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# Pohon Cemara Natal (Pomatal)

A business plan about Christmas trees in Indonesia

# Summary

Introduction

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Costs calculation

Conclusion

# Introduction

In Europe and North America is usual for a family to buy a Christmas tree in December.

But it's not yet the tradition of the Indonesian peoples, though there are a lot of Christians. As a result, there is a lack of competitors in Indonesia.

Therefore, the goal of the company is to sell Christmas trees in the surrounding of Jakarta in Indonesia.

# Market analysis

## *Type of tree*

As an european Christmas tree cannot grow in tropical climate or survive to the trip from a cold region, we want to grow a local tree, similar to our Christmas trees.

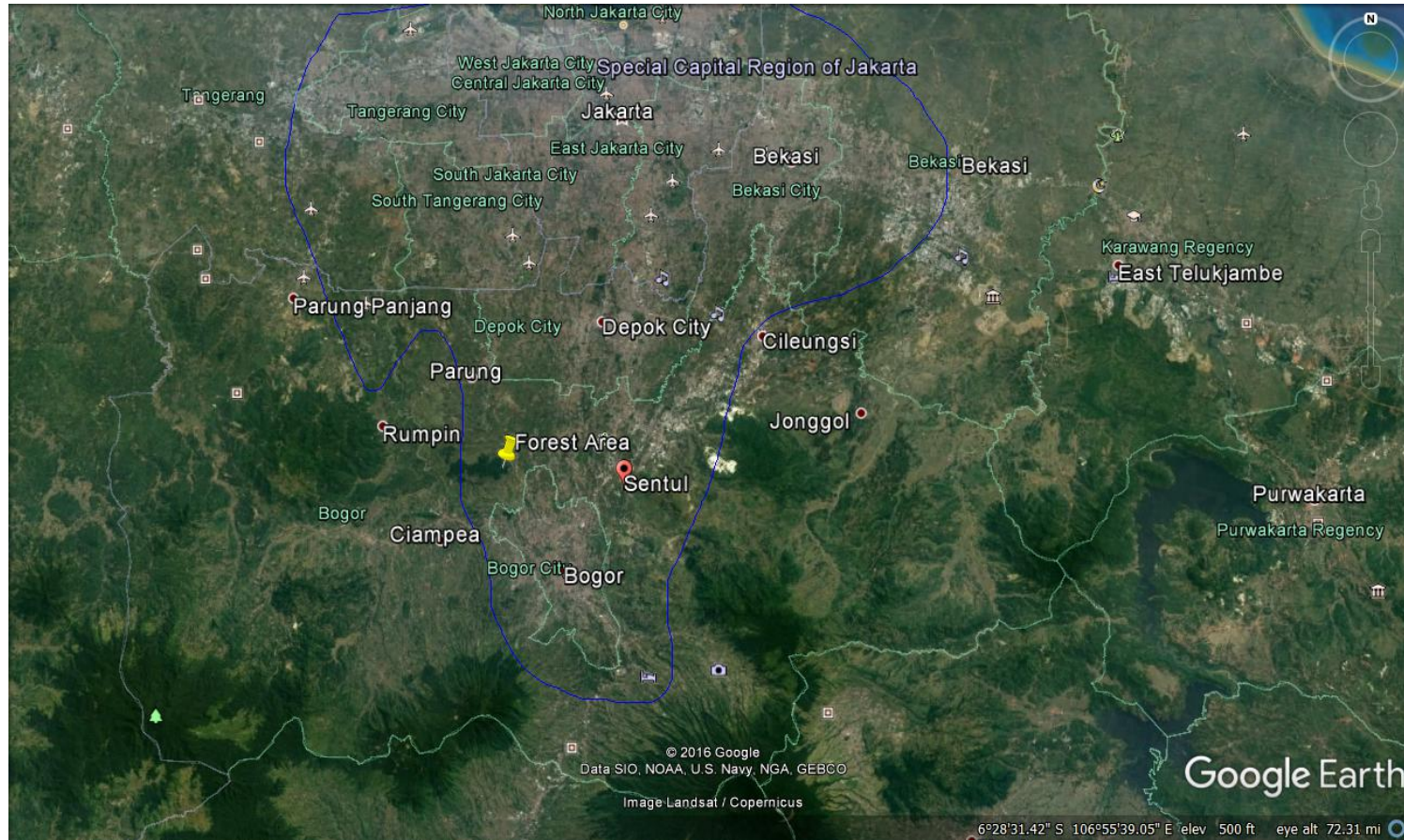


### Platycladus Orientalis .L Franco

- Originate from China
- Growth rate: 2 ft. (61 cm)/year
- Nicknamed Fir Fan
- Able to withstand the climate in low and high altitude area

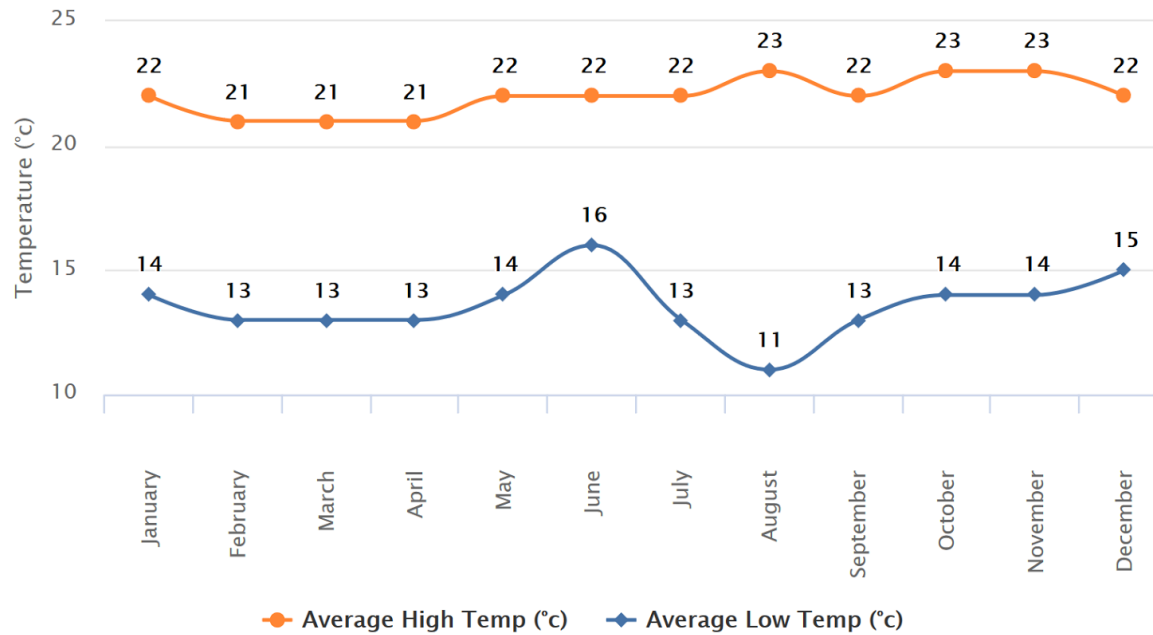
# Location

We plan to sell our Christmas trees in the area of Jakarta. But the production will take place in the Bogor forest (about 100km from Jakarta).

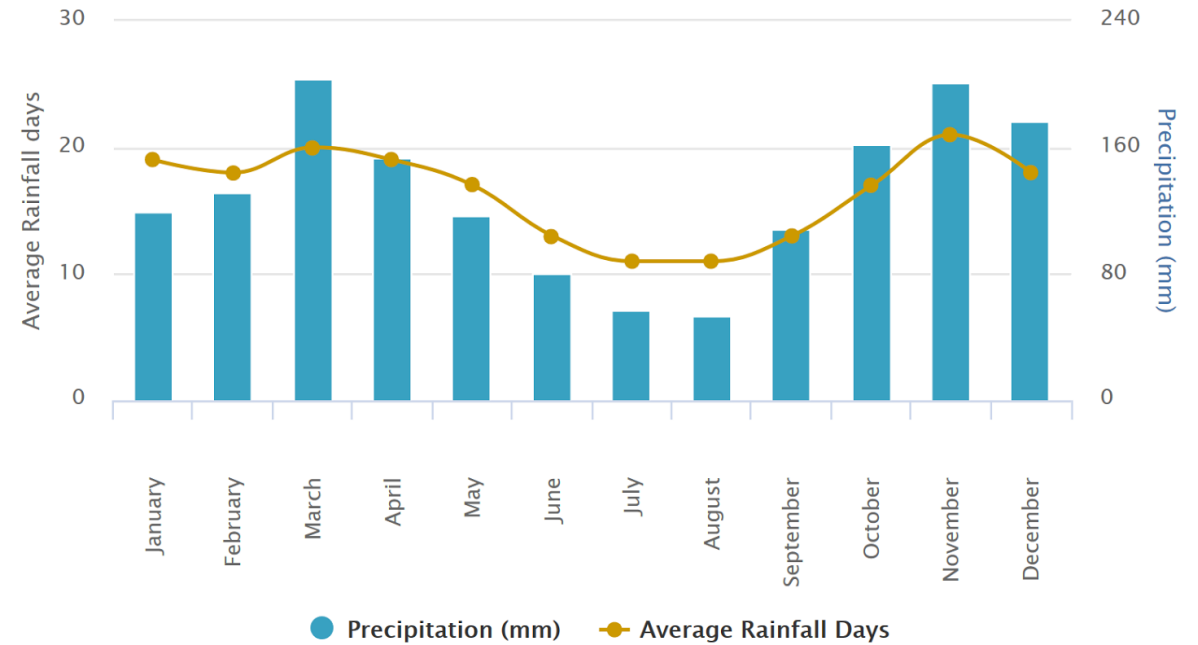


# Climate in the area of Bogor

Average Temperature (°C) Graph for Bogor



Average Rainfall (mm Graph for Bogor)



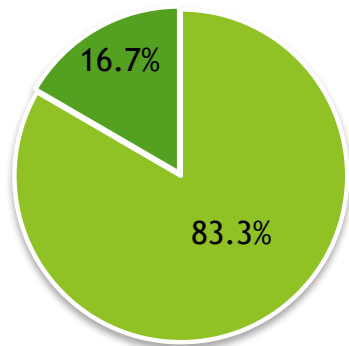
The forest area will be located near Bogor instead of Jakarta due to higher rainfall and also cheaper price of land

The climate in Bogor is cooler than Jakarta thus making it more suitable to grow pine tree

# Survey

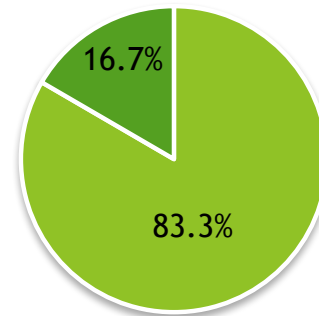
Only 7 persons answered to the survey. These results must be so taken into account carefully.

Do you celebrate Christmas with a Christmas tree?



■ Yes ■ No

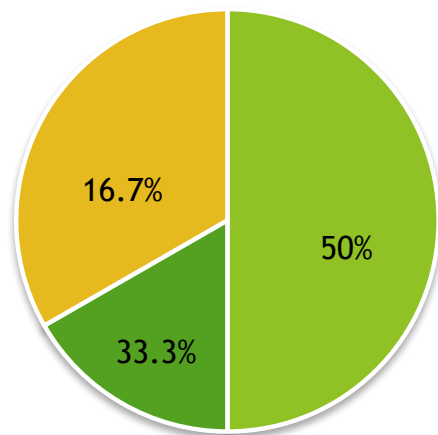
Which type of tree if you do not consider price?



■ Real Tree ■ Plastic tree

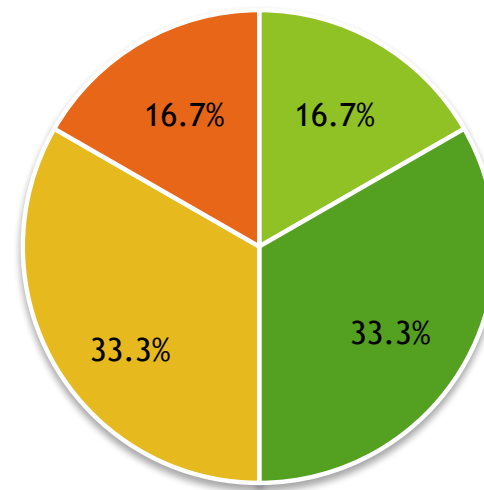
# Survey

How much do you think Christmas tree price should be?



■ € 14.2 - 24.8 ■ € 35.5 - 53.2 ■ > € 53.2

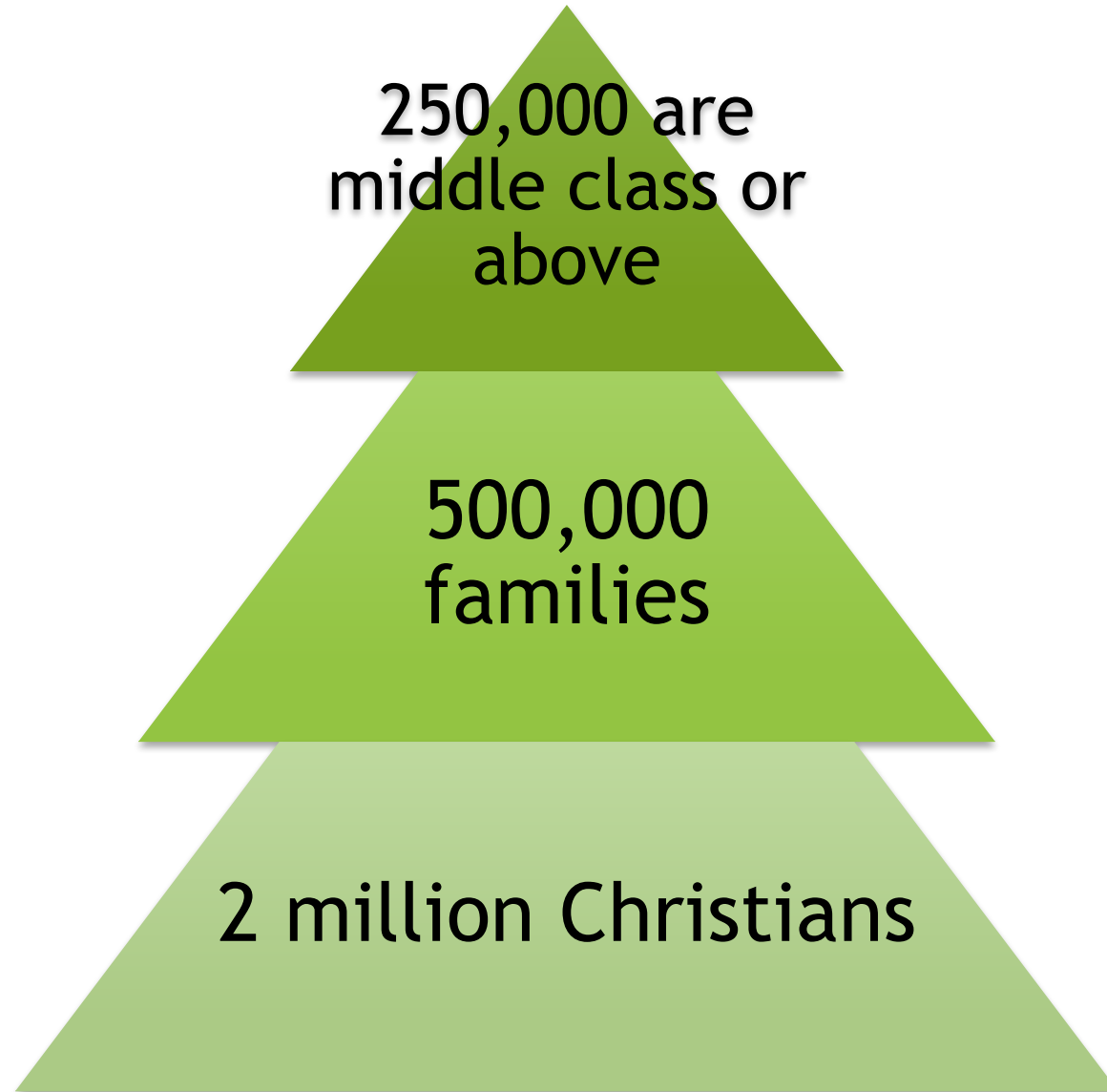
How tall do you prefer your Christmas tree?



■ 150 cm ■ 200 cm ■ 250 cm ■ 300 cm



# *Population in targeted location*



# Competitor

## Plastic Tree

Can be used  
several times

Not dirty

Prices

Plastic tree market	
Height (cm)	Prices (€)
150	€41 - €60.5
200	€55 - €188
250	€209 - €348

# Costs calculation

For the costs calculation, we assume :

- Our occupation will consist in growing 1.5 meter trees.
- As shown by the market analysis, we have 250,000 potential clients (1 tree per family). So we expect to sell, at the maximum output, at least 70,000 trees per year.
- Each tree needs 2m<sup>2</sup> of ground.
- As there is 2 years of growth, we need 280,000 m<sup>2</sup> of land.
- The agricultural land in Indonesia is fertile (moreover we forecast to buy a high quality land).
- The rain is enough to neglect irrigation (no water cost).

# Costs calculation

- The team is composed of 6 persons and completed by 8 auxiliary workers during November and December.
- The trees we are selling are sold to wholesalers like commercial centers to avoid unnecessary cost outside our core work.
- All depreciation costs and taxes are in accordance with the law of Indonesia.
- All cost are in € for practical reasons.

# Investments and depreciation costs

<b>Property</b>			
Description	Investment (€)	Depreciation rate (years)	Depreciation (€/year)
Property (4000€/ha)	112 000,00 €	0	0,00 €
Additional expenses (3%)	3 360,00 €	0	0,00 €
Grading work	4 000,00 €	50	80,00 €
Roads & landscaping	2 000,00 €	50	40,00 €
<b>Buildings</b>			
Description	Investment (€)	Depreciation rate (years)	Depreciation (€/year)
Administration building	60 000,00 €	50	1 200,00 €
Machinery hangar	40 000,00 €	50	800,00 €
<b>Machinery</b>			
Description	Investment (€)	Depreciation rate (years)	Depreciation (€/year)
Chain saw (5 units)	1 000,00 €	10	100,00 €
Brushcutter (1 unit)	200,00 €	10	20,00 €
Tractor (1 unit)	20 000,00 €	10	2 000,00 €
Trailer (1 unit)	4 000,00 €	10	400,00 €
Shears (5 units)	250,00 €	10	25,00 €
Packaging machine (2 units)	5 000,00 €	10	500,00 €
<b>Vehicles</b>			
Description	Investment (€)	Depreciation rate (years)	Depreciation (€/year)
Pick-up (1unit)	12 000,00 €	5	2 400,00 €
Car (1 unit)	10 000,00 €	5	2 000,00 €
<b>SUM</b>	<b>273 810,00 €</b>		<b>9 565,00 €</b>

# Total investment and depreciation

## Total investment and depreciation

Investment goods	Investment expenditures	Depreciation rate (%)	Depreciation costs
Property	115 360,00 €	0 %	0,00 €
Exterior installations	6 000,00 €	2 %	120,00 €
Building	100 000,00 €	2 %	2 000,00 €
Machines	30 450,00 €	10 %	3 045,00 €
Vehicles	22 000,00 €	20 %	4 400,00 €
Unexpected	30 000,00 €	0 %	0,00 €
Circulating capital	10 000,00 €	0 %	0,00 €
<b>Totals</b>	<b>313 810,00 €</b>		<b>9 565,00 €</b>

# Consumption costs

## Consumption costs

Description	Costs per tree
Pesticide	0,0800 €
Fertilizer	0,0400 €
Gasoline	0,0080 €
Young plant tree	0,5000 €
Tree net	0,0600 €
<b>Total</b>	<b>0,6880 €</b>

# Labor costs

Personnal in cost center	Number	Personnal direct costs
Administration	2	5 520,00 €
Commercial	1	5 520,00 €
Agronomist	1	2 760,00 €
Workers	2	4 416,00 €
Auxilliary worker (during 2 months)	8	2 760,00 €
<b>Total of labour costs</b>		<b>20 976,00 €</b>



# Total of investment and financing

Total of investment and financing		
Total investment	313 810,00 €	
Own funds	30,00 %	94 143,00 €
Outside financing	70,00 %	219 667,00 €

We assume to have 10% interest on a loan for 10 years

## Calculation of financing costs

### Interest paid on debt

Year	Balance of debt	Interest rate	interest costs p.a.	Refunding bank loan
1	219 667,00 €	10,00 %	21 966,70 €	21 966,70 €
2	197 700,30 €	10,00 %	19 770,03 €	21 966,70 €
3	175 733,60 €	10,00 %	17 573,36 €	21 966,70 €
4	153 766,90 €	10,00 %	15 376,69 €	21 966,70 €
5	131 800,20 €	10,00 %	13 180,02 €	21 966,70 €
6	109 833,50 €	10,00 %	10 983,35 €	21 966,70 €
7	87 866,80 €	10,00 %	8 786,68 €	21 966,70 €
8	65 900,10 €	10,00 %	6 590,01 €	21 966,70 €
9	43 933,40 €	10,00 %	4 393,34 €	21 966,70 €
10	21 966,70 €	10,00 %	2 196,67 €	21 966,70 €
<b>Sum repayment</b>				<b>219 667,00 €</b>

# Self costs per tree

	1st year	2nd year	3rd year	4th year	5th year
Utilization of capacity	0 %	50 %	80 %	100 %	100 %
Trees quantity	0	35000	56000	70000	70000
Costs	costs per year	costs per year	costs per year	costs per year	costs per year
Depreciation costs	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €
Financing costs	-21 966,70 €	-19 770,03 €	-17 573,36 €	-15 376,69 €	-13 180,02 €
Labour costs	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €
Consumption costs	-24 080,00 €	-38 528,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €
<b>Sum of costs</b>	<b>-76 587,70 €</b>	<b>-88 839,03 €</b>	<b>-96 274,36 €</b>	<b>-94 077,69 €</b>	<b>-91 881,02 €</b>
<b>Cost per tree</b>	<b>0</b>	<b>2,54 €</b>	<b>1,72 €</b>	<b>1,34 €</b>	<b>1,31 €</b>

	6th year	7th year	8th year	9th year	10th year
Utilization of capacity	100 %	100 %	100 %	100 %	100 %
Trees quantity	70000	70000	70000	70000	70000
Costs	costs per year	costs per year	costs per year	costs per year	costs per year
Depreciation costs	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €
Financing costs	-10 983,35 €	-8 786,68 €	-6 590,01 €	-4 393,34 €	-2 196,67 €
Labour costs	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €
Consumption costs	-48 160,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €
<b>Sum of costs</b>	<b>-89 684,35 €</b>	<b>-87 487,68 €</b>	<b>-85 291,01 €</b>	<b>-83 094,34 €</b>	<b>-80 897,67 €</b>
<b>Cost per tree</b>	<b>1,28 €</b>	<b>1,25 €</b>	<b>1,22 €</b>	<b>1,19 €</b>	<b>1,16 €</b>

To be competitive against plastic tree, we choose to sell our tree at a price of 5€ to wholesalers.

## Calculation of the revenue

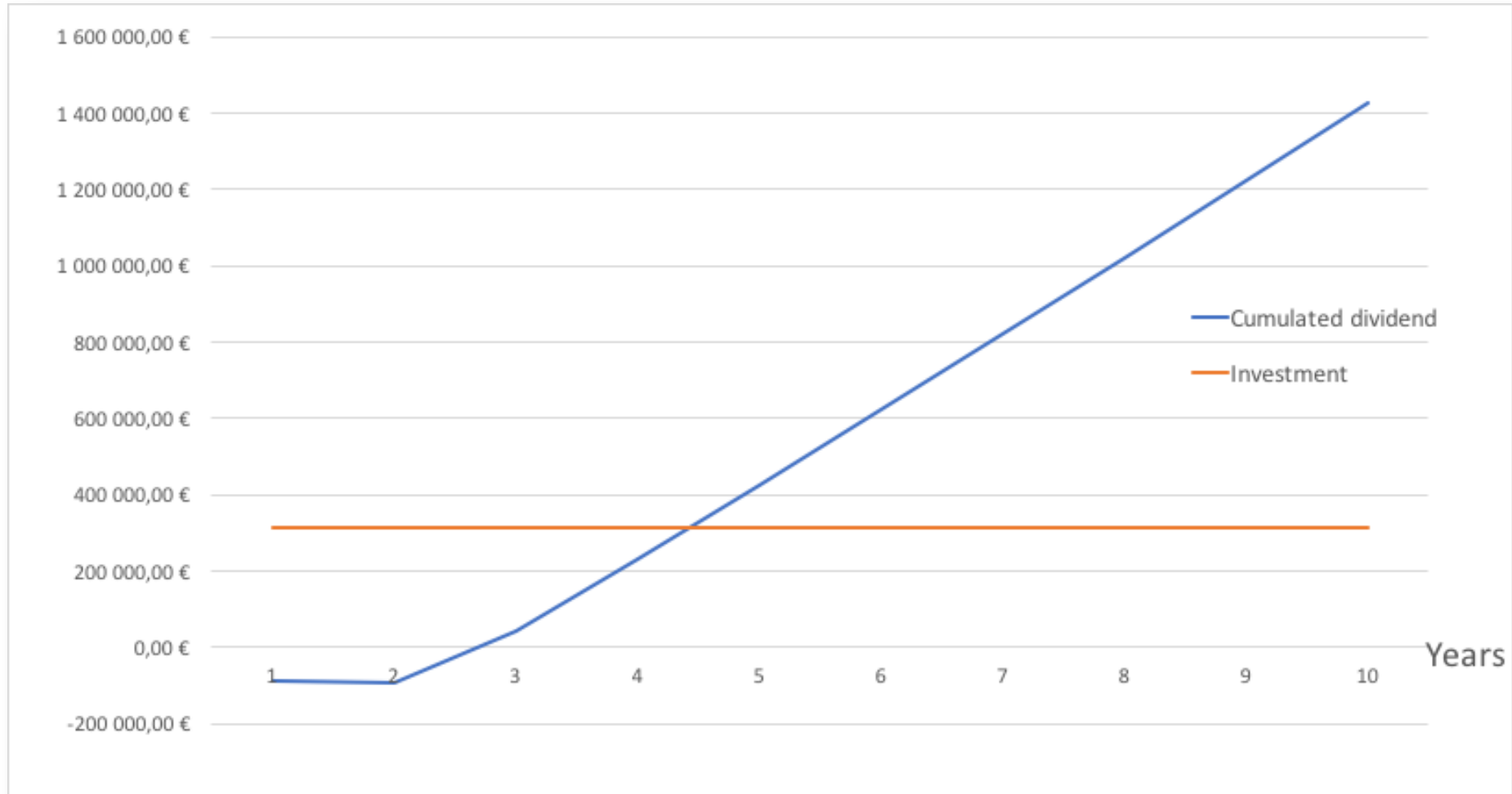
Year	Output	Price per tree	Revenue
1	0	5,00 €	0,00 €
2	35000	5,00 €	175 000,00 €
3	56000	5,00 €	280 000,00 €
4	70000	5,00 €	280 000,00 €
5	70000	5,00 €	350 000,00 €
6	70000	5,00 €	350 000,00 €
7	70000	5,00 €	350 000,00 €
8	70000	5,00 €	350 000,00 €
9	70000	5,00 €	350 000,00 €
10	70000	5,00 €	350 000,00 €

# Cash-flow for 10 years

Cash-flow for 10 years					
	1st year	2nd year	3rd year	4th year	5th year
Sales profits	0,00 €	175 000,00 €	280 000,00 €	350 000,00 €	350 000,00 €
Depreciation costs	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €
Labour costs	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €
Consumption costs	-24 080,00 €	-38 528,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €
Financing costs	-21 966,70 €	-19 770,03 €	-17 573,36 €	-15 376,69 €	-13 180,02 €
Loss carried forward		-76 587,70 €			
Profit before taxes	-76 587,70 €	9 573,27 €	183 725,64 €	255 922,31 €	258 118,98 €
Taxes (20%)	0,00 €	1 914,65 €	36 745,13 €	51 184,46 €	51 623,80 €
Profit after taxes	-76 587,70 €	7 658,62 €	146 980,51 €	204 737,85 €	206 495,18 €
Cash flow	-67 022,70 €	17 223,62 €	156 545,51 €	214 302,85 €	216 060,18 €
Repayment credit	21 966,70 €	21 966,70 €	21 966,70 €	21 966,70 €	21 966,70 €
<b>Dividend</b>	<b>-88 989,40 €</b>	<b>-4 743,08 €</b>	<b>134 578,81 €</b>	<b>192 336,15 €</b>	<b>194 093,48 €</b>
Cumulated dividend	-88 989,40 €	-93 732,48 €	40 846,33 €	233 182,48 €	427 275,96 €

	6th year	7th year	8th year	9th year	10th year
Sales profits	350 000,00 €	350 000,00 €	350 000,00 €	350 000,00 €	350 000,00 €
Depreciation costs	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €	-9 565,00 €
Labour costs	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €	-20 976,00 €
Consumption costs	-48 160,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €	-48 160,00 €
Financing costs	-10 983,35 €	-8 786,68 €	-6 590,01 €	-4 393,34 €	-2 196,67 €
Loss carried forward					
Profit before taxes	260 315,65 €	262 512,32 €	264 708,99 €	266 905,66 €	269 102,33 €
Taxes (20%)	52 063,13 €	52 502,46 €	52 941,80 €	53 381,13 €	53 820,47 €
Profit after taxes	208 252,52 €	210 009,86 €	211 767,19 €	213 524,53 €	215 281,86 €
Cash flow	217 817,52 €	219 574,86 €	221 332,19 €	223 089,53 €	224 846,86 €
Repayment credit	21 966,70 €	21 966,70 €	21 966,70 €	21 966,70 €	21 966,70 €
<b>Dividend</b>	<b>195 850,82 €</b>	<b>197 608,16 €</b>	<b>199 365,49 €</b>	<b>201 122,83 €</b>	<b>202 880,16 €</b>
Cumulated dividend	623 126,78 €	820 734,94 €	1 020 100,43 €	1 221 223,26 €	1 424 103,42 €

# Return on investment



Return on investment : 4.5 years

# Conclusion

Our company is maybe quite little, but we have taken an high margin of security about the size of the market. Moreover we earn money before reaching full capacity.

In accordance with our moral values, a part of the incomes will reinvested in sustainable processes for agriculture.

We expect a great success and plan to export our business model throughout all Asia with a franchise system.

# References

## Population

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## Costs calculation

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