

ons

Case Study

Ivy House Dairy Farm, Nottinghamshire, UK

The Hydor evaporative cooling system has been successfully installed at Ivy House farm, who specialise in producing organic milk.

Installed within the innovative 36 bay rotating milking parlour and holding areas, owner Mark Hornbuckle comments "The cooling capacity of the system is excellent. The herd is milking better and is far more comfortable. Moreover, our problem with flies in the parlour has been dramatically reduced."

The system was installed by Hydor as shown in Figure 3, with plans currently in place to extend (as marked in red) to the feeding lines within the cubicle areas as has been done with Druids Lodge Dairy Farm (see opposite photograph).

As well as the Hydor Evaporative Cooling System, the farm has installed eight Hydor 1250mm belt drive air movement fans in the cubicle sheds. These fans are suspended in series along the cubicle shed and their purpose is to blow fresh air through the cubicle shed, capturing any heat and moisture rising from the herd and removing it from the building.

Evaporative Cooling System and Planned Extension.

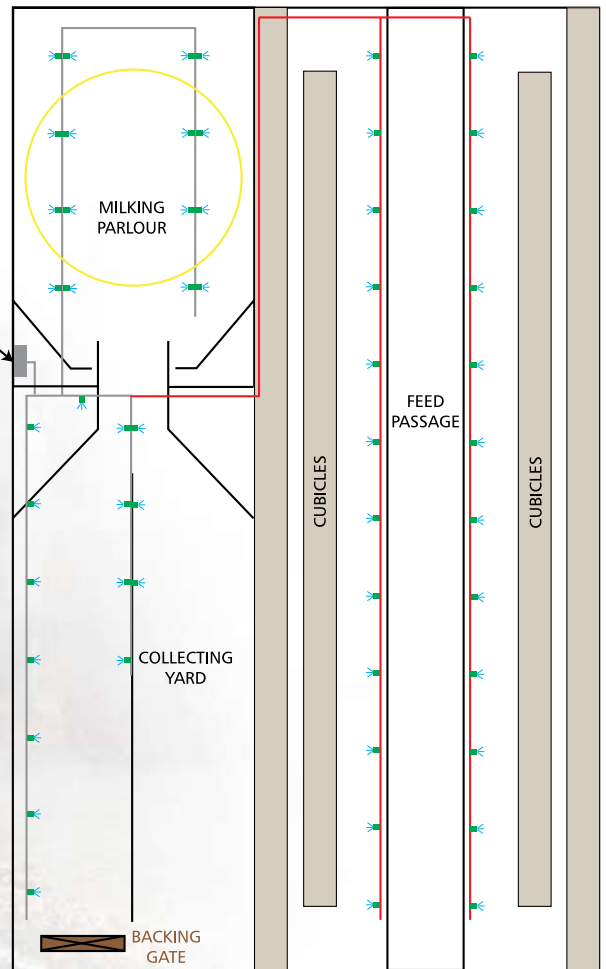


Figure 3.



Ivy House Dairy Farm, Milking Parlour



Case Study

Steanbow Farm, Somerset, UK

Hydor have installed two evaporative cooling systems, one in each of two poultry sheds holding 54,000 birds on Steanbow Farm in Shepton Mallet. The two poultry houses utilise the Hydor 'Pre-Vent' system as illustrated in Figure 5, an additional stage of cooling which is required initially to reduce the higher temperatures the two poultry houses experience during the summer, by being located in a 'sun trap' area of the farm.

In addition to the emergency cooling function; the system has also proven to be extremely useful as a regular stage of cooling by replacing the use of numerous fans, which expend more energy to achieve the same effect. The system is also being put to valuable use to maintain the desired humidity levels in the early part of the crop, when the birds are young.

Owner Mr F Christensen was delighted with the instant results;

"The reduction in excessive temperatures is impressive. Within 5 minutes the temperature had dropped from 30°C to 25°C. We are now able to reduce our energy overheads significantly whilst improving the environment for the birds in high summer."

Hydor 'Pre-Vent' System incorporating Evaporative Cooling System.

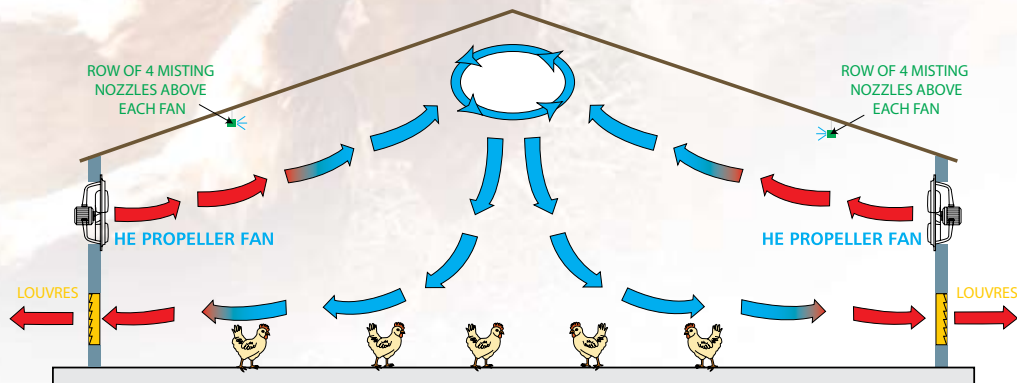


Figure 5.

The Pre-Vent and evaporative cooling system installed at Steanbow Farm (Figure 5) operates slightly differently to conventional ventilation systems as no roof extract units are installed.

Ten fans are installed down each side of the building with louver outlet shutters at low level between each fan. Four nozzles, spaced at 1 metre apart are installed internally from the ceiling above each fan.

Mist is carried with the air from the fans towards the centre of the building, where it meets the heat generated by the birds, evaporates, cooling the air which falls to the level of the birds. The positive pressurisation within the building pushes this across and out through the wall louvres.

Following the success of the evaporative cooling system in these two buildings Mr Christensen is looking to install the system in a further two buildings and is considering the benefits available for dairy housing at Steanbow Farm.

Steanbow Farm Poultry House





Case Study

Salad Production

Evaporative cooling systems have been installed in four large greenhouses focusing on salad production.

The system in the glasshouses is controlled via a manual timer allowing the 'on' and 'off' time periods to be manually regulated according to the requirements, as dictated by stock levels and age, along with the external environmental climate.

The pipe is mounted directly into the roof construction allowing the fine droplets to be circulated evenly across the building easily by the ventilating fans thereby avoid damp spots (see Figure 7.).

'Back to Back' nozzles are mounted to each length of pipe, this ensures the full width of the glasshouse is covered, (see Figure 8), whilst reducing the amount of piping required and minimising costs.

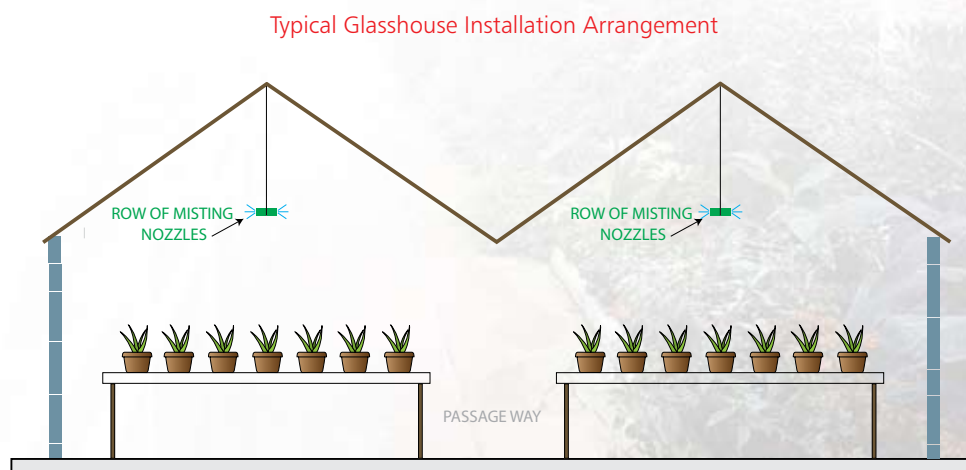


Figure 8.