



Farmer FARM

ROLE PURPOSE (CORE BUSINESS) :	Agriculture
POSSIBLE ACTIONS (PROJECTS) :	ANIMAL, METHANE-F, PV-FB, ZTF, R-FIELD
RESOURCES :	Land ownership (dark green plots, considered as rural area)
CONSTRAINTS :	Financial weakness
KNOW-HOW AND EXPERTISE :	Agriculture and husbandry
INITIAL FINANCIAL CAPACITY (K€) :	2 500
OPERATING EXPENSES (K€) :	500

INTERACTIONS WITH OTHER ACTORS

LA	Land banking
NGO	Legal action from NGO; Funding for ZTF
NAT-EN	Farm inputs for AGRO-F and BIOGAS; Land for PSPT, BIOGAS, GEO, PTG, WIND-T, SOLAR-F
LOC-EN	PV-FB; Farm inputs for AGRO-F and BIOGAS; Land for PSPT, BIOGAS, GEO, PTG, WIND-T, SOLAR-F
PC	Land, co-investment
DEV	Land for dwellings

RECOMMENDED STRATEGY

The Farmer's revenues from farming are low. Renewable energy provides them with opportunities for additional income:

- By producing energy with methanization in the farm (METHANE-F) and photovoltaic panels on farm buildings (PV-FB);
- By producing rapeseed necessary to agrofuel production (R-FIELD) and biomass for gas production (ANIMAL);
- By renting or selling plots for renewable energy production such as wind turbines (WIND-T), biogas (BIOGAS), geothermal energy (GEO), solar plant (SOLAR-F), and for storage systems such as batteries (BATT), pumped storage power station (PSPT) or power to gas (PTG).

The Farmer may also sell or rent plots for economic and urban uses (with the risk of contributing to urban sprawl and soil artificialization...)

Finally the Farmer may act directly towards energy saving through ecological farming without ploughing the soil (zero till farming: ZTF). However this means a loss of yield for

POSSIBLE ACTIONS FOR FARM

ANIMAL HUSBANDRY



ANIMAL

Cows, pigs, sheep, etc.

TYPE: Activity (A)

OTHER ENTREPRENEUR(S) : none

INVESTMENT COST (K€) : 300

GROSS ANNUAL INCOME : 4% (60 K€ per 5-year term)

ENERGY SAVED (MWh / year) :-100 (Negative because animal husbandry emits greenhouse gas (methane)).

PREREQUISITE FACILITIES : None (but is prerequisite for BIOGAS)

LOCATION : 3 plots on farmland (rural area)

JOBS CREATED LOCALLY : 2

METHANISATION AT FARM



METHANE-F

Production of methane and electricity

TYPE: Continuous energy production (Pc)

OTHER ENTREPRENEUR(S) : none

INVESTMENT COST (K€) : 1 900

GROSS ANNUAL INCOME : 10% (950 K€ per 5-year term)

ENERGY PRODUCED (MWh / year) : 600

PREREQUISITE FACILITIES : none

LOCATION : One plot in rural area. Odours in the neighbourhood (risk of residents opposition).

JOBS CREATED LOCALLY : 3

SOLAR PANELS ON FARM BUILDINGS



PV-FB

Photovoltaic panels on farm buildings roofs

TYPE: Intermittent energy production (Pi)

OTHER ENTREPRENEUR(S) : LOC-EN but after agreement with the farmer)

INVESTMENT COST (K€) : 500

GROSS ANNUAL INCOME : 6% (150 K€ per 5-year term)

ENERGY PRODUCED (MWh / year) : 600

PREREQUISITE FACILITIES : storage capacity 50 MWh

LOCATION : Existing farm buildings on J5

JOBS CREATED LOCALLY : 1

RAPESEED FIELD



R-FIELD

Rapeseed field to feed AGRO-F

TYPE: Activity (A)

OTHER ENTREPRENEUR(S) : none

INVESTMENT COST (K€) : 90

GROSS ANNUAL INCOME : 4% (18 K€ per 5-year term)

ENERGY SAVED (MWh / year) : -100 (Negative because growing plants only for energy production is not environmentally and ethically sustainable).

PREREQUISITE FACILITIES : None (but is prerequisite for AGRO-F)

LOCATION : 3 plots on farmland (rural area)

JOBS CREATED LOCALLY : 1

ZERO TILL FARMING



ZTF

Reduces soil erosion and builds up organic matter (biological diversity of the soil fauna). Increases carbon sequestration.

TYPE: Energy saving (through less ploughing)

OTHER ENTREPRENEUR(S) : none

INVESTMENT COST (K€) : 10

GROSS ANNUAL INCOME : -5% (-3 K€ per 5-year term); energy saving doesn't compensate decline of productivity

ENERGY SAVED (MWh / year) : 1 100

PREREQUISITE FACILITIES : None

LOCATION : Farmland (in rural area)

JOBS CREATED LOCALLY : 0