

ECONOMICS OF THE PRODUCTION

Leaf lettuce result per harvest

Growing period: 10 days seedlings preparation + 28 days growing in the hydroponics system
Conversion rate: 1USD = 21,9CZK (Dec2020)
System size: 25 plants with distance 15cm (5 stories, 5 plants per story)

COSTS - OPTIMUM SCENARIO

N.O.	Material	Work	Specification	Unit	Unit cost CZK	Quantity	Cost CZK	Cost USD
1	Electricity		14hrs/day	1 kWh	5	68,13	341	15,8
2	Water			1 m3	89,66	0,07	6	0,3
3	Fertilizer		Terra Aquatica Bio Thrive Grow 500ml	each	249	0,14	35	1,6
4	Substrate		Rockwool cube 3,6 x 3,6cm	each	2	25	50	2,3
5	Seeds		Leaf lettuce Dubáček "Gagarin"	each	1	25	25	1,2
TOTAL COST:							457	21,25
COST PER PIECE:							18	0,85

COSTS - LOW COST SCENARIO

N.O.	Material	Work	Specification	Unit	Unit cost CZK	Quantity	Cost CZK	Cost USD
1	Electricity		14hrs/day	1 kWh	5	68,13	341	15,8
2	Water			1 m3	89,66	0,07	6	0,3
3	Fertilizer		Terra Aquatica Bio Thrive Grow 500ml	each	249	0,14	35	1,6
4	Substrate		Rockwool cube 2 x 2cm	each	1	25	25	1,2
5	Seeds		Lettuce (dubáček, casini)	each	0,1	25	3	0,1
TOTAL COST:							409	19,0
COST PER PIECE:							16	0,76

RENTABILITY WITH LETTUCE PRODUCTION

Variables	CZK	USD
Average price of the lettuce in the grocery store	25	1,141552511
Production cost in optimum scenario	18	0,821917808
Production cost in low cost scenario	16	0,730593607
Amount saved with optimum scenario regime per 1 lettuce	7	0,319634703
Amount saved with optimum scenario per 1 harvest (25 lettuces)	175	7,99086758
Amount saved with low cost regime per 1 lettuce	9	0,410958904
Amount saved with low cost regime per 1 harvest (25 lettuces)	225	10,2739726
Total cost of the system if built on your own	12613	575,9360731
Amount of harvests needed to return the cost of the system in optimum regime	72	6 years
Amount of harvests needed to return the cost of the system in low cost regime	56	4,7 years

COMMENTS

- 1)
- Low cost scenario counts with smaller Rockwool cubes which shall not have any impact on quality
- 2)
- Low cost seeds are similar to those you can buy in hobby market in packet. The quality is notably lower, but still acceptable, you may fail few times before you find the right product.
Make sure to buy fresh seeds.

