

# Kerguéhennec system Brittany, FR



Organic farming certified acc.  
(EU) 2018/848 since 2018

Kerguéhennec farm experiment, to improve results reliability all crop rotation elements (5) are present each year



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## Yield enhancing strategy, what makes the farm special?

Since 2008, ITAB is facilitating a network of "system experiments" on stockless organic cropping systems, known as ROTAB. Those systems look at the complex combination of practices and decision rules that make the reality of commercial farms.

Launched in 2018 and managed by the regional Agricultural Chamber of Brittany, the Kerguéhennec system experiment is designed to supply feed and protein self-sufficiency for a representative poultry farm under organic farming. Compared to a reference system (local target yields) gross margin should be equivalent or higher and the overall workload equivalent or lower with no increase in work peaks.

**Optimisation wishes and questions:** Perennial crops (alfalfa) are used for difficulties with thistle control, trials are underway on the use of alfalfa - economic viability must be found. Poultry manure can lead to a long-term decrease in soil organic matter content.

**Soils:** Silty-sandy-clay, 80cm deep, 3.8% of organic matter

**Surface:** 4.5 ha with distribution of operations tested at the scale of a 100-hectare farm.

## Rainfall and temperatures

2003-2023	J	F	M	A	M	J	J	A	S	O	N	D	Year
Rainfall [mm]	118	88	67	76	69	57	50	57	66	113	109	128	998
Mean temperature [°C]	6.9	6.9	9.6	11.1	14.7	19.4	18	18.5	19.2	14.6	10	9.1	13.2

## Crops, yields and fertilisation, 2019-2025 [t/ha]

Crops	Target yields	2019	2020	2021	2022	2023	2024	2025	Mean
W-Oat	2.5	4	1.4	4.6	3.4	3	2.5	3.1	<b>3.1</b>
Grains Corn	7	7.1	9	8.2	6.4	7.5	9.1	9.7	<b>8.1</b>
Buckwheat	1.5	0	2	1.5	0.3	2.4	0.4	1	<b>1.1</b>
Faba bean	2.5	3.7	0	2.5	2.4	2.6	3.5	3.1	<b>2.5</b>
W-Triticale Peas	3.5	2.5	3.4	2.5	3.1	3.2	1.5	2.7	<b>2.7</b>

Grains: 85% DM, Fertilisation: commercial organic fertiliser based on poultry manure and/or slaughterhouse by-products applied only on maize: N-18, P-35, K-28 [kg/ha], tillage: systematic ploughing

## Crop rotation



Photos: © A Dupont

## Machinery

### Tractors

### Power HP

6530 Premium (John Deere)

120

TLa 80 (New Holland)

80

RTK guidance system

Matériel précision RTK

### Mechanical weeding

6 rows inter-row cultivator (Carré)

4.5

Precision tine weeder (Treffler)

6

Rotative weeder (Einböck)

6

Rotary hoe (Grégoire Agri)

6

### Cultivation

### Working width (m)

Pentaxol weeder (Carré)

5.30

Cultivator Canadien Genius 3003 super (Amazone)

3

Rotative weeder Zirkon 8 (Lemken)

3

Seed drill Solitair 9 (Lemken)

3

Precision seed drill Optima V 6 row (Kverneland)

4.5

### Harvest

Class Evion 430

### Fertilisation

Spreader

ITAB, Kerguéhenec farm 02/2026