

# CASE STUDY

## Maize Seed & Fertilizer Distribution



### **ABSTRACT**

A case study on the Maize Seed and Fertilizer distribution activity under the Italian funded Early Recovery of Agriculture and Livelihoods program of PaRRSA to support the small farmers of Swat and Upper Dir.

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## 1. Background

Swat was devastated by a saga of unfortunate events as a result of terrorism which brought life to a standstill. Swat saw a serious decline over the past few years in almost all the sectors, which reached its peak in 2007-2008. After the successful military operation in 2009 the region was cleared from oppressors and the 2.4 million internally displaced people (IDPs) returned to their homes in Malakand.

Although, Swat has the lowest amount of cultivable land per household of any agricultural district in Pakistan (less than 1.61 acres per household), it is blessed by relatively rich soils at the base of its valleys, generally sufficient water resources, and a cool climate. Swat is predominantly agricultural where 75-80% of its 200,000 households are directly or indirectly dependent on agriculture and related activities prior to the militancy needed immediate attention for early recovery of agriculture and livelihoods.

## 2. Geography and Climate

The Swat Valley lies in the Hindukush mountain range, covering an area of 5,337 square kilometers and extending from south to north for a distance of over approximately 150 kilometers. The elevation of the valley above mean sea level rises from about 800 meters after the descent from the Malakand Pass in the south to a 6,000-meter Falakser peak in the north (with habitations peaking at about 3,000 meters). The River Swat runs from northeast to southwest through the main valley and is regularly joined by streams from tributary valleys branching off from the main valley. Dok Dara, a union council in Upper Dir is a mountainous terrain with marginal availability of agriculture land. It is at an elevation of more than 1000 meters above sea level and has extreme weather in winters and has a mild summer.

## 3. Maize Crop Potential

Swat is still predominantly a semi-subsistence agricultural economy. Maize is one of the major produce in the area. The crop statistics report for Khyber Pakhtunkhwa, 2008-2009 depicts the total maize cultivated area to be 62430 hectares, where the produce was estimated to be 101,515 tons for the said year with an average produce of 1.63 tons of crop per hectares. The per hectare produce for Dok Darra is also similar.

## 4. ERALP support to Farmers

As part of the restoration of agriculture and livestock production to the pre-conflict level, ERALP designed, procured and distributed a number of agriculture input packages. In the same context, the project interventions for the kharif season of 2010 included procurement and distribution of quality maize seed and fertilizers to the farmers of the area during which 63.06 tons (certified 38.1, basic and hybrid 24.96 ton) of quality maize was distributed along with 189 tons urea and 202 tons of DAP amongst 3,202 farmers. The total maize area cultivated as a result of this initiative was 2102 hectares (5192 Acres). The area wise details of the beneficiaries, distributed inputs and cultivated area are given in Table-1 below

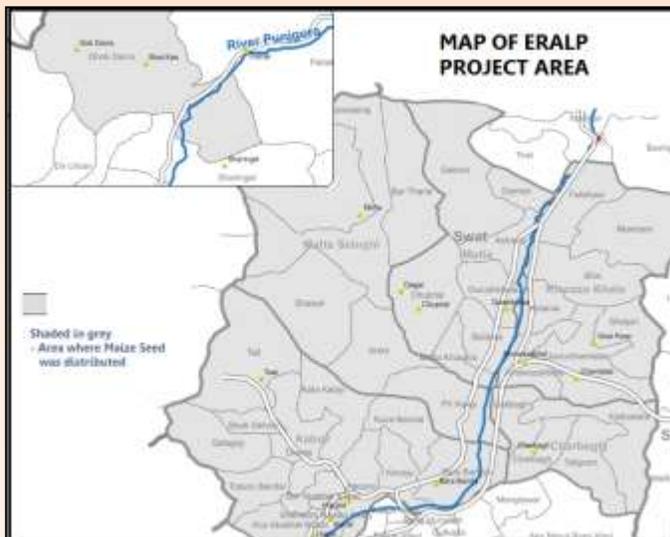


Table-1 illustrates Area Wise distribution of Inputs

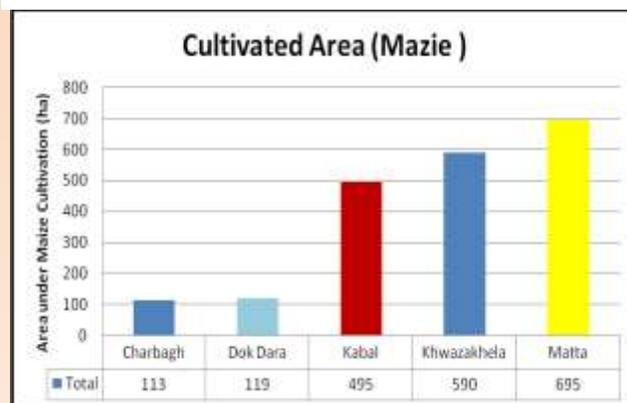
Area	Beneficiaries	Inputs (in Kg.)			Area(Ha)
		Maize Seed	DAP	Urea	
Charbagh	200	3350	12850	12850	113
Kabal	807	14680	50275	50075	495
Khwazakhlea	781	17478	54500	54500	590
Matta	1108	23552	62550	63950	695
Dok Dara	306	4000	8150	8100	119
<b>Total</b>	<b>3202</b>	<b>63060</b>	<b>188325</b>	<b>189475</b>	<b>2012</b>

### 5. Maize Crop Produce

The provision of certified seed and quality Inputs increased the per acre yield on an average by 20%. Graph-2 depicts the production figures, which are estimated to have increased from 1.63 tons per hectares (Crop Statistics Report of Khyber Pakhtunkhwa, 2008-2009) to approximately 2 tons.

This estimation is based on the production statistics gathered by the field staff from the farmers. The total estimated produce as a result of project interventions totals to around 4023 tons (Graph-1) under a total cultivated area of 2012 ha.

Graph-1 depicts Maize Cultivated Area (under ERALP)



#### 5.1 Production of Certified Seed

Some of the farmers who were given the basic seed were linked with the Federal Seed Certification and Registration Department who inspected and cleared maize fields over 62.35 Hectares (154 acres). An estimated 141 acre of crop was declared fit for production of certified seed (annex-1). These shows an average produce of 40% more (0.63 tons) per hectare than the previous year's production figures as mentioned in section above.

### 6. Return on Investment

Total cost of the Maize activity was PKR 18.416 Million (ERALP share) which included cost of Seed, Urea and DAP. The total estimated cost by the farmers has been accounted for which is 30.180 Million. The estimated produce from 2012 is estimated to be 4023 tons. Taking the sale price to be PKR 30,000 per ton (maize grain, Stover and shells), the total production is worth PKR 120.692 Million.

Graph-2 depicting UC wise maize produce

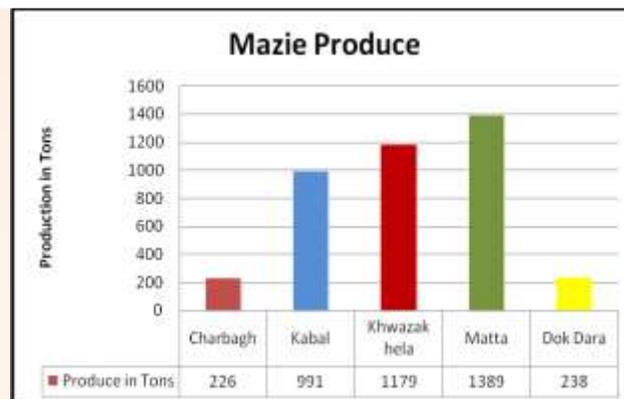


Table- 2: Illustrates Economic Analysis of the Maize Cultivation Initiative

Total Activity Cost by (ERALP)	18,415,957
Total Estimated cost by farmers (@PKR 15,000/ha)	30,180,000
Total Sale	120,691,822
Net Profit	72,095,865
Average income per farmer	22,516
Return on Investment	148.35%

Figures in PKR

### 7. Activity Process

The project activity was managed through Government Procedures. Requirements were advertised in the local newspapers with PPRA's (Public Procurement Regulatory Authority's) website. Selection of tenders was made in light of the competitive statement prepared by the procurement committee.

Once the inputs were procured they were sent to the project warehouse in Swat for onward distribution to different sites, on need basis through the line department.

### 8. Reaching the Target Beneficiaries

The identification of beneficiaries was jointly done by line department and the ERALP project staff. The 3,202 beneficiaries identified and selected for this project were small farmers. In general, the project has helped to revive the livelihoods of the conflict affected area. The project also benefited the overall community by providing skills to the local farmers as well as an opportunity to work and earn, hence improving their living standards.

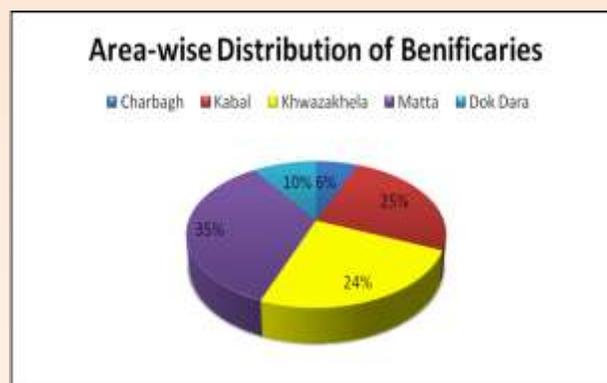
### 9. Technical Support to the Farmers

The farmers were given continuous support from the Agriculture Department Staff, ERALP field staff and NRM Coordinators of PaRRSA, who visited the cultivated sites on frequent basis. Guidance and technical inputs were given to the farmers on need basis. Hence, this activity also built the capacities of the local farmers and improved their linkages with the line department.

Bumper Crop



Graph-3 depicting Area wise distribution of beneficiaries



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Form No. 81

**ANNEX-1**

To The Deputy Director

**MAIZE FIELD CROP INSPECTION REPORT OF SWAT**

S No	Name & Address of grower	1	2	3	4	5	6	7	8	9	10	11		
		Area (Acres)	Class	Lot No.	Average	Exp Yield	Remarks							
1	MSG Cluster Bala Khawazakhla Swat	36.00	Certified	1160-010	36.00	40.00	Crop is upto standard subject to cob inspection before shelling							
2	MSG Cluster Bala Khawazakhla Swat	4.00	Certified	1160-014	4.00	3.00	do							
3	Maize Seed Grower Luster Bala Swat	4.00	Certified	1160-015	4.00	4.00	do							
4	MSG Cluster Bala Khawazakhla Swat	44.00	Certified	1160-016	44.00	40.00	Crop is upto standard subject to cob inspection							
5	MSG Cluster Fapca Khawazakhla Swat	20.00	Certified	1160-017	20.00	20.00	Crop is upto standard subject to cob inspection before shelling							
6	MSG Cluster Jarno Khawazakhla Swat	5.00	Certified	1160-018	5.00	5.00	do							
7	M Sher Ali S/O Noor Hussain Jarno Swat	1.00	Certified	1160-019	1.00	1.00	do							
8	MSG Cluster Shalpin, Khawazakhla Swat	10.00	Certified	1160-020	10.00	10.00	do							
9	MSG Cluster Babu Khawazakhla Swat	6.00	Certified	1160-021	6.00	6.00	do							
10	MSG Cluster Babu Khawazakhla Swat	9.00	Certified	1160-022	9.00	9.00	do							
11	Muhammad Sunnis S/O Khalim Gul Chahar Khawazakhla Swat	1.00	Certified	1160-023	1.00	1.00	Crop is upto the standard							
12	Zahir Khan S/O Fazal Khan Chahar Khawazakhla Swat	2.00	Certified	1160-024	2.00	2.00	Crop is upto standard subject to cob inspection before shelling							
13	MSG Cluster Sunbil Matla Swat	12.00	Certified	1160-026	12.00	0.00	Not upto the standard							
<b>Total:</b>											<b>154.00</b>	<b>142.00</b>	<b>12.00</b>	<b>141.00</b>

*(Signature)*  
SEED CERTIFICATION OFFICER

*(Signature)*