



Solar Watering Systems

by LA BUVETTE[®]

SOLAR-FLOW[™]

Solar waterers and pumping stations



Next

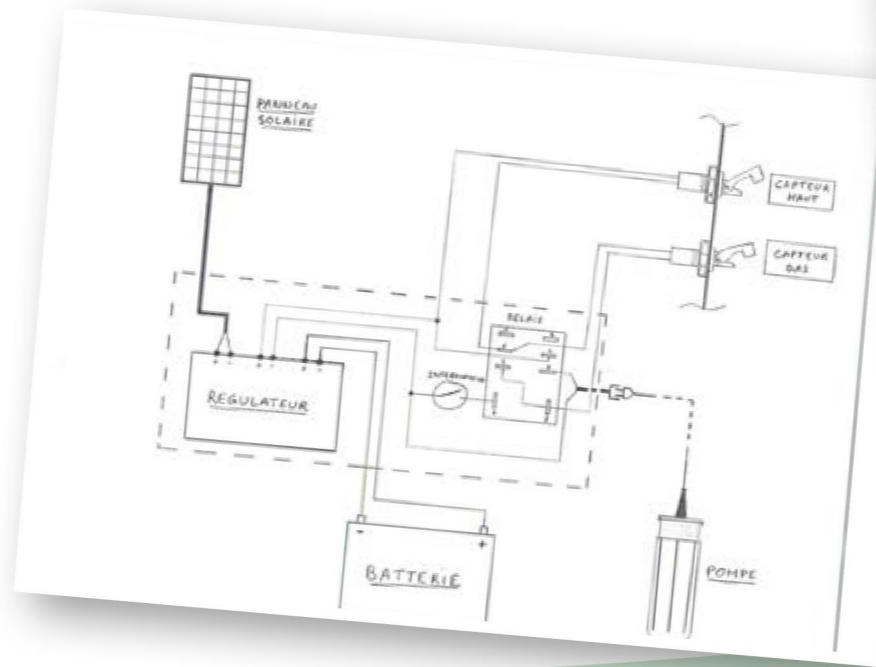




SOLAR-FLOW™

LA BUVETTE, pioneer of solar watering

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2003: LA BUVETTE markets the first watering systems with solar pump SOLAR-FLOW[™] 900 and SOLAR-FLOW[™] 1500. These watering systems are the result of extensive studies offering an innovative, efficient and reliable solution. You can still find them in the LA BUVETTE catalogue.

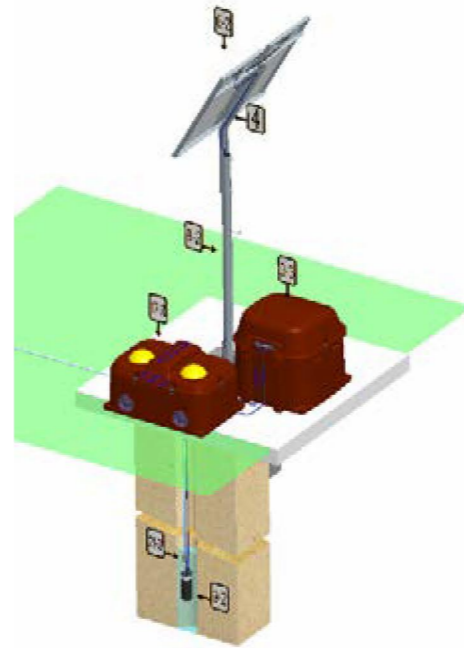




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2014: Technological developments allow lowering the price of the entire SOLAR-FLOW[™] range. Considering the rising cost of fuel, SOLAR-FLOW pays itself back after only one grazing season.



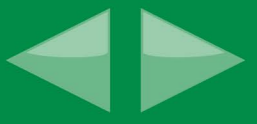


SOLAR-FLOW[™]

LA BUVETTE, pioneer of solar watering

Today:

More than **500 SOLAR-FLOW[™]** units
are at present in service





SOLAR-FLOW[™]

The more sun,
the more the animals drink,
the bigger the water output.

Why to choose LA BUVETTE[®] Solar Products ?

- + **Industry-leading performances** (flow rates, pumping depth, battery life) ahead of competition
- + **Reliability:** LA BUVETTE is a pioneer in the field of solar watering solutions drawing on **more than 10 years' experience**
- + **All-in-one or modular solutions** for watering one or more plots
- + **Anti-theft systems** covered by a some insurance policies: self-breaking nuts + padlock supplied
- + **Advice** from LA BUVETTE specialists for easy installation
- + **After-sales service** from LA BUVETTE and quick delivery of spare parts
- + **Low maintenance:** maintenance of the immersion pump every 2 to 5 years depending on the quality of the borehole

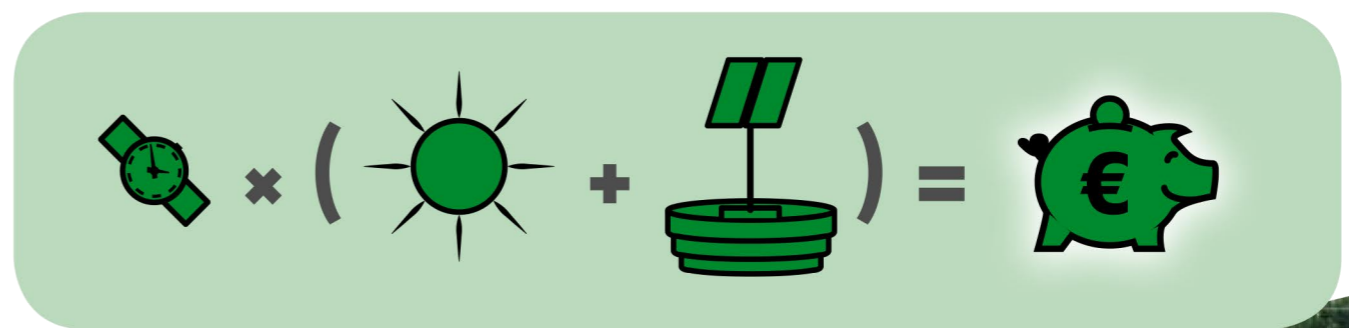
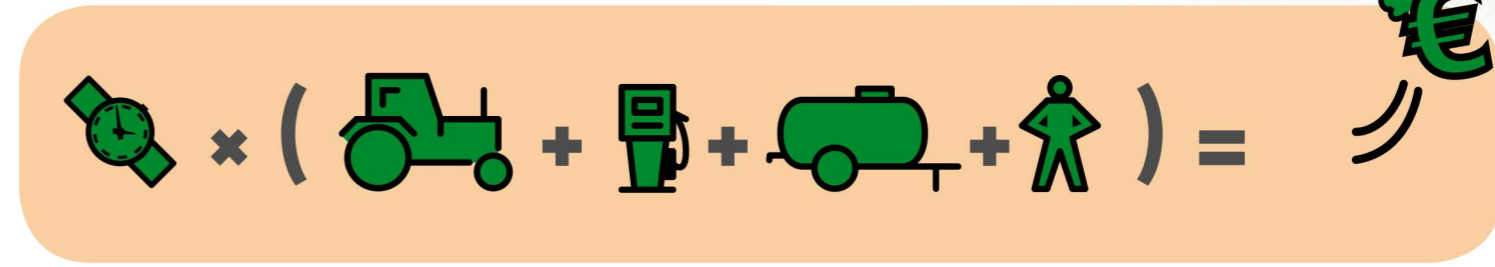




SOLAR-FLOW™

Time and Money Saver...

- Lower prices** thanks to the latest technological developments! Pumping station from ~~4 299 €_{EX. TAX}~~ **2 499 €_{EX. TAX}*** onwards and complete autonomous solar waterer from ~~3 980 €_{EX. TAX}~~ **3 535 €_{EX. TAX}*** onwards
- Quick return on investment** (sometimes already after one season only, depending on your water hauling costs)
- Subsidies possible**, contact your local agricultural administration for more information



*Recommended maximum prices in euros excluding tax according to Tariff n° 99 from 15 October 2013.





Your water hauling costs

Fill in your data, the result is calculated automatically:

1 YOUR TIME:

Number of days water has to be hauled:
(= Number of days on pasture / hauling frequency)

Average duration of water haulage:

You spend **55** hours a year watering your herd on pasture.

2 YOUR MONEY:

Fuel price:

Hourly costs: (Use the table)

- Tractor
- Fuel
- Water tank
- Labour

Each year, the hauling of water costs you:

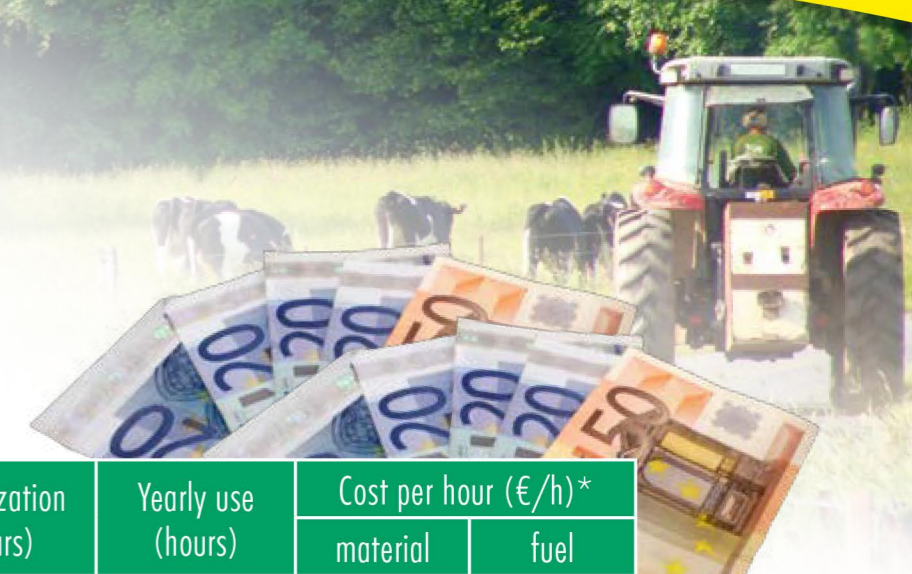
1.439,90 €

The amount **SOLAR-FLOW™** can help you save each year

	Purchase price (in €)	Amortization (years)	Yearly use (hours)	Cost per hour (€/h)*	
				material	fuel
2WD Tractor (Power)					
60 HP	22 000	7	700	4,70	3,28
80 HP	30 000	7	700	6,00	4,38
100 HP	40 000	7	700	7,80	5,47
4WD Tractor (Power)					
80 HP	34 500	7	700	8,20	4,38
100 HP	45 500	7	700	9,70	5,47
120 HP	57 200	7	700	12,00	6,57
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1,50"/>	<input type="text" value="0,00"/>
Water tank (volume)					
3000 l	2 500	7	50	5,40	
5000 l	3 500	7	50	7,60	
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="55,00"/>	<input type="text" value="0,00"/>	
Labour					
Help				11,5	
Breeder				6,0	

Enter your personal data here if you know them

*Following the barème d'entraide - Trame BCMA



SOLAR-FLOW™

Tips on Choosing:

- ➕ Choose a location that is **well exposed to the sun** (no big trees nearby) and that delivers a sufficiently abundant volume of water in summer (depending on your need for water).
- ➕ Do not forget to **adapt the diameter of your pipes** to the entire suction height (water column).
- ➕ It is necessary to **install a concrete base or metal frame** (not supplied).
- ➕ In areas where there is a risk of severe frost, the **batteries must be wintered**.
- ➕ If possible, install your SOLAR-FLOW™ out of sight and report it to your insurer indicating the details of its built-in anti-theft systems.

CALCULATION OF YOUR WATER COLUMN:

D_V **Vertical distance (pump – trough or tank):** 
(= Immersion depth + height outside the well)

D_H **Horizontal distance (pump – trough or tank):** 

Estimation of the pressure loss with Ø25 mm pipes (inn.Ø 18 mm): 6.234301 m

⚠ **For an horizontal distance longer than 50 m, use pipe with bigger diameter.**

Total suction height (water column): *
(= $D_V + D_H + \text{Pressure loss}$)

* **Warning:** Please contact us if your water column exceeds **50 m**



SOLAR-FLOW™

Calculation of your daily water need:

Indicate the number of animals to be watered in the board opposite to obtain an estimation of their water consumption in the pasture.













Press «Enter» to launch the calculation.

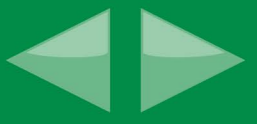
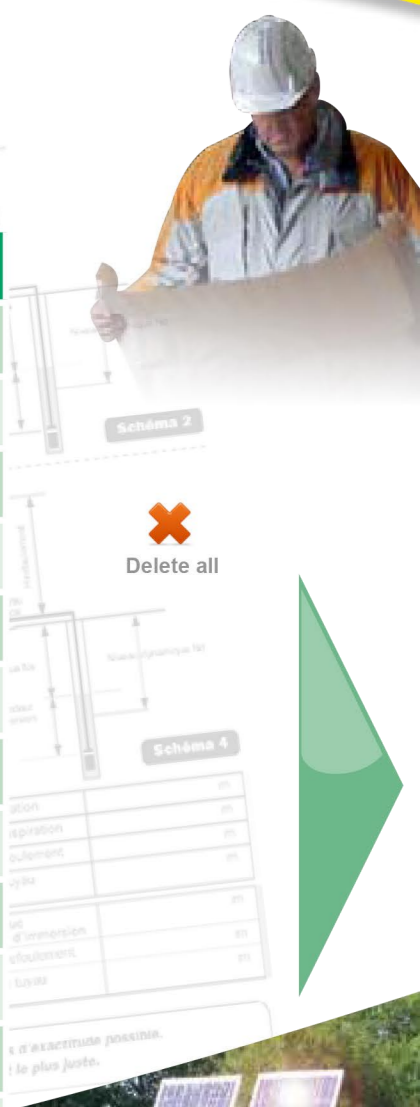


Total daily water need:

3300 litres



Animal type	Number	Daily consumption
 Dairy cow (35 kg/d)	30	3300
 Nursing cow	?	0
 Grass-fed calf (200 kg)	?	0
 Dry cow, in-calf cow, bullock	?	0
 Heifer 350-450 kg	?	0
 Milk ewe	?	0
 Nursing ewe + lamb	?	0
 Dry ewe	?	0
 Milk goat	?	0
 Dry goat	?	0
 Adult horse	?	0
 Lactating mare	?	0





How to choose your SOLAR-FLOW™

Click on the type that suits your criteria best and discover after how many seasons it will have paid itself back :



24 VOLT TYPES:

- For watering up to **40 heads of cattle**
- Flow rate of **3500 litres per day** in optimum conditions: 160 to 360 l/h depending on the immersion depth
- Pumping depth down to **50 meters** (water column).



Ref. 2203



Ref. 2287



Ref. 2202

12 VOLT TYPES:

- For watering up to **20 heads of cattle**
- Flow rate of **2200 litres per day** in optimum conditions
- Pumping depth down to **20 meters** (water column).



Ref. 2285



Ref. 2201

24 V

12 V

Need a custom solution ?
Contact our technicians !



SOLAR-FLOW™ «Solar-Powered»

Ref. 2203



REF. DESIGNATION

2203 Solar pump set 24 V «SOLAR-POWERED» with two 70 Wp panels, submerged pump, pole and supports, 1 24 V booster, 50 m (164 ft) hose, fi ttings and electric cables

24 VOLT SOLAR PUMP SET WITHOUT BATTERY:

Complete solar pump sets working without battery.
The pump is activated as soon as the luminosity is sufficient.

- For watering up to **40 heads of cattle**
- Pumping depth down to **50 meters** (water column)
- A storage tank is recommended to cover several days without sun (read OUR ADVICE)



OUR ADVICE

A SOLAR-FLOW™ “Solar-Powered” pumping station does not store the energy. Therefore, you should provide for a water reserve of sufficient capacity in order to cover several very cloudy days in a row.
A storage tank is better than troughs as a means of storage. It shields the water from light and you will not find any drowning animals in it. This prevents algae growth and water contamination.
Depending on the immersion depth, a SOLAR-FLOW™ “Solar-Powered” can pump up 160 to 360 litres per hour. Equip the tank with an overflow system to direct the excess water back to its source.

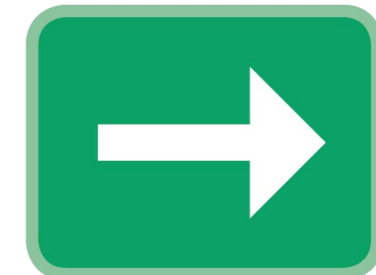
Real installation example



Theoretical break-even point*



Free Advice and Quotation



*According to the calculation of your water hauling cost here.



SOLAR-FLOW™ «Storage»

Ref 2287



24 VOLT SOLAR PUMP SET WITH BATTERIES:

Complete autonomous solar pump set.

The batteries accumulate energy as soon as the luminosity is sufficient.

Water level sensors activate and stop the pump to avoid overflow.

- For watering up to 40 heads of cattle
- Flow rate of 3500 litres per day in optimum conditions:
160 to 360 l/h depending on the immersion depth
- Pumping depth down to 50 meters (water column).
- Autonomy without sun: 10 days with a daily consumption of 2500 l/ day.

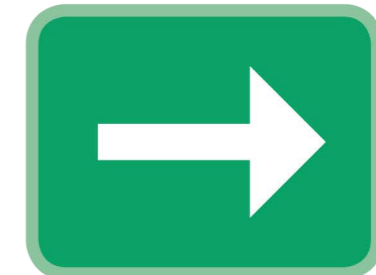
Real installation
example



Theoretical
break-even point*



Free Advice
and Quotation



REF. DESIGNATION

2287 Solar pump set 24 V «Storage»
With two 70 Wp panels, submerged pump, pole, support, cabinet, two 12 V batteries,
electric cables and 50 m (164 ft) stainless steel cable, 50 m hose and water level sensors

*According to the calculation of your water hauling cost here.



SOLAR-FLOW™ 1500 L

Ref 2202

1 500 LITRES DRINKING TROUGH WITH 24 VOLT SOLAR PUMP AND BATTERIES:

The complete autonomous watering solution.

- For watering up to 40 heads of cattle
- Flow rate of 3500 litres per day in optimum conditions: 160 to 360 l/h depending on the immersion depth
- Troughs made of Polychoc™ HDPE, with 8 years warranty against all manufacturing defect.
- Pumping depth down to 50 meters (water column).
- Autonomy without sun: 10 days with a daily consumption of 2500 l/ day.



OUR ADVICE

Have your pump overhauled regularly (every 2 to 5 years depending on the quality of the borehole). LA BUVETTE offers you a fixed rate for pump maintenance. Take advantage of the low season to have your pump overhauled and have it operational by the next high season... Contact your dealer for advice.

Real installation example

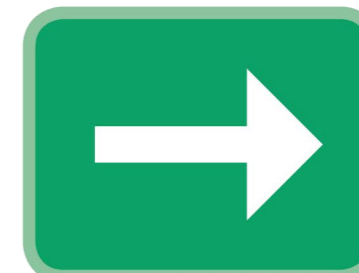


Theoretical break-even point*

3

season(s)

Free Advice and Quotation



REF. DESIGNATION

2202 Complete pack - Solar pump - Two 750 litres (1500 litres) drinking troughs - Two 12 V batteries and two solar panels 70 Wp

*According to the calculation of your water hauling cost here.



SOLAR-FLOW™ «Storage»

Ref 2285



12 VOLT SOLAR PUMP SET WITH BATTERY:

Complete autonomous solar pump set.
The battery accumulates energy as soon as the luminosity is sufficient.
Water level sensors activate and stop the pump to avoid overflow.

- For watering up to 20 heads of cattle
- Pumping depth down to 20 meters (water column).
- Flow rate of 2200 litres per day in optimum conditions
- Autonomy without sun: 10 days with a daily consumption of 1200 l/day.

REF.	DESIGNATION
2285	Solar pump set 12 V «Storage» With one 70 Wp panel, submerged pump, pole, support, cabinet, 12 V battery, electric cables and 25 m (82 ft) stainless steel cable, 25 m (82 ft) hose and water level sensors

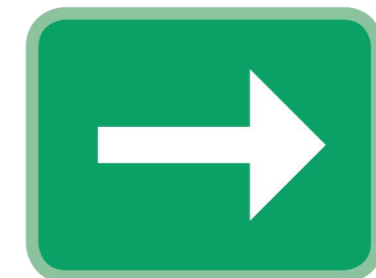
Real installation example



Theoretical break-even point*



Free Advice and Quotation



*According to the calculation of your water hauling cost here.

SOLAR-FLOW™ 900 L

Ref 2201



900 LITRES DRINKING TROUGH WITH 12 VOLT SOLAR PUMP AND BATTERY:

The complete autonomous watering solution.

- For watering up to 20 heads of cattle
- Flow rate of 2200 litres per day in optimum conditions
- Troughs made of Polychoc™ HDPE, with 8 years warranty against all manufacturing defect.
- Pumping depth down to 20 meters (water column).
- Autonomy without sun: 10 days with a daily consumption of 1200 l/day.



OUR ADVICE

Have your pump overhauled regularly (every 2 to 5 years depending on the quality of the borehole). LA BUVETTE offers you a fixed rate for pump maintenance. Take advantage of the low season to have your pump overhauled and have it operational by the next high season... Contact your dealer for advice.

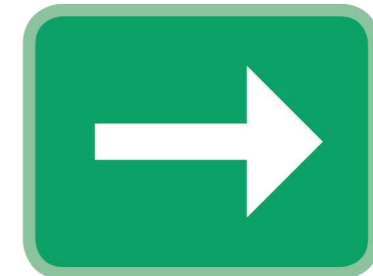
Real installation example



Theoretical break-even point*



Free Advice and Quotation



REF. DESIGNATION

2201 Complete pack - Solar pump - Two 450 litres (900 litres) drinking troughs - One 12 V battery and one solar panel 70 Wp

*According to the calculation of your water hauling cost here.

Installation Example

SOLAR-FLOW™ «Solar-Powered»

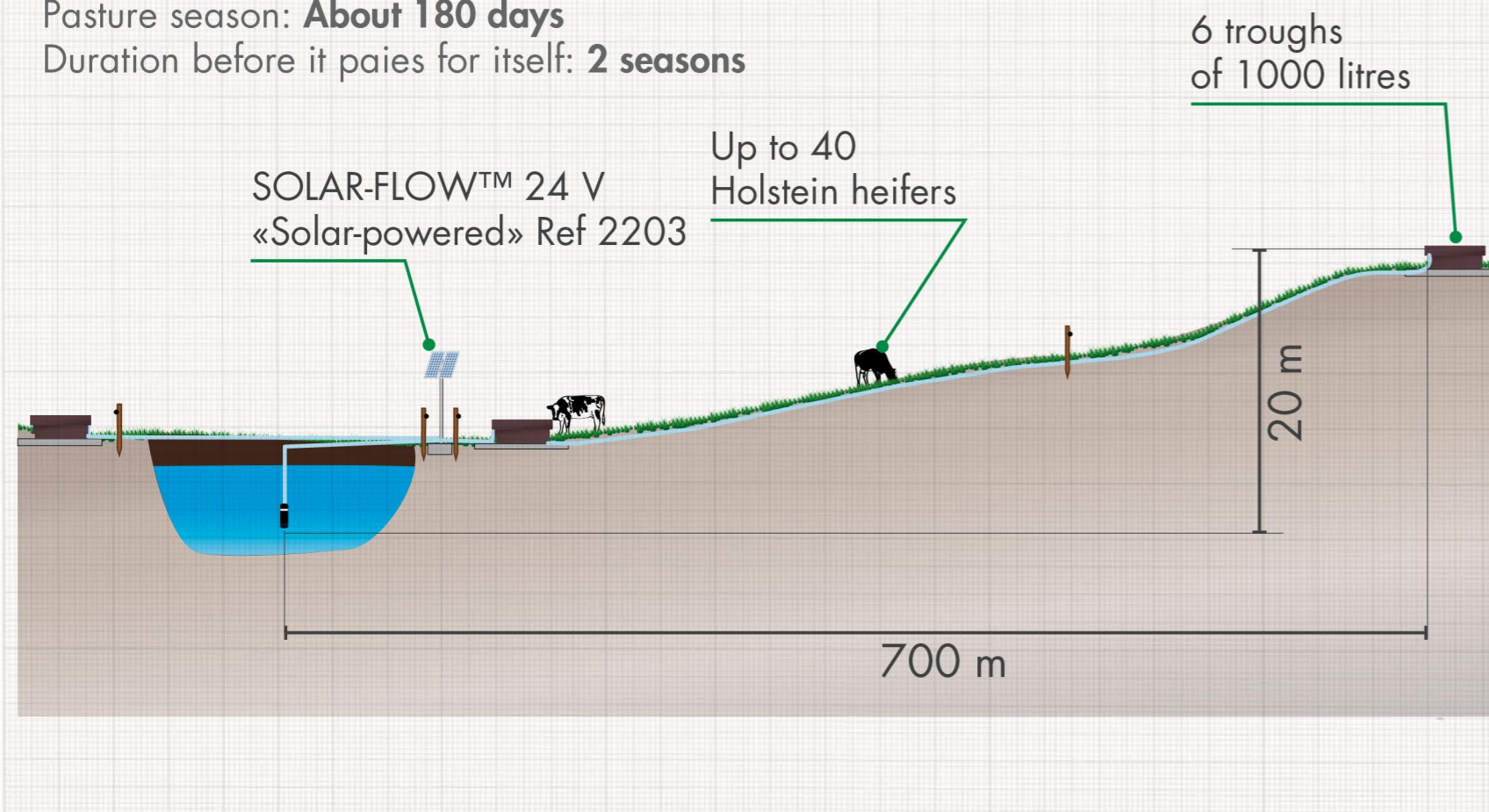
Plan of the installation:

Installation date: **01/2014**

Distance between farm and plot: **6 km**

Pasture season: **About 180 days**

Duration before it pays for itself: **2 seasons**



Hervé CHAUVIN, breeder of dairy cows in Guemené Penfao (Loire-Atlantique, France)

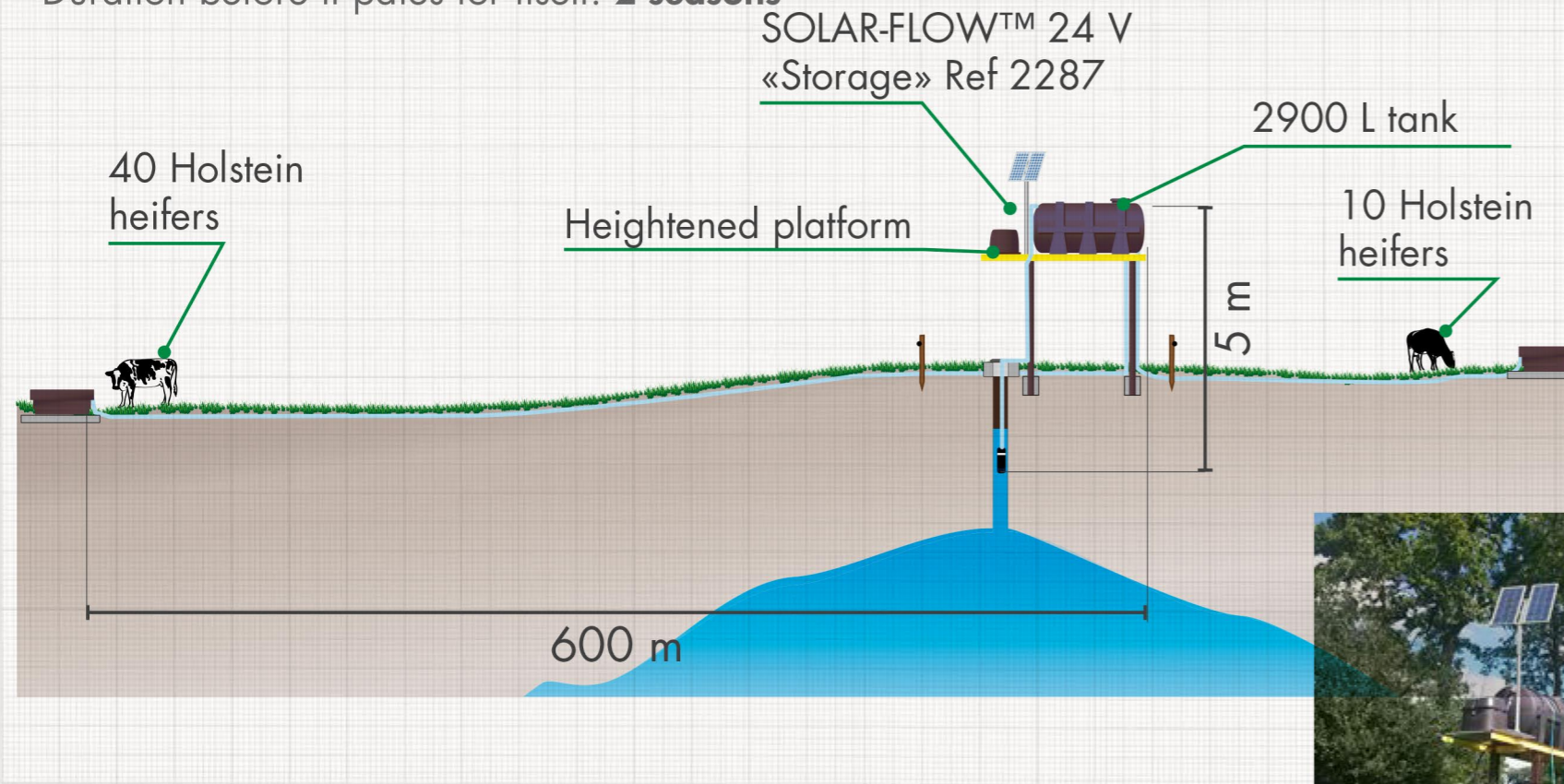
“ I have been using a 24 V SOLAR-FLOW™ Solar-Powered pump without batteries since January 2014. It takes water from a pond to serve several groups of Holstein Friesian heifers (up to 40 animals). As soon as there is enough light, the pump fills up 6 troughs of 1000 litres. The farthest one is situated at a distance of 700 meters and 20 m higher and it all works perfectly. The animals stay outside from March till November and before I had to haul water with my tractor two times a week and it cost me 1h30 each time. I am very happy with my investment. The SOLAR-FLOW™ pump is really effective. My installer even added a valve system allowing the water to return to the pond when the troughs are full.

”

Installation Example SOLAR-FLOW™ «Storage»

Plan of the installation:

Installation date: **07/2014**
Distance between farm and plot: **3 km**
Pasture season: **About 240 days**
Duration before it pays for itself: **2 seasons**

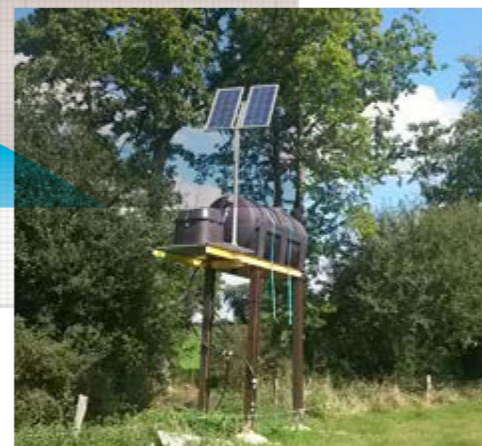


Jean-Louis GAVARD, breeder of dairy cows in Saint-Etienne-en-Coglès (Ille-et-Vilaine, France)

“

My 24 V SOLAR-FLOW™ «Storage» with batteries has been operational since July 2014. The water is drawn from a shallow borehole and is first stored in a higher placed 2900 litre tank before supplying two troughs placed at a distance of up to 600 m. From April to November, the system provides water to a group of 1 to 2 year old heifers and a group of some ten +2 year old heifers on pasture at 3 km from the farm. My SOLAR-FLOW™ «Storage» station saves me 1h30 of water hauling time 2 to 3 times a week. It will have paid for itself after two seasons only.

”



Installation Example

SOLAR-FLOW™ 1500 L

Plan of the installation:

Installation date: **04/2006**

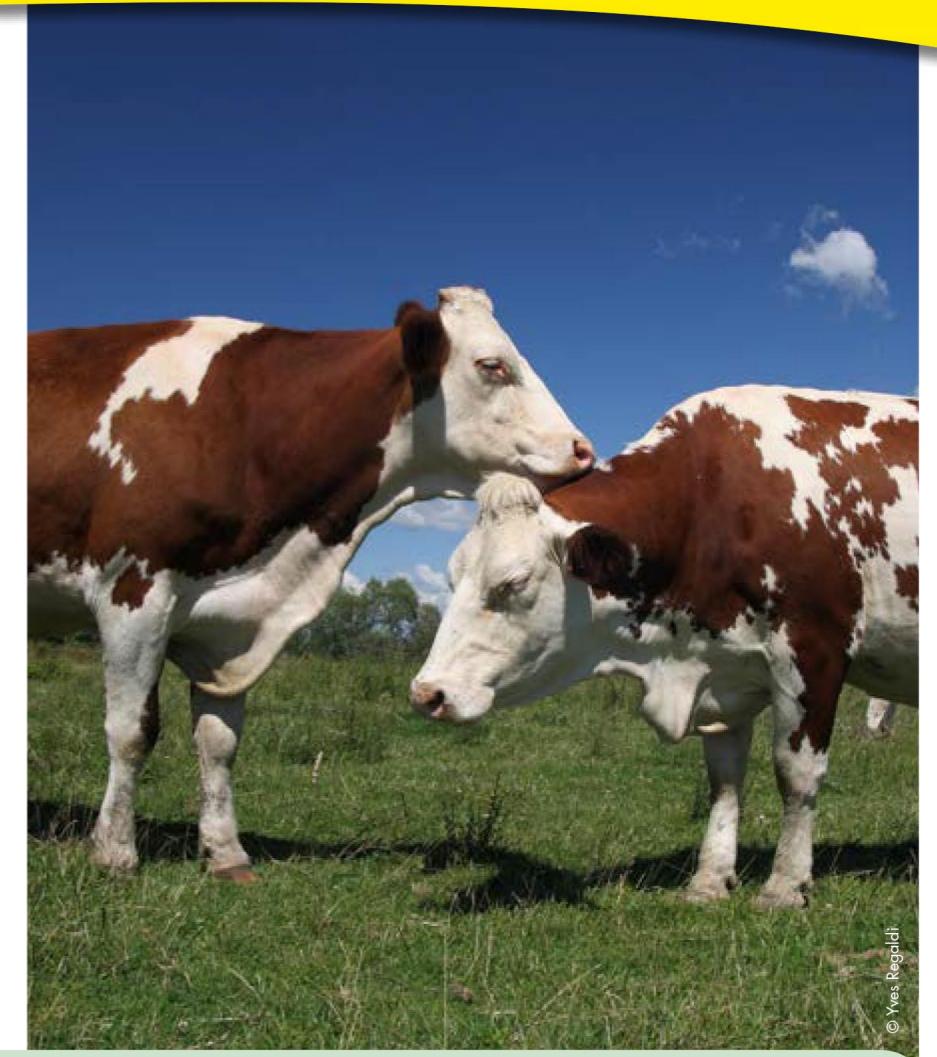
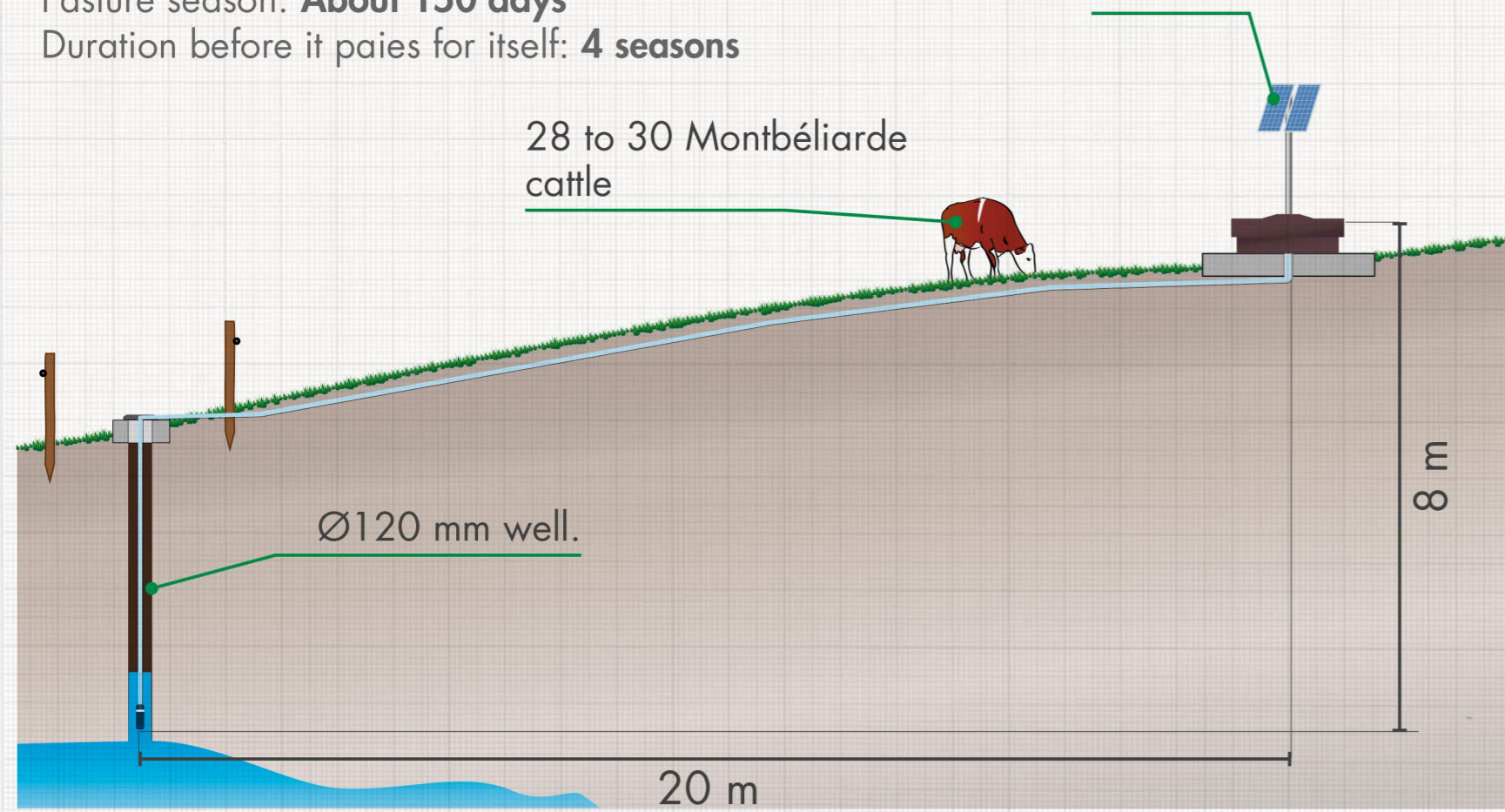
Distance between farm and plot: **12 km**

Pasture season: **About 150 days**

Duration before it pays for itself: **4 seasons**

28 to 30 Montbéliarde
cattle

SOLAR-FLOW™ 1500 L
Ref 2202



Bernard SAINT-DIZIER, breeder of Montbéliarde cattle in They-Sous-Montfort (Vosges, France)

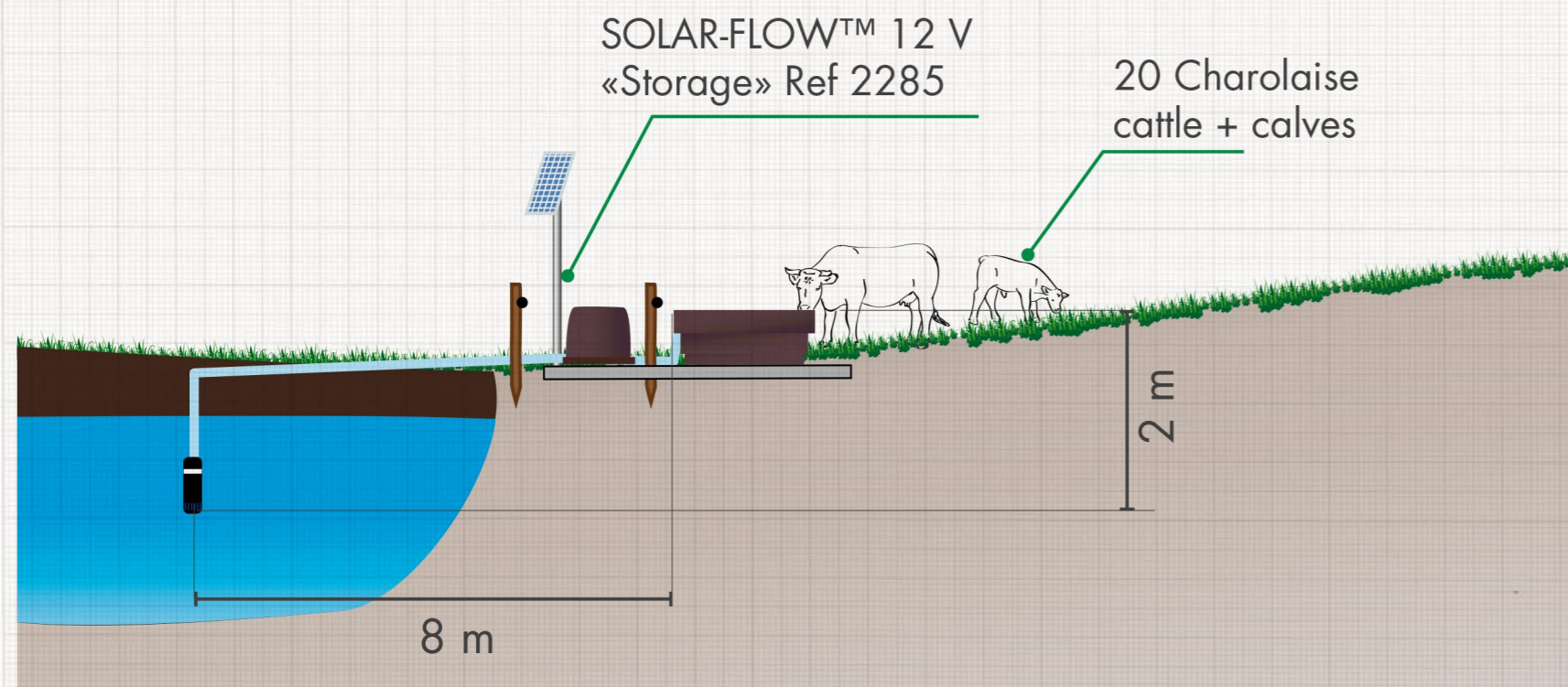
“ I have been using a Solar-Flow 1500 L since april 2006. As time passed, I was astounded by its output and reliability, which made it earn my confidence. In may 2010, I chose a Solar-Flow 900 L for a group of 18 young cows. I gain a huge amount of time and no longer need to worry about the water supply. It is a big relief. The pumps are submerged to a depth of 6-8 m in wells at a distance of some twenty metres from the troughs. No need to worry about the Solar-Flow™ drinkers. Even if the sky is overcast, the troughs are full. The animals are calmer, no longer stand around waiting for the tractor to come and there is no more crowding to get water. Even when I only take into account the fuel savings, tractor wear and gain in time (1 hour a day), my Solar-Flow 900 L will be paid off in 3 seasons.



Installation Example **SOLAR-FLOW™ «Storage»**

Plan of the installation:

Installation date: **07/2007**
Distance between farm and plot: **1 km**
Pasture season: **About 210 days**
Duration before it pays for itself: **2 seasons**



**Bruno C., breeder of dairy cows in
Saint-Pierre Magnycourt (Nièvre, France)**

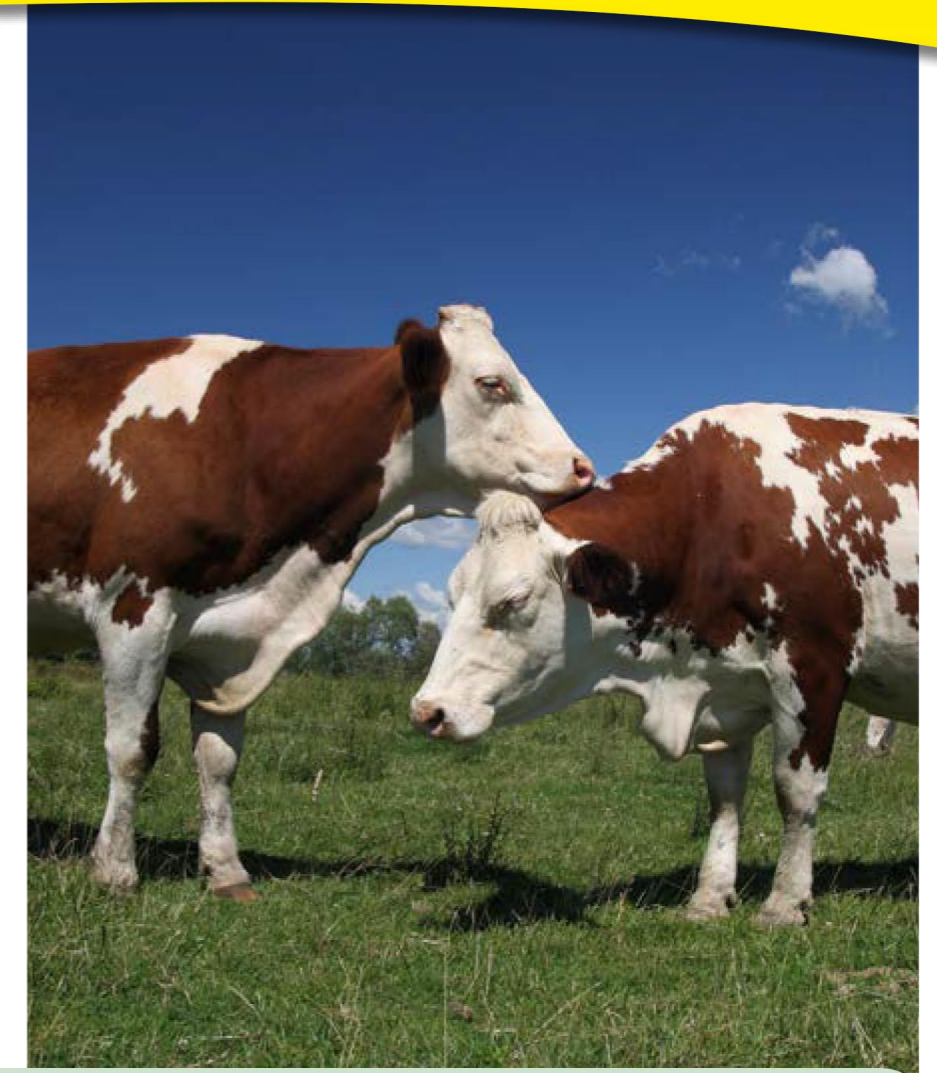
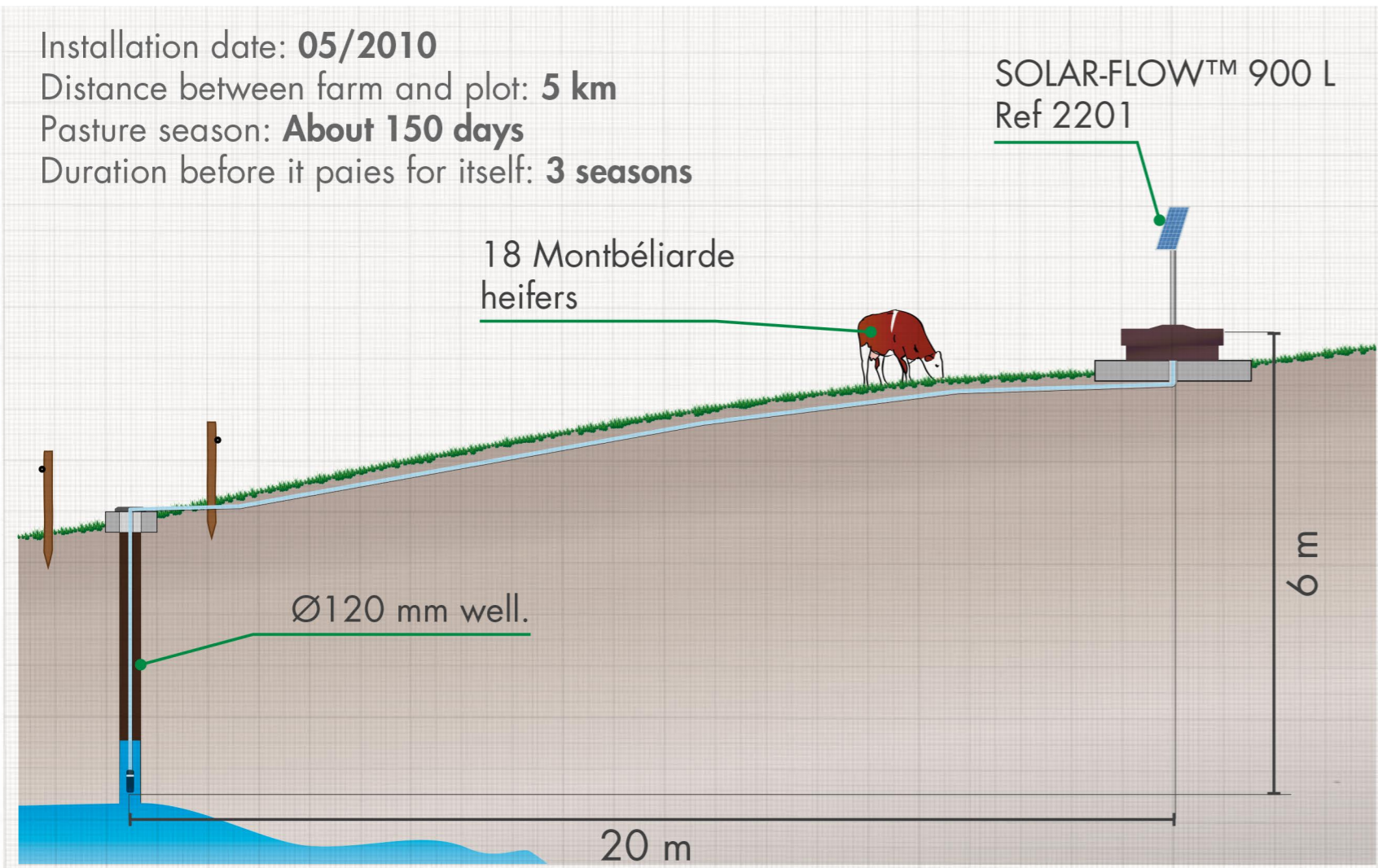
“ I have been using a 12 V SOLAR-FLOW™ «Storage» pumping station since July 2007. I installed it to replace a wind turbine that was too often out of order. This 12 V system pumps a sufficiently large volume of water from a pond for some twenty Charolaise cows and their calves. When the weather is bad for several days in a row, I check the battery charge level, but it actually has a very long life. I am much more at ease than when I still had the wind turbine. Before I had the SOLAR-FLOW, I had to come with the tank every day to fill up the troughs. Now, I can do other things and when I do a quick calculation, it has paid itself back already a long time ago!

”

Installation Example SOLAR-FLOW™ 900 L

Plan of the installation:

Installation date: **05/2010**
Distance between farm and plot: **5 km**
Pasture season: **About 150 days**
Duration before it pays for itself: **3 seasons**



Bernard SAINT-DIZIER, breeder of Montbéliarde cattle in They-Sous-Montfort (Vosges, France)

“ I have been using a Solar-Flow 1500 L since april 2006. As time passed, I was astounded by its output and reliability, which made it earn my confidence. In may 2010, I chose a Solar-Flow 900 L for a group of 18 young cows. I gain a huge amount of time and no longer need to worry about the water supply. It is a big relief. The pumps are submerged to a depth of 6-8 m in wells at a distance of some twenty metres from the troughs. No need to worry about the Solar-Flow™ drinkers. Even if the sky is overcast, the troughs are full. The animals are calmer, no longer stand around waiting for the tractor to come and there is no more crowding to get water. Even when I only take into account the fuel savings, tractor wear and gain in time (1 hour a day), my Solar-Flow 900 L will be paid off in 3 seasons.

”