AGRICULTURAL ESTABLISHMENT PLAN

VERGER 10,000

AI-generated concept. No selected land parcel, lease or completed business is represented.

A decision-focused feasibility study with explicit assumptions, funding requirements and concept design.

Dr. Hassan El Hellani • PhD in Management • EL Hellani Advisory

Reference market: France. This is a newly prepared illustrative business plan. Historical benchmarks are dated separately. No land, premises, financing or client contract has been secured.

INVESTMENT PLAN

Investment brief: 10,000 apple trees

Reference concept: an eight-hectare planted orchard on an approximately ten-hectare gross site in western France. A qualified agronomist must confirm site, density, cultivar and water suitability.

Decision	Illustrative requirement
Trees	10,000 total, including pollinisers
Planting density	1,250 trees/ha
Net planted area	8 ha = 19.77 acres
Gross site allowance	10 ha = 24.71 acres
Funding excluding land	€640,000
Land purchase illustration	€64,000 plus transaction costs; not a local quote

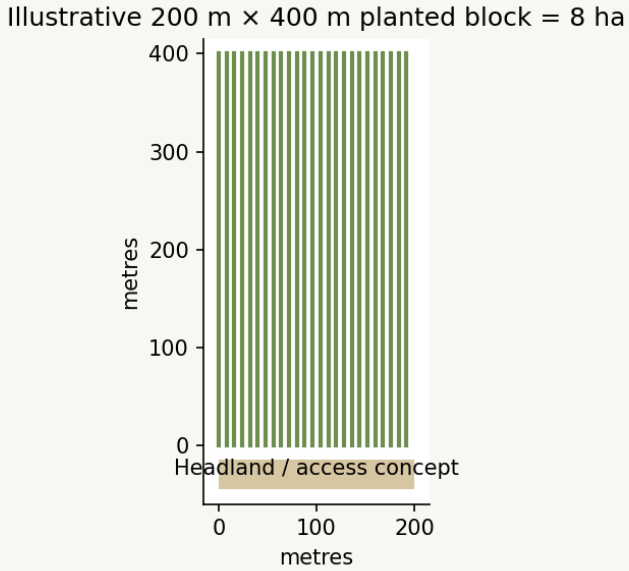
The establishment is a multi-year biological investment. Mature sales do not begin in year one. Frost, heat, water restrictions, packout and buyer terms can outweigh an attractive number of trees. The plan assumes outsourced cold storage and packing rather than a new packhouse.

Decision implication. Obtain land and irrigation diligence before ordering trees. The national land average is not proof that an irrigable orchard site is available at that price.

INVESTMENT PLAN

Land arithmetic and orchard layout

Calculation	Result
Row spacing × tree spacing	4 m × 2 m = 8 m²/tree
10,000 × 8 m²	80,000 m² = 8 ha
Gross allowance	2 ha for headlands, access and staging
Area conversion	1 ha = 2.47105 acres



Lines show representative row organisation, not all 50 physical rows; exact survey and terrain determine block geometry.

In an ideal 200 m x 400 m net planted block, 50 rows at 4 m spacing and 200 positions per row at 2 m spacing yield 10,000 positions. Real boundaries, polliniser patterns and machinery turning areas reduce usable space; use a surveyed plan before treating the arithmetic as plantable capacity.

INVESTMENT PLAN

Agronomic design and establishment

The reference is a trellised dessert-apple orchard, with pollinisers included inside the 10,000 positions. No organic certification or premium is claimed.

Design decision	Evidence required
Cultivars	Buyer demand, local disease pressure and harvest window
Rootstock	Soil, vigour, support system and water reliability
Pollination	Compatible varieties and bloom timing
Irrigation	Legal water access, source yield and seasonal demand
Protection	Site-specific frost/hail economics and permissions

A 2024 Chambre d’Agriculture apple guide gives a biological-orchard establishment benchmark of €40,000–€50,000/ha and mature potential of 35–50 t/ha. Those are context bounds, not a quote for this conventional demonstration. Density and site conditions can change the cost materially.

Decision implication. Commission a soil profile, water analysis and variety plan. A generic business plan cannot choose a rootstock safely without the site evidence.

INVESTMENT PLAN

Establishment investment envelope

The base assumes €45,000 per planted hectare for trees, support, irrigation and establishment. It is an inclusive planning envelope, not a nursery quotation.

Use	EUR
Orchard establishment: 8 × €45,000	€360,000
Shared/used machinery and handling	€60,000
Site/water/power enabling allowance	€25,000
Professional fees and contingency	€15,000
Multi-year operating reserve	€180,000
TOTAL excluding land	€640,000

Do not add a second full planting-labour budget without clarifying what the establishment offer includes. Conversely, do not assume hail nets, boreholes or frost systems are included unless specified. The €25,000 site allowance does not fund a large reservoir or new packing building. Land is excluded; leasing would introduce annual rent into operating costs.

Decision implication. Use an itemised agronomist/vendor scope to avoid omissions and double counting. If the site needs major water infrastructure, change the funding requirement.

INVESTMENT PLAN

Yield and price sensitivity

Gross t/ha	€0.65/kg	€0.75/kg	€0.85/kg	€1.00/kg
25	−€49,900	−€32,900	−€15,900	€9,600
30	−€31,880	−€11,480	€8,920	€39,520
35	−€13,860	€9,940	€33,740	€69,440
40	€4,160	€31,360	€58,560	€99,360
45	€22,180	€52,780	€83,380	€129,280
50	€40,200	€74,200	€108,200	€159,200

The matrix holds orchard cash costs at the mature €140,000 envelope and packout at 85%. It isolates yield and realised price. At €0.65/kg and 35 t/ha the investment can generate a loss; greater tree count does not protect against weak unit economics.

Agreste’s October 2026 estimate placed French dessert-apple production 15% below the prior year, with producer prices 8% higher year-on-year in September. National price movement does not offset a farm-specific crop failure. Use the statistic as risk context rather than a forecast.

INVESTMENT PLAN

Sources, limitations and next evidence

Chambre d’Agriculture de la Charente, Guide Conduite du Pommier en Agriculture Biologique, 2024, technical-economic benchmarks. Search-indexed excerpt available; direct PDF retrieval returned access denied during research. Verify with a local adviser before relying on the benchmark.

https://charente.chambres-agriculture.fr/fileadmin/user_upload/253_chambre_agriculture_de_la_charente/Documents/PRODUIRE/BIO/GB_POMMIER-2024-VD-BD.pdf

Groupe Safer, rural land markets 2024, published May 2025:
https://mag.safer.fr/mise-a-jour-2025-les-marches-fonciers-ruraux-en-2024/

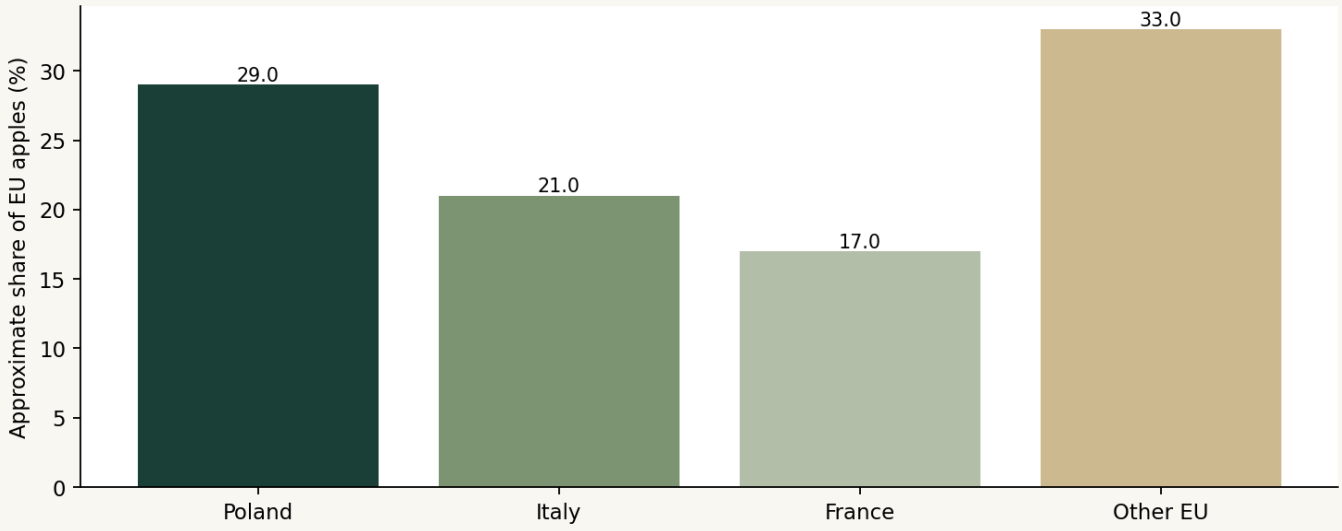
Agreste, Pomme, 13 October 2026:
https://www.agreste.agriculture.gouv.fr/agreste-web/disaron/IraFru26130/detail/

All project costs, density, yield ramp, packout and realised prices remain author assumptions or calculations. A complete commission would add local land offers, agronomy, water permits, nursery quotations, seasonal labour costs and buyer contracts. This owner edition is illustrative; the public excerpt withholds financial and execution schedules.

EXPANDED ANALYSIS | 28 OCTOBER 2026

Apple-market context and route to sale

Eurostat reports 11.6 million tonnes of EU apples harvested in 2024, 4% below 2023. Poland, Italy and France accounted for approximately 29%, 21% and 17%. This is supply context, not a price or a forecast for the proposed orchard. [E3]



E3: Eurostat, 2024 harvest. Country shares rounded; other EU is the calculated residual.

Commercial decision	Evidence to secure
Fresh dessert buyer	Written grade, variety, size and delivery requirements.
Processing fallback	Net price after collection, transport and deductions.
Storage / packing partner	Capacity reservation, tariffs and loss responsibilities.
Payment timing	Acceptance date, rejection procedure and credit terms.

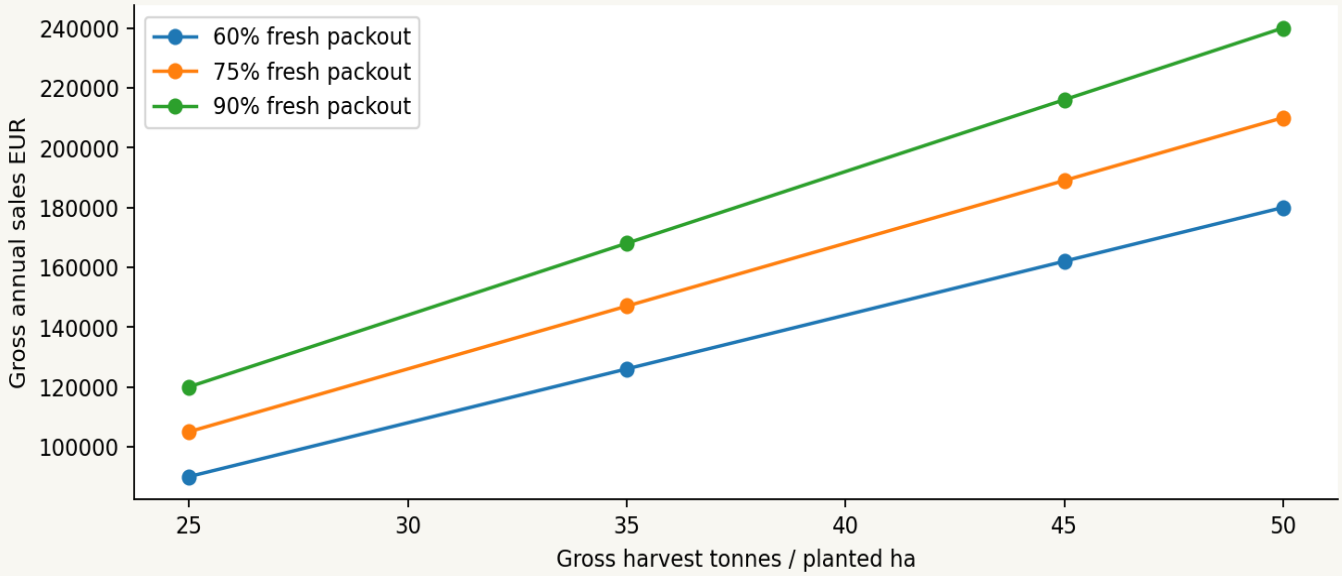
Do not multiply total harvested kilograms by a premium retail shelf price. The orchard receives a grower realisation after quality grading and commercial deductions. A processing fallback may clear downgraded fruit but reduce the blended price. Test the packout with the selected cultivar and buyer; country production totals cannot validate saleable yield or a local water supply.

E3 | Eurostat, published 25 August 2025; accessed 28 October 2026.
https://ec.europa.eu/eurostat/en/web/products-eurostat-news/w/ddn-20250825-1

EXPANDED ANALYSIS | 28 OCTOBER 2026

Yield and packout: separate two risks

The following sensitivity adds a transparent scenario layer; it is not a revision to the original funding envelope. Eight planted hectares are held constant. Gross yield, fresh packout and prices are assumptions pending agronomist and buyer evidence.



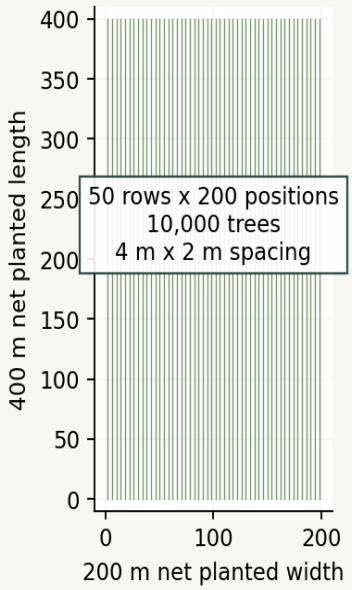
Illustrative fresh price EUR 0.65/kg; processing EUR 0.15/kg. Revenue before all operating costs.

At 45 tonnes/ha	60% fresh	75% fresh	90% fresh
Total gross harvest	360 t	360 t	360 t
Blended price / harvested kg	EUR 0.450	EUR 0.525	EUR 0.600
Gross sales	EUR 162,000	EUR 189,000	EUR 216,000

At this yield, a 15-percentage-point packout loss reduces revenue by EUR 27,000 under the stated prices. This is not a profit estimate: harvest labour, orchard care, storage, packing, transport, rejected fruit and finance remain payable. Lower yield can coincide with lower grade, so include combined stress rather than testing each risk only in isolation.

EXPANDED ANALYSIS | 28 OCTOBER 2026

Row geometry and water design brief



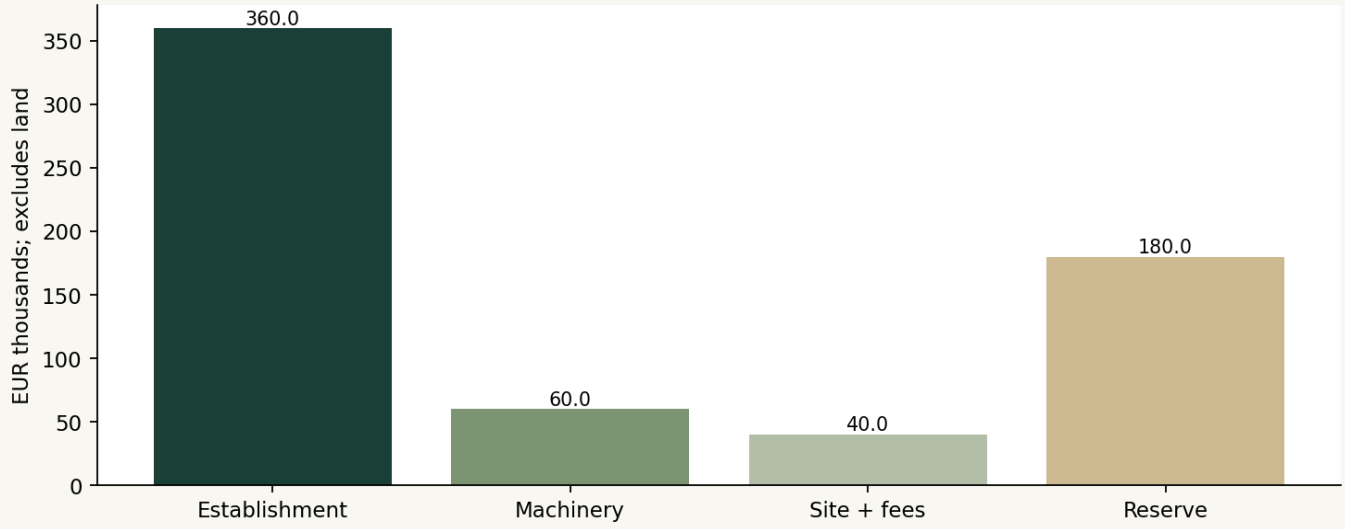
Net geometric block: 80,000 m² = 8 ha. Extra 2 ha gross allowance lies outside this schematic.

Calculated infrastructure brief	Quantity / interpretation
Planting density	10,000 / 8 = 1,250 positions per ha
Approximate planted row length	50 x 400 m = 20,000 m
One lateral per row	About 20 km before headers, spare or routing
Water sensitivity at 2-4 mm/day	160-320 m³/day across 8 ha; assumed demand scenario

One millimetre over one hectare equals 10 m³. The water range illustrates system sizing arithmetic, not a prescribed irrigation schedule or permitted abstraction. Soil, evapotranspiration, rootstock, application efficiency and local rights determine actual demand. Headlands, slopes and irregular boundaries can reduce tree count. Obtain a survey and a competent irrigation design before ordering plants or piping.

EXPANDED ANALYSIS | 28 OCTOBER 2026

Funding gates for a biological asset



Existing illustrative EUR 640,000 envelope. Site + fees groups EUR 25,000 enabling and EUR 15,000 fees/contingency.

Release gate	Required proof
Before land commitment	Soil profile, drainage, frost history and lawful water.
Before nursery deposit	Variety/rootstock plan, pollination and supply specification.
Before establishment works	Itemised scope; clarify nets, support and irrigation exclusions.
Before harvesting contract	Grade, labour, packing capacity and payment agreement.

The EUR 180,000 reserve is 28.1% of the stated non-land funding. It must carry establishment-year operating deficits and timing risk; it is not spare capital for a packhouse. At an illustrative EUR 60,000 annual net burn it covers three years, versus two years at EUR 90,000. These are reserve-duration tests, not the orchard maturity forecast.

Record tree survival, replacement cost, flowering, yield per surviving tree and saleable packout annually. Mature yield cannot be assumed in year one. Frost protection and hail systems need their own site economics. Land purchase, transaction costs, a large reservoir and a new cold store are outside this envelope. Detailed year-by-year workpapers remain withheld from the excerpt.

End of selected portfolio excerpt

This is only part of the full illustrative report.

Financial schedules, cash-flow detail and implementation

workpapers are deliberately excluded from this public excerpt.

To discuss a commissioned plan for your business:

Dr. Hassan El Hellani | EL Hellani Advisory

Historical sources are dated; newly prepared work is not backdated.

Concept images are AI-generated and are not completed client sites.