

5-Year Production & Financing Plan — Saffron

(Crocus sativus)

Saffranbolu · prepared 2026-10-07 UTC · price basis: live feed

Executive summary

Requested planting area	20.0 ha
Optimal planting area	30.0 ha (×1.5)
Net present value (12 %)	42,997,653 TRY
Payback year	2028
Establishment capital	12,600,000 TRY
Peak annual opex	3,306,000 TRY
Output unit	kg dry stigma
Year-5 output	0.195 t

Quota compliance statement

COMPLIANT — the plan stays within the national quota room in every year (0.20 % of global output minus current Turkish production of 0.6 t). No over-quota volume is sold at distress prices. Price response modelled with constant elasticity -0.7 against global supply growing 1.5 %/yr from 450 t.

Cash-flow table (TRY)

Year	Area ha	Output t	Quota t	Price/kg	Revenue	Opex	Net	Cumulative
2027	30.0	0.045	0.3	118,052	5,312,329	2,850,000	2,462,329	-10,137,671
2028	30.0	0.12	0.313	120,399	14,447,891	2,964,000	11,483,891	1,346,219
2029	30.0	0.21	0.327	122,744	25,776,142	3,078,000	22,698,142	24,044,361
2030	30.0	0.225	0.341	125,102	28,147,901	3,192,000	24,955,901	49,000,262
2031	30.0	0.195	0.355	127,468	24,856,342	3,306,000	21,550,342	70,550,604
Y0						12,600,000 (capex)		

Resource plan

Year	Labour days	Water m ³	TR share of global %
2027	6,600	75,000	0.14
2028	6,600	75,000	0.16
2029	6,600	75,000	0.17
2030	6,600	75,000	0.18
2031	6,600	75,000	0.17

Area sensitivity (NPV by planted area)

Area ha	×	NPV TRY	Payback	Quota breaches
8.0	0.4	11,469,612	2028	0
10.0	0.5	14,336,609	2028	0
12.0	0.6	17,203,443	2028	0

14.0	0.7	20,070,116	2028	0
16.0	0.8	22,936,626	2028	0
18.0	0.9	25,802,974	2028	0
20.0	1.0	28,669,159	2028	0
23.0	1.15	32,968,133	2028	0
26.0	1.3	37,266,742	2028	0
30.0	1.5	42,997,653	2028	0

Assumptions

Yield ramp (per ha, yr1→)	1.5, 4.0, 7.0, 7.5, 6.5
Establishment / opex per ha	420,000 / 95,000 TRY
Base price	118,060 TRY/kg (live feed)
Global output / growth	450 t · 1.5 %/yr
Discount rate	12 %

Risks & mitigations

- Price elasticity -0.7: every +1 % of global supply from this plan trims price $\approx$ 0.7 %
- Quota room = 0.20 % of global output minus current Turkish production (0.30 t of new supply in 2027); over-quota volume is modelled at 55 % distress price
- Iran $\approx$ 90 % of world output; corms multiply $\times 3$ by year 3 — replant year 5
- Corm cycle: replant in year 5 — plan a 20 % nursery block each year to keep output flat

Method

Deterministic NPV grid-search over planting area under a global-market quota and constant-elasticity price response; 2026 TRY reference prices, 12 % discount rate — research-grade

Status Research-grade decision support — not an investment offer; verify prices, permits (hemp) and ISO 3632 grading with accredited laboratories before financing.