

# Land-use Planner

Engage in participatory land-use planning



Perennial crop

Country  
Region  
Currency  
Date

West Africa  
Euro (EUR)  
18-05-2023

Land use **Gum arabic (acacia senegal) / Gum arabic (acacia senegal) - association with sesame**

Description Small-scale producer - based on Chad practices

## PRODUCTION

Maximum production in tons per hectare (productivity at peak year) 0.16 Tons  
 Year of first harvest 5 Year  
 Year of highest production (peak year) 14 Year  
 Last year of harvest (end of production) 25 Year  
 After the last year of harvest, the plantation is replanted 100 %

The reference year (Year 1) is the year of plantation. The last year of harvest is when the crop stops producing or when the farmer decides it is no longer worth to harvest the land use.

Yield profile, in tons per hectare for each year over the lifetime of the plantation

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	
0	0	0	0	0.02	0.04	0.04	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.16	0.16	0.16	Tons
Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	
0.16	0.16	0.16	0.12	0.10	0.08	0.08	0.08	0	0	0	0	0	0	0	0	0	Tons
Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45	Year 46	Year 47	Year 48	Year 49	Year 50		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		Tons

## VALUE

In currency per ton 1679 EUR

This corresponds to the local price for the raw produce, in the local market, unless specified differently in the comments section below. In case the raw produce is transformed locally, the price of the processed product may be used to better reflect its local value. Note that the estimated value in Euros may have changed with evolving exchanged rates since the creation date of this worksheet.

## COSTS

Costs to establish the plantation (land preparation, seeds & seedlings...) excluding labour costs, per ha 0 EUR

Costs to maintain the plantation during unproductive years (weeding, fertilizers, insurance...), per ha and per year 0 EUR

Costs during production years (including harvest costs), per hectare and per year, excluding labour 0 EUR

These are the average non-labour costs supported by farmers. Costs related to the processing of the raw produce are only included in production years if the price indicated above was that of the processed commodity.

## LABOUR

Days of work per hectare to establish the plantation (planting year) 60 Days 17% Family

Days of work to maintain the plantation during unproductive years, per ha and per year 15 Days 100% Family

Days of work during production years, per hectare and per year 50 Days 100% Family

## TREES ON FARMS

Average number of trees on farmland per hectare 0 Trees

This is particularly relevant for shade-grown cultivation and agro-forestry systems

## CARBON

Carbon stock in the biomass of the perennial crop in tons of carbon per hectare 8 tC

The average carbon stock found in this perennial crop over the lifetime of the crop plantation

## BIODIVERSITY

Relative biodiversity value estimate expressed in % of the biodiversity value found in local intact natural forests 0 %

## OTHER INFORMATION

Intercropping with sesame 200 acacia senegal per hectare Mainly household labour, except for land preparation before planting

Acknowledgement: Compiled by the European Forest Institute through the Land-use Planner website.

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## ASSOCIATED LAND USE

Secondary land use type / preset

annual- Sesame  
crop

Market value: 1068.23 EUR/ton, Caloric content: cal/100g, Yield: 0.35 ton/ha, Cost (no labour): 53.41 EUR/ha, Labour days: 110.0 days/ha, Labour type: Family

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[landuseplanner.org](http://landuseplanner.org)