

# MOL Group

## Sustainability Case Study

<b>PROJECT NAME</b>	<b>Plantation of 2400 olive trees at Central Processing Facility in TAL Block</b>
<b>LOCATION</b>	TAL Block, District Karak, Khyber Pakhtunkhwa, Pakistan
<b>DURATION</b>	5 years (Saplings will bear fruit after five years)
<b>OUTCOME</b>	Income of around 15-17 million PKR/year, estimated 21.600t CO <sub>2</sub> sequestration/year

### Project Description

#### ▶ BACKGROUND

Pakistan is the third largest importer of edible oil. With the rising global demand and increase in prices in the international market, Pakistan's import share of edible oils / oil seeds was 3.264 million tonnes, involving import bill of about USD 2.71 billion. The Khyber Pakhtunkhwa province has about 880,000 hectares of cultivable wasteland which is suitable for olive cultivation. In June 2016, the provincial government launched an olive plantation project. Saplings were provided for plantation to promote the olive production. Oil & gas companies in the area were also urged to play their role. MOL Pakistan reached an understanding with the Agriculture Department for the creating of an olive trees plantation at the Central Processing Facility (CPF) in Karak.

#### ▶ HISTORY

Land Suitability Survey: Before commencement the works at the Central Processing Facility, the Agriculture Department carried out a land suitability survey. A total of 2400 olive trees were planted at CPF in the available land near the boundary wall. Identification of sites for plantation:

S.NO	PLOT NO	SIZE (METER X METER)	LOCATION	NO OF PLANTS 10 Feet (P-P) 15 Feet (R-R)
1	PLOT A	34 x 39 x 53 9 (Triangular in Shape)	Backside of P&FE Building	50
2	PLOT B	13 x 59 (Assumed as Rectangle)	Backside of P&FE Building	481
3	PLOT C	77 x 55 (Assumed as Rectangle)	Plantation area where trees growth is almost zero	305
4	PLOT D	355 x 14 (Assumed as Rectangle)	At the backside of senior Mess (Strip near Boundary wall)	338
5	PLOT E	195 x 15 (Assumed as Rectangle)	At the back side of villa P, QR (strip near Boundary wall)	211
6	PLOT F	25 x 15 (Assumed as Rectangle)	At the back side of Dormitory (Strip near Boundary wall)	28
7	PLOT G	141 x 15 (Assumed as Rectangle)	Near Security Complex (Strip near Boundary wall)	153
8	PLOT H	57 x 48 (Assumed as Rectangle)	Cricket Ground Fire Brigade building side	198
9	PLOT I	100 x 12 (Assumed as Rectangle)	Cricket Ground Auditorium Side	87
10	PLOT J	99 x 74 (Assumed as Rectangle)	Plot in front of Mosque and Senior Mess	551
			<b>Total</b>	<b>2400</b>

NOTE: All Sizes are in meters

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### Economic Outcome

Total number of olive plants	=	2400
Success Ratio (Subject to irrigation and maintenance)	=	90%
<b>Total successful plants</b>	=	<b>2160</b>

### FOR OIL

Initial production start at 5 <sup>th</sup> year of plantation	=	(10-15 kg)
If assumed 10 Kg :		
So net production	=	21,600 Kg
Oil percentage	=	(10-15%)
If assumed	=	10%
Olive oil production	=	21,600 liter
Sale (Govt: Price)	=	700 (2017-18)
<b>Net amount</b>	=	<b>Rs. 1,512,000/-</b>

### FOR PICKLE

Total Production	=	21,600
(-) Sorting Grading (20% loss)	=	4320 Kg
Total Pickle	=	17280
Net (200/Kg Govt: rate)	=	Rs. 34,56,000/-
(9-10) years	=	(25-30 Kg)
If consider production	=	25 Kg
Total Production	=	54,000 Kg
Oil Recovery	=	10 %
Net Oil Production	=	5400 liter
Sale (Govt: rate)	=	Rs. 37,80,000 (Net Amount)
<b>Total Production</b>	=	<b>54,000/-</b>
Sorting/Grading (20%)	=	43,200
<b>If Price – 200/Kg</b>	=	<b>Rs. 86,40,000/-</b>

<b>FRUIT SALE RATE</b>	=	<b>80/ Kg (Market Rate)</b>
5 <sup>th</sup> year	=	Rs. 1728,000/-
(9-10 years)	=	Rs. 4320,000/-

## Project Results

### ► MAIN RESULTS AND OUTCOMES (WHAT CHANGED?)

The following factors supports the role of olive plantation towards sustainability and environment:

- Low Water Requirements

Because of its small leaves with their protective cuticle and hairy underside with slow transpiration, the olive tree survives even extended dry periods. However, this defence system is at the expense of growth and productivity of the tree. Once established, olive trees are among the most drought-resistant trees in the world. But the olive tree is not a desert plant. It needs regular watering to thrive.

- CO2 Sink

Olive orchards are a CO2 sink which remove CO2 from the atmosphere and fix it in the soil. If the proper agricultural practices are applied, in a mature semi-intensive olive orchard with average crop yields, an olive tree can fix 10t CO2e/ha/year. Therefore the estimated carbon sequestration by these plants could be 21600t/year after it turns into a mature orchard.

- Supports Biodiversity

Biodiversity tends to be high in traditionally cultivated olive groves, which provide a variety of habitats (e.g., dry stone walls, patches of natural vegetation etc.) supporting a diversity of wildlife including reptiles, butterflies and other invertebrates, birds and mammals as well as many passerine species, that hunt insects, lizards and small mammals. Older trees provide an abundant food supply for fauna, as they host a high density of insects along with the tree's fruit.

- Curbs Desertification

The tree grows well in areas with 500-800 mm of precipitation per year and produces a good harvest, so its cultivation in arid areas can play an important role in curbing desertification.

