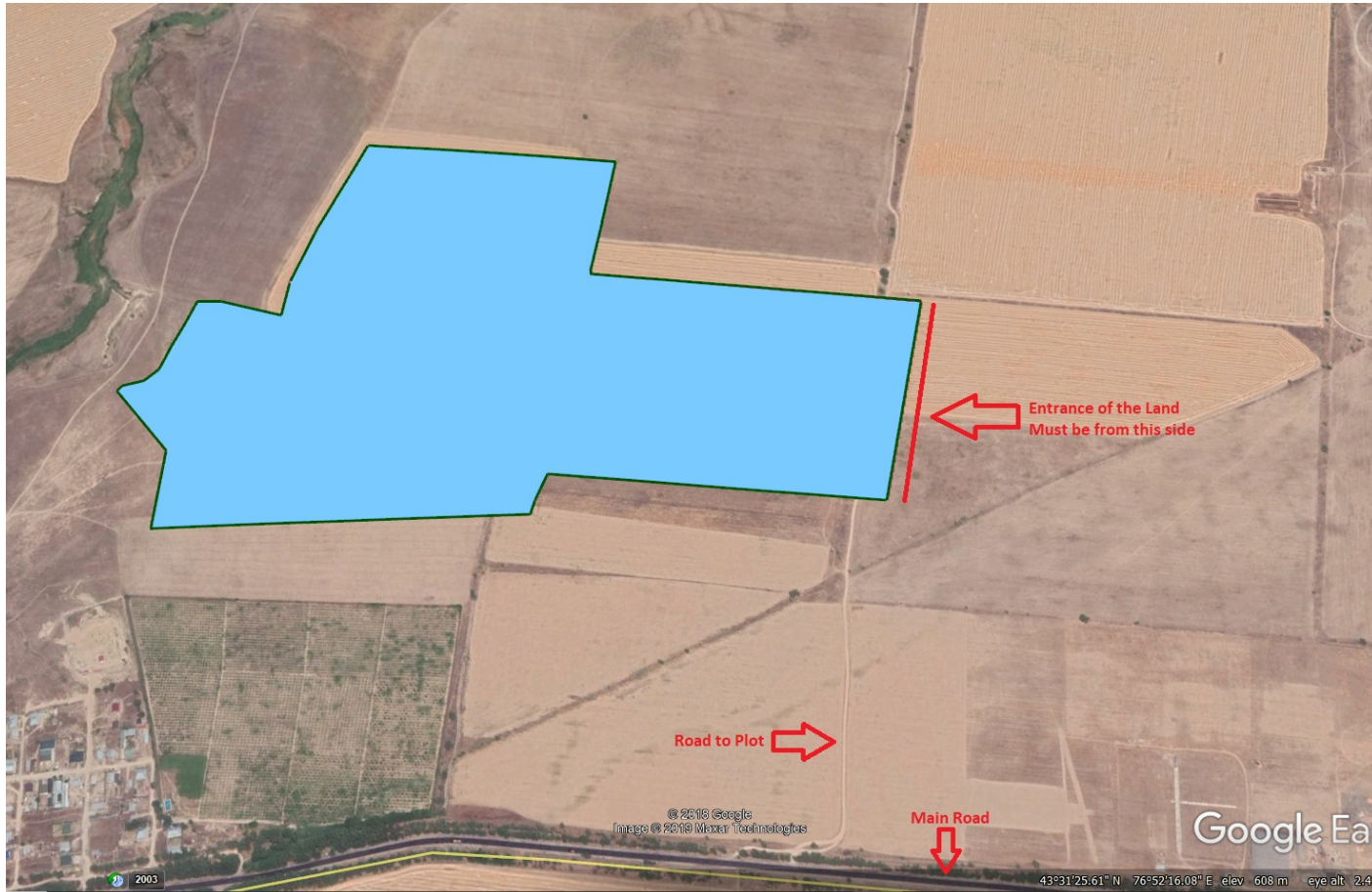




Mushroom Complex 2020 – 2022

# Executive Summary - Integrated Mushroom Production Facility



The proposed project will be situated in Almaty, Ily Region, Kazakhstan as illustrated in the attached land drawings and site plan with an area of 45 hectares. The proposed location of the site seeks to take advantage of the current strong demand for mushrooms both within the country and the growth markets in the Eurasia Free Trade Agreement and the Central Asian region



# Compost Factory

## BUNKERS:

Number of bunkers : 3 bunkers + 1 straw filters

Bunker dimensions : 9 x 30 x 7,5 (W x L x H)

Production capacity : maximal +/- **495 Tons** Phase 1 per week

Filling System : Overhead filling unit Emptying System : front-end loader Floor system

Execution : Closed

## TUNNELS:

Number of tunnels : **7**

Dimensions : 4 x 30 x 4,5 (W x L x H)

Execution : Sandwich panel tunnels with grid floor and tunnel nets

Doors : 2 doors per tunnel

Halls : 2 halls

Total input Phase 1 : +/- max 165 ton Phase1 per tunnel (3 tunnels x 165 ton = 495 ton)

Total output Phase 2 : +/- 115 ton Phase2 per tunnel (**3 tunnels x 115 ton = 345 ton**)

Total input Phase 2 : +/- 165 ton Phase2 per tunnel (2 tunnels x 165 ton = 330 ton)

**Total output Phase 3 : +/- 140 ton Phase3 per tunnel (2 tunnels x 140 ton = 280 ton)**

**Needed for own use : +/- 198 Ton Phase3**

**Approximate Total Investment for Compost Factory – USD 16,703,478**





# Mushroom Factory

## 24 GROWING ROOMS:

Number of rooms : 24

Number of shelves : 6

Number of shelf rows per room : 4

Width of the shelves : 1.400 mm

Length of the shelves : 31,5 meter

Room dimensions : W x L x H =  $\pm 6,5 \times 34,0 \times 4,5$  meter

Functions of the rooms : Automatic harvesting

Growing surface per room : 529,2 m<sup>2</sup>

Total growing surface : 12.700 m<sup>2</sup>

Filling : +/- 90 kg/m<sup>2</sup> phase3

Filling per week : **+/- 198 Ton/week phase3**

Growing schedule : 6 weeks

Production : +/- 40 kg/m<sup>2</sup>

Total production per week : +/- 98 tons/week (is about **5,080 Ton** mushrooms per year based on Phase 3)

**Approximate Total Investment for Mushroom Factory – USD 16,114,923**



Christiaens  
Group



Christiaens  
Group



# Canning Factory

## BLANCHING MUSHROOMS

- Product : fresh mushrooms
- Capacity : 2,400kg/hr fresh
- Bulk density : 0.25 kg/liter

**This line contains the following equipment:**

- 1) 1-PALLET HYDRATOR
- 2) FLOTATION WASHER FOR MUSHROOMS
- 3) CONTINUOUS SCREW BLANCHER
- 4) SCREW COOLER
- 5) INSPECTION BELT
- 6) ELEVATOR TO GRADER
- 7) GRADER
- 8) MUSHROOM SLICER FOR BLANCHED MUSHROOMS
- 9) CONTROL PANEL

**Approximate Total Investment For Canning Line – USD 2,831,400.00**



# Project Budget Breakdown

	US \$	Percentage
Compost Facility (inc. Bldg and installation)	16,703,478	38%
Production Facility (inc. Bldg and installation)	16,114,923	36%
Canning Facility (inc. Bldg and installation)	2,831,400	6%
Office Construction including Office Equipment	1,800,000	4%
Non-Construction Costs Including Working Capital during the construction period	5,121,399	12%
Customs Duties	0	0%
Pre-Construction Costs	1,650,000	4%
Total Capital Requirement	44,221,191	100%

# Capital budgeting– 80% Debt, 20% Equity

	Units	Best case (annual increase of sales by 5%)	Base case	Worst case (Annual decrease of sales by 15%)
Total project cost	USD thsd	44 221 191,00	44 221 191,00	44 221 191,00
WACC	%	9%	9%	9%
IRR	%	35%	34%	18%
NPV	USD thsd	55 992,52	54 352,59	15 037,13
Payback period, years	years	2,56	2,99	5,10
Discounted payback period, years	years	2,84	3,15	6,20
Profitability Index, PI		2,23	2,26	1,34

- **Basic assumptions:**
- BASE CASE: Sales are adjusted by *inflation rate of 4% annually/State refund on investments.*
- BEST CASE: Sales are increased by 5% *annually (with respective 4% inflation rate)/Expenses are increased annually by 4% inflation rate/ State refund on investments.*
- WORST CASE: sales are adjusted at 4% *inflation rate but the sales price is decreased by 15%/Expenses are affected by inflation annually/No state refund on investments.*

# Financial Structure

Mushroom Complex in Almaty  
Project Total Investment – USD 44,221,191

**Investment Fund for  
Special Projects**

- Interest 5%
- 2 Years Grace Period
- 25% state refund on investments

80% Debt – USD  
35 376 952,8

20% Equity – USD  
8 844 238,2

Project construction and commissioning period 24 months





Thank You!