Ba	Taung Shey	Tha Pyay Kone
74.	U Thein Kyaw	Taung Shey	Tha Pyay Kone
75.	U Soe Thiha	Taung Shey	Tha Pyay Kone
76.	U Thint Naing	Taung Shey	Tha Pyay Kone

77.	U Than Soe	Taung Shey	Tha Pyay Kone
78.	U Kyi Mg	Taung Shey	Tha Pyay Kone
79.	U Aung Nay Lin	Taung Shey	Kan Thar
80.	U Thein Min	Taung Shey	Tha Pyay Kone
81.	U Soe Hlaing	Taung Shey	Tha Pyay Kone
82.	U Mg Lay	Taung Shey	Tha Pyay Kone
83.	U Mg Htwe	Pin Pyaw	Lay Htoe Kone
84.	U Than Phay	Mong Li	Kyan Khin
85.	U Myint Hlaing Tun	Mong Li	Kyan Khin
86.	U Shwe Pyue	Mong Li	Nawng Ye
87.	U Kyauk Khae	Mong Li	Nawng Ye
88.	U Tin Aung	Mong Li	Kyan Khin
89.	U Nay Win	Mong Li	Kyan Khin
90.	U Win Soe	Mong Li	Nawng Ye
91.	U Win Maw	Mong Li	Nawng Ye (Kyauk Taw)
92.	U Zayyar Chan	Mong Li	Kyan Khin
93.	U Mg Aye Ko	Mong Li	Nawng Ye (Kyauk Taw)
94.	U Mg Gyi	Mong Li	Kyan Khin
95.	U Tin Maung	Mong Li	Nawng Ye
96.	U Kyaw Htoo	Mong Li	Nawng Ye (Kyauk Taw)
97.	U Myint Naing	Mong Li	Kyan Khin
98.	U Aung Lann	Mong Li	Nawng Ye
99.	U Aung Kyi	Mong Li	Kyan Khin
100.	U Than Aung	Mong Li	Nawng Ye
101.	U Aung Pwar	Mong Li	Nawng Ye
102.	U Poe Cho	Mong Li	Kyan Khin
103.	U Aung Toe	Mong Li	Nawng Ye
104.	U Ko Thaung	Mong Li	Nawng Ye (Kyauk Taw)
105.	U Kyaw Sein	Mong Li	Nawng Ye
106.	U Phyu Lwin Soe	Mong Li	Kyan Khin
107.	U Thar Tun	Mong Li	Nawng Ye
108.	U Soe Tint	Mong Li	Nawng Ye
109.	U Thein Mg	Mong Li	Nawng Ye
110.	U Mg Cho	Mong Li	Nawng Ye
111.	U Aung Pan	Mong Li	Kyan Khin
112.	U Thein Phay	Mong Li	Nawng Ye
113.	U Tin Shein	Mong Li	Nawng Ye
114.	U Kyaw Aung	Mong Li	Nawng Ye (Kyauk Taw)
115.	U Aung Kyone	Mong Li	Ein Pu
116.	U San Myint	Mong Li	Ein Pu
117.	U Aung Htike	Mong Li	Ein Pu
118.	U San Myine	Mong Li	Ein Pu

119.	U Ba May	Mong Li	Ein Pu
120.	U Kyaw Lwin	Mong Li	Ein Pu
121.	U Aung Soe	Mong Li	Ein Pu
122.	U Aung Mya	Mong Li	Ein Pu
123.	U Aung Phaung	Mong Li	Ein Pu
124.	U Aung Paung	Mong Li	Ein Pu
125.	U Win Kyaw	Mong Li	Ein Pu
126.	U Aung Soe	Mong Li	Kyauk Pu Lin
127.	U Poe Aung	Mong Li	Kyauk Pu Lin
128.	U Poe Soe	Mong Li	Kyauk Pu Lin
129.	U Than Maung	Mong Li	Kyauk Pu Lin
130.	U Ba Yee	Mong Li	Taung Pu
131.	U Mg Nyan	Mong Li	Taung Pu
132.	U Tun Chein	Mong Li	Taung Pu
133.	U Mg Key	Mong Li	Taung Pu
134.	U Soe Naing	Mong Li	Ein Pu
135.	U Zaw Thet Aung	Mong Li	Ein Pu
136.	U Soe Paing	Mong Li	Ein Pu
137.	U Kyaw Hoe	Mong Li	Ein Pu
138.	U Poe Nyo	Ta Me	Inn Pa Let
139.	U Poe Htaw	Ta Me	Inn Pa Let
140.	U Kyaw Soe	Ta Me	Inn Pa Let
141.	U Be Oo	Ta Me	Inn Pa Let
142.	U Thar Po	Ta Me	Inn Pa Let
143.	U Khing Soe	Ta Me	Inn Pa Let
144.	U Shwe Kyoe	Ta Me	Inn Pa Let
145.	U Than Mg	Ta Me	Inn Pa Let
146.	U Win Zaw	Ta Me	Inn Pa Let
147.	U Min Lwin	Ta Me	Inn Pa Let
148.	U Poe Htaung	Ta Me	Inn Pa Let
149.	U Khun Naing Win	Ta Me	Inn Pa Let
150.	U Ba Hoe	Ta Me	Inn Pa Let
151.	U Htaw	Ta Me	Inn Pa Let
152.	U Ba Lay	Ta Me	Inn Pa Let

Table A2. Direct Beneficiary UDP Female Farmers in Pindaya Township

Sr. No.	Name	Village Tract	Village
1.	Daw Than Mya	Ta Me	Ta Me
2.	Daw Hla Au	Ta Me	Ta Me
3.	Daw Kyi Htay	Pin Pyaw	Lay Htoe Kone
4.	Daw Nyo Aye	Pin Pyaw	Lay Htoe Kone
5.	Daw Aye Khine	Pin Pyaw	Lay Htoe Kone
6.	Daw Nang Kyaw	Pin Pyaw	Lay Htoe Kone
7.	Daw Htwe Tin	Pin Pyaw	Lay Htoe Kone
8.	Daw Paung	Pin Pyaw	Lay Htoe Kone
9.	Daw Swe	Pin Pyaw	Lay Htoe Kone
10.	Daw Mar Aye	Mong Li	Hphawng Pyar
11.	Daw Win Mya	Mong Li	Hphawng Pyar
12.	Daw Rrthicar Giri	Mong Li	Hphawng Pyar
13.	Daw Tin Aung	Mong Li	Mong In (Da Nu)
14.	Daw Nang Ngwe	Mong Li	Mong In (Da Nu)
15.	Daw Hla Kaung	Mong Li	Mong In (Da Nu)
16.	Daw Theint Theint Aung	Mong Li	Mong In (Da Nu)
17.	Daw Moe Moe Aung	Mong Li	Mong In (Da Nu)
18.	Daw Yu Yu Nwee	Taung Shey	Tha Pyay Kone
19.	Daw Mee Maung	Taung Shey	Tha Pyay Kone
20.	Daw Kyi Aye	Mong Li	Kyan Khin
21.	Daw Khin Win	Mong Li	Kyan Khin
22.	Daw Htwe Yee	Mong Li	Nawng Ye
23.	Daw Thae Phyu	Mong Li	Ein Pu
24.	Daw Saw Pu	Mong Li	Ein Pu
25.	Daw Phyu Phyu Zar	Mong Li	Ein Pu
26.	Daw Mon Aye	Mong Li	Ein Pu
27.	Daw Lay	Ta Me	Inn Pa Let
28.	Daw Phyu Win	Ta Me	Inn Pa Let
29.	Daw Saw Toe	Ta Me	Inn Pa Let
30.	Daw Phyu Yi	Ta Me	Inn Pa Let



Photo 1. Farmers Participate in Husk Removal for Maize Crop Cuts in Lay Htoe Kone village, Pindaya township on September 26, 2017



Photo 2. Farmers Participate in Husk Removal for Maize Crop Cuts in Phaung Pyar village, Pindaya township on September 26, 2017