



A single roof, two halves. Within twenty-four hours, the hens had chosen the side that reflects the sun instead of absorbing it. No scientific demonstration is this eloquent. (AI-generated image)

What the Hens Taught Us About Heat

When animals vote with their feet, it pays to listen.

On one farm, a half-treated roof was enough to reveal a truth that all the sensors in the world struggle to express: animals know, instantly, where life is more bearable. And that knowledge has a direct impact on mortality, egg-laying and the energy bill.

By Joël Kohli, Founder & Director

There are scientific demonstrations, with their probes, their protocols and their curves. And there are demonstrations that animals perform themselves, unprompted — and which, at times, are more eloquent than any measurement.

This one is worth telling.

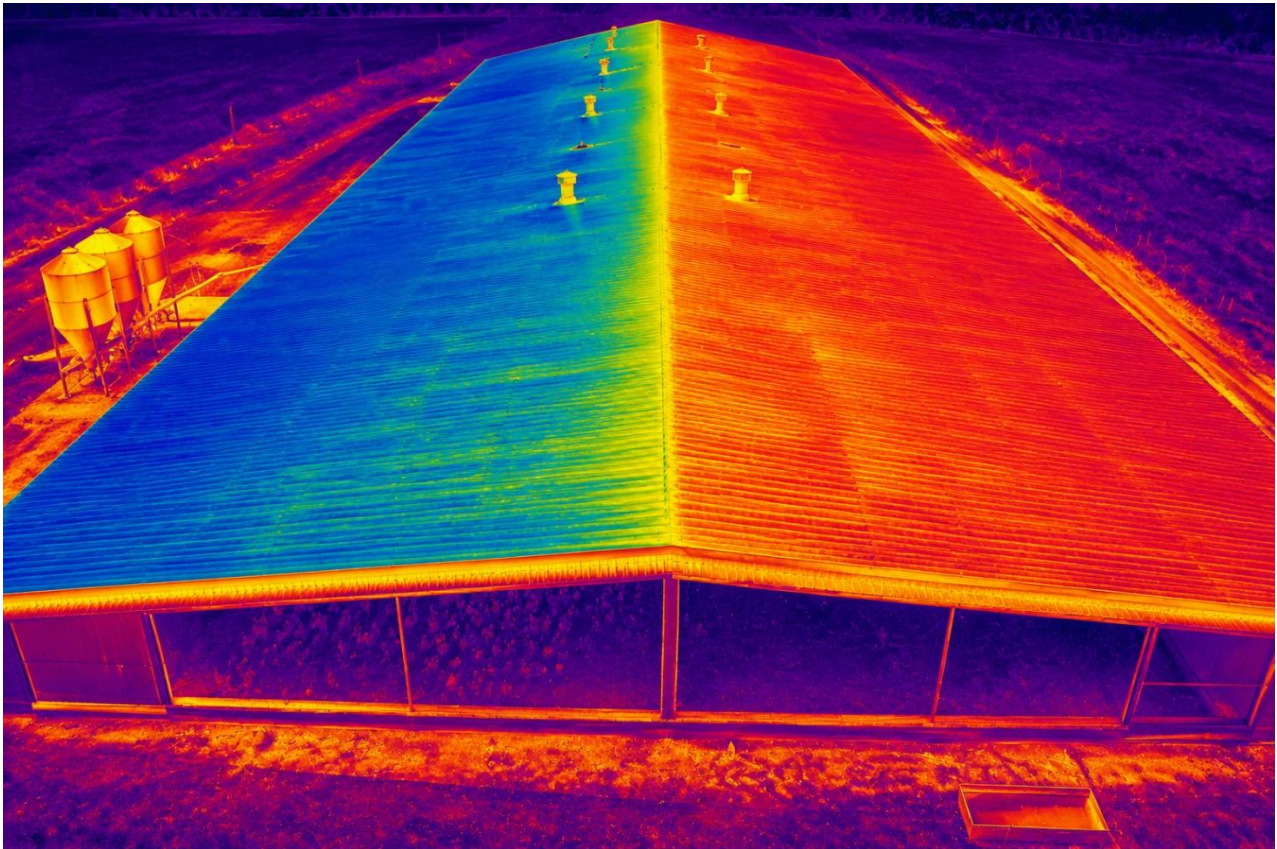
One Roof, Two Halves, twenty-four hours

On a laying-hen farm, a thermo-reflective coating project is launched on the roof. On the first day, half the surface is treated. The other half remains in its original state — dark, absorbent, scorching under the sun.

After twenty-four hours, the farmer makes an observation that instantly reassures him about his decision: **the entire flock had moved and was crowding under the section of roof that had just been treated.**

No one had guided them. No sensor had pointed them to the coolest zone. They had found it on their own, within a few hours, simply because the temperature difference under the two halves of the roof was distinct enough for an animal to feel it and act accordingly.

This is the kind of proof no brochure can manufacture.



What the hens sense, the thermal camera measures: up to a 50% difference in surface temperature between the two halves of the roof. (AI-generated image)

The Summer of 2026 Brought Swiss Livestock Farms to Their Knees

Twenty years ago, this anecdote would have been a mere curiosity. In 2026, it strikes a nerve. Because this summer, the heatwave hit Swiss livestock farms with a severity widely documented by the French-speaking media.

Swiss broadcaster RTS reported that cows suffer heat stress far earlier than one might imagine — **from as low as 16 °C depending on humidity, wind and sunlight** — and that, under the effect of heat, they cluster together, stop eating and stop ruminating, a grouping behaviour identified by the **FiBL** — **Forschungsinstitut für biologischen Landbau, the Research Institute of Organic Agriculture** —, a leading Swiss research centre specialising in organic and sustainable farming. That is exactly what the hens on our farm expressed in their own way by gathering under the treated roof.

The figures relayed by the Swiss press this summer are striking. A dairy cow can produce **up to 20 to 30% less milk** during periods of intense heat. The Swiss Farmers' Union, quoted by Keystone-ATS, stresses that the heatwave also affects animal fertility, with heat stress disrupting their hormonal balance. And to grasp the scale of the thermal challenge inside a barn: **a single cow releases around 2,000 watts of heat per hour in summer** — the equivalent of an electric radiator, multiplied by the size of the herd.

Pigs are not spared either. RTS points out that they suffer from heat **from as low as 22 °C depending on air humidity** — and since they barely sweat, they rank, alongside cows, among the most vulnerable farm animals. Stephan Birrer, a large-animal veterinarian in the canton of Lucerne, notes that losses also affect meat production: animals raised for slaughter eat less and therefore gain less weight. His observation is clear-cut:

“For farm animals, it's similar to us: when we're too hot, we try to withdraw or move less.” — Stephan Birrer, large-animal veterinarian (LU)

The Italian example illustrates the economic stakes. The agricultural association **Coldiretti estimates its country's losses at between 10 and 15%** due to heat — an order of magnitude that, applied to an entire sector, runs into the hundreds of millions. What Italy endures on a large scale, Switzerland now experiences every summer.

On the poultry side, the field evidence directly echoes our story. This summer's reports described significant mortality in henhouses during heat peaks, including in recent buildings equipped with ventilation — followed by a **gradual return of the laying rhythm as temperatures dropped**. This is precisely the sequence that the roof treatment made it possible to reproduce artificially on our farm: bringing the ambient conditions below a liveable threshold, and letting egg-laying resume.

The message from Swiss farmers this summer is unanimous: heat stress is no longer an occasional hazard, it is a structural risk, earlier and more intense every year — and it affects **all livestock sectors at once**, from the henhouse to the pigsty to the cattle barn.



Misting systems have been installed in some barns, as here in Oulens-sous-Échallens (VD). Misters and fans work — but they cost money, consume electricity and water, at the worst time of year. Thermo-reflective coating acts upstream, without energy or water.

KEYSTONE/Laura Juliano

From Survival to Yield: What Followed

Back to our farm. The story does not end with the hens' spectacular relocation. The following days confirmed what the animals' behaviour had foreshadowed:

Heat-related deaths stopped. On a farm, a heatwave is not a mere discomfort — it is a direct cause of mortality. Poultry, unable to sweat, regulate their temperature by panting, a mechanism that quickly reaches its limits when conditions under the roof exceed certain thresholds. By lowering the temperature of the living space, the coating removed the cause.

The laying cycle returned to normal. This is perhaps the most important lesson for a farmer. Heat stress does not only kill — it disrupts. A heat-stressed hen reduces its food intake, its laying drops, and shell quality deteriorates. A few days after the roof was treated, laying had recovered its rhythm.

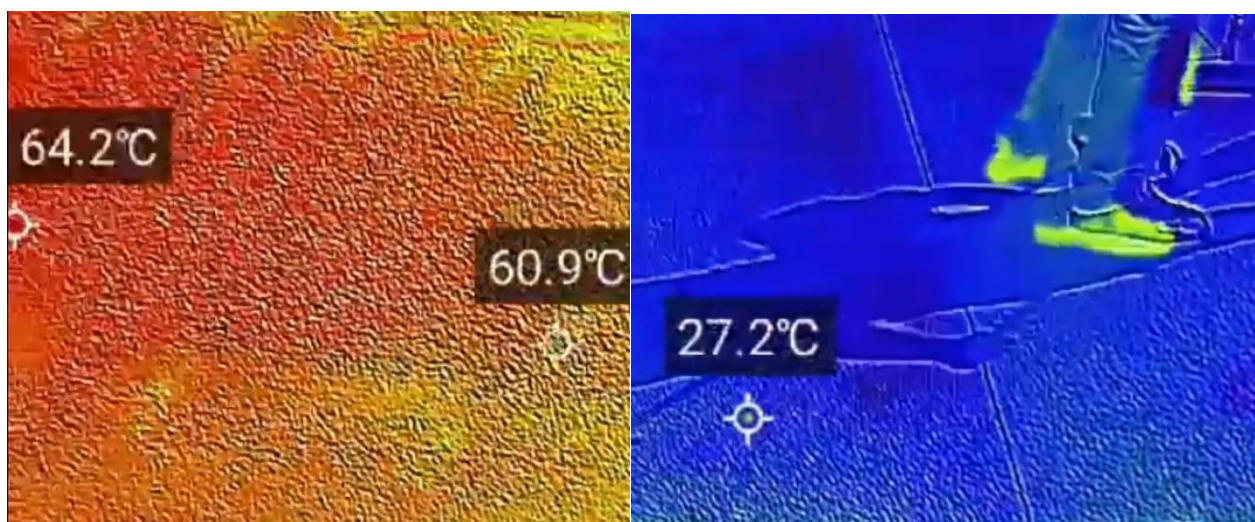
In other words: the coating did not merely save animals. It **restored the farm's productivity**.

Why Livestock Buildings Are Textbook Cases

Livestock farms — henhouses, barns, cattle sheds — combine almost all the factors that make a roof critical.

They are often **large metal or fibre-cement structures**, with low insulation, whose roof is the main interface with solar radiation. They house **living beings at high density**, which themselves give off heat and humidity — as we saw, 2,000 watts per cow per hour — further intensifying the indoor atmosphere. And they shelter animals whose **thermal comfort directly determines profitability**: a heat-stressed bovine produces less milk, eats less, gains less weight; a hen lays fewer eggs.

On this type of building, **a dark roof can reach 70 to 80 °C at the surface** and turn the living space into a furnace. A thermo-reflective coating that reflects up to 87% of solar radiation drastically lowers that temperature — with **surface temperature reductions that can exceed 50%** and a marked decrease in the heat transmitted indoors.



Surface temperature reductions can exceed 50% after applying a thermo-reflective coating on a bituminous membrane. [Watch the video here.](#)

The Alternative to Energy-Hungry Solutions

Faced with livestock heat stress, the usual response is to add active equipment: misters, industrial fans, adiabatic cooling systems. This summer's Swiss reports show them everywhere — large fans in barns,

misting systems, showers, night-time grazing. These devices work, but they carry a cost that is too often overlooked when weighed against their benefit.

They are **expensive to install**. They are **energy-consuming** — and therefore reliant on electricity, whose price keeps rising. **They consume water**, an increasingly precious resource, sometimes restricted during droughts — precisely when heatwaves strike. **And they require regular maintenance**.

Thermo-reflective coating acts upstream, on the cause rather than the symptom. By preventing heat from entering, it reduces the very need for active cooling. In many cases, it makes it possible to **sharply reduce reliance on misters and fans — or even do away with them**. Where active systems fight continuously against heat that has already settled in, the coating stops that heat from settling in the first place.

It is a passive approach: no energy consumption in use, no mechanical parts, no water. The roof works on its own, every summer day, for years.

A Benefit That Speaks the Farmer's Language

For a livestock farmer, the thermal argument translates directly into concrete indicators:

- **Lower mortality** during heatwave episodes, which grow more frequent and earlier every year.
- **Preserved productivity** — regular laying, maintained milk production, undisturbed growth.
- **Reduced operating costs** — less electricity, less water, less maintenance of active equipment.
- **A growing animal-welfare argument**, increasingly valued by industry sectors, large retailers and consumers.

On top of this, as with any agricultural building, comes the option of pairing the roof treatment with a photovoltaic installation — a reflective, cooler roof improving panel yield and, on bifacial modules, their output through the albedo effect. Read the **White Paper by SolarWorld AG and the Institute for Solar Energy Research Hamelin (ISFH)** [here](#).



Reflecting rather than absorbing: a light, thermo-reflective roof protects the herd, preserves productivity — and, coupled with photovoltaics, generates more abundant energy.

In a Word

The hens on this farm read no study. They consulted no data sheet. They simply looked for the place where life was more bearable, and they found it under the half of the roof that reflected the sun instead of absorbing it.

This is perhaps the best definition of what a thermo-reflective coating does: making a building liveable when the heat rises. For the animals, it means surviving and producing. For the farmer, it means protecting the herd, profitability and cash flow — without multiplying costly, energy-hungry equipment.

The summer of 2026 showed, across Switzerland, that livestock heat stress is no longer a hypothesis. When animals vote with their feet, it pays to listen — and to act where it all begins: **on the roof**.

Sources: Field feedback, laying-hen farm, RENOVCOAT (France), partner supplier of THERM'Reflectis, 2026 · RTS — “Heat stress: when cows reduce their intake” (cattle thresholds 16 °C / pigs 22 °C, grouping behaviour FiBL, veterinarian Stephan Birrer's testimony, Coldiretti estimate 10-15%) · 24heures, 20 minutes — Milk production down 20 to 30%, June-July 2026 · Watson / Keystone-ATS — Swiss Farmers' Union, impact on fertility and production, 2026 · SRF / 24heures — “2,000 watts of heat per cow per hour,” 2026 · Agroscope / FiBL — Study on the increase in heat days in livestock farming · MeteoSwiss — Swiss Climate Scenarios 2025

Do you run a cattle, pig or poultry farm? Your animals are suffering from the heat — your roof can remedy it. Let's talk before next summer.

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