EN

BUSINESSPLAN AQUAPONICS

The assumptions regarding production times, cleaning times, consumables and machines are based on the experience of PROFarm GmbH, which has been collected and consolidated over the last few years based on the systems that have been implemented and are in operation.

PROFarm expressly points out that no liability can be assumed for the achievement of the values calculated in the business plan, since when determining work and sales processes, it always depends on which methods are used in production and sales, or also which products actually be produced. It is also important how the system parts are constructed, which components are actually used and how the work processes are organized.

SALES FORECAST

Aquaponics

PRODUCTION KEY FIGURES:

Anual fish production	.53488372093	kg
Dressing percentage	0.43	
Anual fish fillet production	25000	kg
Stocking density	300	kg/m³
Fattening months	4	M
Anual lettuce production	20000	Pcs

MARKETING:

Delivery interval	14	-days
14 -day consumption amount of fish fillet per household	1	kg
14 -day consumption amount of lettuce per household	0.8	Pcs
Number of families supplied	384615384615	Pcs
Number of persons supplied (Families x 2.26)	076923076923	Pcs
Assumed market share	0.05	
Required region population	538461538454	Persons

SALES:	Gross	VAT	Net
Direct sales price of fillet per kg	19	0.1	272727272727
Direct sales price of lettuce per piece	1.6	0.1	454545454546
Annual turnover of fish fillet	475000	0.1	31818.181818
Annual turnover of lettuce	32000	0.1	29090.909091
Annual total turnover	507000	000000000002	60909.090909

REQUIRED SPACE AQUACULTURE (Fish):	m²	m³
Fattening tank	631430584919	948320413437
Growth tank	9.888	8
Purging tank	10.18464	8
Sedimentation filter	423030029352	829457364344
Bio filter	723203357235	844803037496
Work/passage area	953488372093	
Technical room	953488372093	
Total aquaculture space	253.569025	152.018157

REQUIRED SPACE HYDROCULTURE (Vegetables)	m²
Surface for plants	925925925926
Work/passage area	962962962963
Total hydroculture space	148.888889

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TIME EXPENDITURE

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OPERATION:

Fish breeding (feeding, care,...) per day	0.8	h
Vegetable production (cultivation, care, harvesting,...) per day	0.6	h
Weekly effort for operation	999999999999	h

HARVESTING:

Weight per fish	1.7	kg
Number of fish	.72640218878	Pcs
Slaughtering time per fish	80	s
Time per slaughter for preparation, cleaning,...	3	h
Number of slaughters (=deliveries) per year	26	Pcs
Time spent per slaughter	053538648614	**h**
Weekly time effort for slaughtering	526769324307	**h**

PACKAGING:

Time for packaging per fish	30	s
Time spent for packaging per slaughter	450769932302	**h**
Weekly time effort for packaging	725384966151	**h**

DELIVERY:

Families delivered per hour	15	Pcs
Time spent per delivery	025641025641	**h**
Weekly time effort for delivery	128205128205	**h**

PERSONAL CONTRIBUTION - EMPLOYEES

Weekly working time: Total	63.447275	h
Weekly working time: Personal	0	h
Weekly working time: Employees	63.447275	h
FTE Full-time equivalent [40 hours]	818749999999	**h**

Monthly gross wage [40-hour basis]	1900	EUR
Salaries per year	14	Pcs
Gross annual salary	26600	EUR
Employer contribution	0.3	
Personnel costs per employee [FTE]	34580	EUR
Total personnel costs	4850.1692375	EUR

CALCULATION OF RESULTS

Aquaponics

LOCAL MARKETING:

	Gross	VAT	Net
Annual turnover local marketing	507000	)00000000002	60909.090909
Increased costs due to local marketing	4200	0.2	3500
Office expenses, IT, postal, telephone	600	0.2	500
Accountant	1200	0.2	1000
Sewage, water, fees	2400	0.2	2000
Feed cost	.62790697675	0.2	.02325581395
Stocking fish (0.36EUR per fish)	281805745553	0.2	901504787962
Electricity (0.25 EUR net per kWh)	.73488372093	0.2	279069767442
Heating cost: 0.1EUR	813953488372	0.2	511627906977
Fresh water (3128m³ per day at 1.2EUR)	885395348834	0.2	571162790697
Maintenance costs	2400	0.2	2000
Veterinary costs	1200	0.2	1000
Additional costs (FE, CA,...)	3000	0.2	2500
Rent or lease refrigerated vehicle	11520	0.2	9600
Transport costs (fuel, tolls,...)	24000	0.2	20000
Advertising expenses, web hosting,...	10200	0.2	8500
Hygiene inspections	2400	0.2	2000
Packaging and labeling	10500	0.2	8750
Cleaning and hygiene products	2400	0.2	2000
Disposal of slaughterhouse waste	976744186047	0.2	813953488372
Personnel costs			4850.1692375
Operating expenses	57869.993071		24033.355766
Gross Operation Profit	249130.006929		.73514300003

	Gross	VAT	Net
Investment marketing and implementation:	87324	0.2	72770
Concept and submission support	56340	0.2	46950
Brand development and marketing	17796	0.2	14830
Trainings	7800	0.2	6500
Sales and ramp-up control	0	0.2	0
Commissioning support	5388	0.2	4490
Investment authorities and construction:	372000	0.2	310000
	0	0.2	0
	0	0.2	0
Construction Costs Aquakultur incl. Production	300000	0.2	250000
Construction Costs Hydrokultur	72000	0.2	60000
Financing costs: 7 years at 2,00%	2.67201667785		3.89334723155
Operating profit before social security and taxes	7.33491232214		.84179576847

RESULT COMPARISON

Aquaponics

All values EUR	Without sales	Without employees	Break Even	Desired profit	Full operation
Level of use	0	0	3615725921	62184895	1
Volume sold [kg]	0	0	6539314	8040546223	25000
Sales	0	0	2346998475	5111196609.090909	
Number of families supplied	0	0	7458903	6400210086	15384615
Fixed costs	25600	25600	25600	25600	25600
Variable costs	0	0	5260778	69409280718	3.1865285
Workload per week [h]	0	0	0368985	8234537989	63.447275
Employees workload per week [h]	0	0	0368985	8234537989	63.447275
Personnel costs	0	0	7389882	3807108092	0.1692375
Financing costs:	334723155	334723155	334723155	334723155	334723155
Result:	334723155	334723155	0	0000000001	79576847

Desired result per month 3000EUR

5-YEARS FORECAST

Aquaponics

RAMP-UP:

Total ramp-up (start of production until full capacity)	24	Month
Start of sales (in months after start of production)	6	Month
Start of personell (in months after start of production)	6	Month
Start of fixed costs (in months after start of production)	6	Month
Start of repayment (in months after start of production)	12	Month

BUSINESSPLAN:

All values EUR	Year 1	Year 2	Year 3	Year 4	Year 5
Volume sold [kg]	333333333	666666664	25000	25000	25000
Sales	090908333	72726666409.09090909.09090909.090909			
Fixed costs	12800	25600	25600	25600	25600
Variable costs	796632125	389896375	3.18652853.18652853.1865285		
Personnel costs	436458333	949166666	0.16923750.16923750.1692375		
Financing costs:	0	334723155	334723155334723155334723155		
Result:	159500001	453739343	179576847179576847179576847		