

Cowshed cooling system with non-wetting fog

Recovery of
appetites

Restoration of
milk yield

Conception rate
improvement

Cooling cowshed by 5°C or lower in summertime.

CoolPescon® CH



“The Fog Engineers”

H. IKEUCHI & CO., LTD.

What is CoolPescon® CH ?

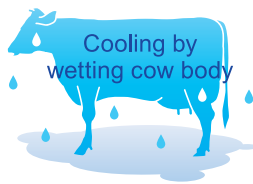
I Cowshed cooling system with non-wetting fog

CoolPescon® CH is the cowshed cooling system that reduces in inside cowshed temperature of **5°C** or more and prevents decreasing milk yield caused by heating stress. The system cools cowshed effectively without wetting the cows or ground using the evaporative cooling effect of very fine Semi-Dry Fog®*. This can keep the cowshed very hygienic.



* Semi-Dry Fog®: A fine fog of evenly distributed particles of 10–30 µm in average diameter.

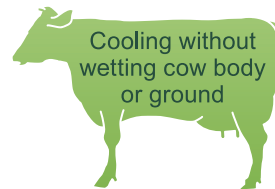
Semi-fine fog cooling



Cooling by wetting cow body

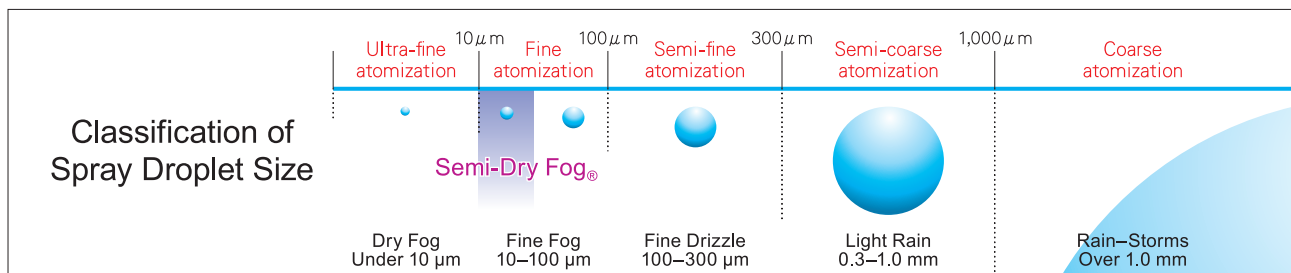
Dropping the body temperature by wetting cow body with fog of coarse particles

CoolPescon® CH



Cooling without wetting cow body or ground

Cooling cows by reducing the surrounding air temperature with fog of fine particles



Note: There are many opinions on the classification of spray droplet sizes but IKEUCHI, "The Fog Engineers", have classified them as above.

I CoolPescon® CH's effect



Restoration of milk yield

In summertime milk yield declines by 10–20% compared to other seasons due to nutritional deficiency caused by using blood flow for heat dissipation and loss of appetite. Our system, which works for their appetite back and diminished heat dissipation, enables to restore milk yield.



Recovery of appetites

From July to September feed intake decreases by 10–15% compared to other seasons due to heat stress. CoolPescon® CH cools down severe heat and improves cows' reduced appetite.



Conception rate improvement

Under hot environment problems such as spermatogenic malfunction or decline of conception rate occur. (Especially two days before and after fertilization date are important.) CoolPescon® CH protects cows from hot environment and improves conception rate.

System Flow

Natural ventilation cowshed

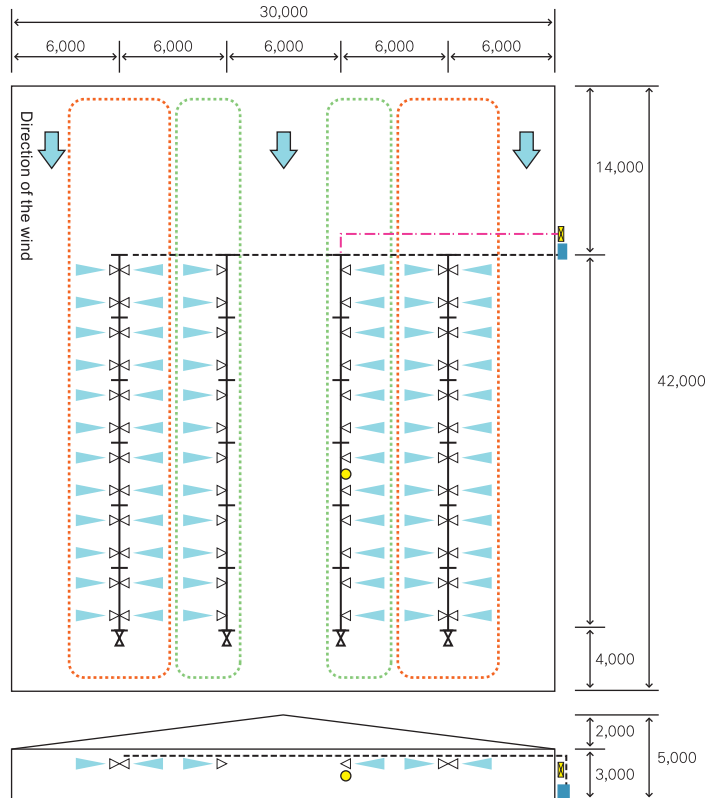


In open ridge and semi-monitor type cowshed, the system is installed at the height of about three meters.

Spraying near the cow body achieves the efficient cooling.
(No worry of wetting even sprayed at close range.)

e.g. Open ridge type

Legend					
	Both side spray header		Pump unit		High pressure hose
	One side spray header		Control unit		Sensor cable
	Temperature and humidity sensor		Bed area		Feeding area



Forced ventilation cowshed

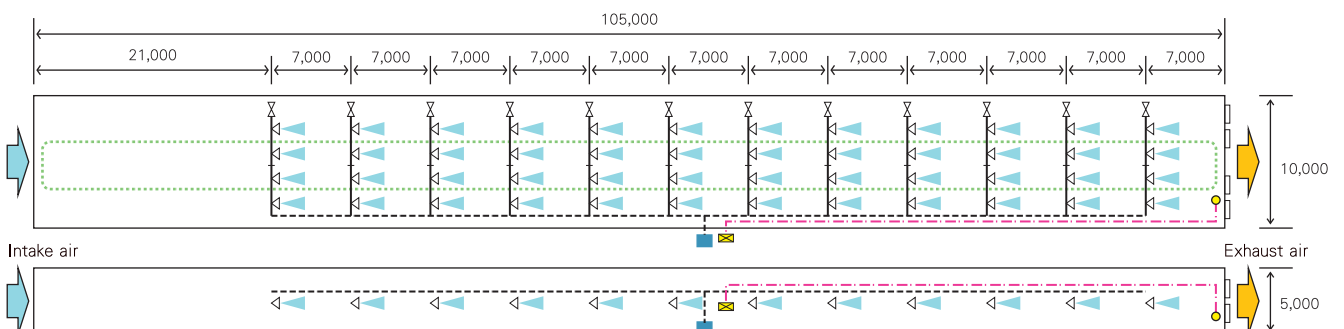


In tunnel ventilation type cowshed forced to ventilate using fans or other devices, the system is installed at the height of five meters so that fog can be carried about by air currents.

This can cool the cowshed uniformly through inlet area to outlet area.

e.g. Tunnel ventilation type

Legend					
	Both side spray header		Pump unit		High pressure hose
	One side spray header		Control unit		Sensor cable
	Temperature and humidity sensor		Bed area		Feeding area



CoolPescon® CH in Use **Maruo Dairy Farm** Ako City, Hyogo Japan



Aiming to restore summer milk yield and improve conception rate

According to Mr. Maruo, during the trial run in 2014, reduction in ambient temperature of 3–5°C was observed without wetting down the cows, ground, or facilities.

In full operation since May 2015, the system has been mitigating heat stress among the cows and increasing their appetite, restoring the volume of milk produced in the summer season that had been down 10–20% from the average.

As with the improved milk yield, which drops in the summer, there are hopes that the conception rate will also rise.

Steady monthly conception allows a regular volume of milk to be supplied all year round, which is ideal for a dairy farmer. The problem is that the summer heat disturbs the estrous cycle due to a loss of appetite and decline in physical functions, and causes delayed conception, ruining the balance of milk yield in the coming fiscal year.

The ability of CoolPescon® CH (formerly called CoolBIM®) to alleviate this problem is a significant result. Different from conventional mist cooling, there is no risk of mastitis in using CoolPescon® CH, as it cools down the cows without wetting those bodies.

Because the system prevents perinatal diseases in the summer and reduces the number of cows under medical treatment, the equipment pays itself off.*1

It is very likely that other dairy farms face the same problem with heat stress in the summer with their cows.

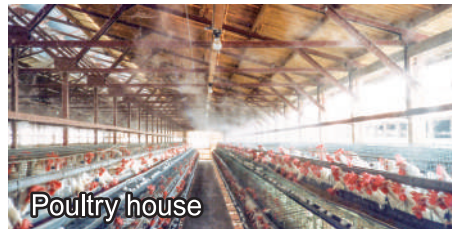
*1 Costs for system implementation vary according to the scale of facilities.

Note: Please do not contact the user directly about this to avoid inconveniencing them.



Photo of trial run of CoolPescon® CH in September 2014. Reduction in ambient temperature of 3–5°C was achieved without wetting the cows or cowshed.

Other animal husbandry performance



Note: Specifications and contents are subject to change without prior notice for purpose of product improvement.

For details or any inquiry please feel free to contact our sales office.

Headquarters

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