

Munters' Climate Control System combats hot, powerful winds

In Northern Africa, bordering the Mediterranean Sea, between Algeria and Libya, lies the Republic of Tunisia. The country has a yearly production of 83 thousand tonnes of eggs in 2004 according to the Food and Agricultural Organization of the UN. Tunisia is mostly made up of desert. But even in the North, with its temperate and mild, rainy winters, it has very hot and dry summers that are spoiled by the Sirocco winds.

Treacherous Sirocco winds

The Sirocco winds are a strong, southerly to south-easterly winds in the Mediterranean that originates from the Sahara and similar North African regions. Known locally as the Guebli, these winds are a major precursor to bad layer conditions.

The Sirocco causes dusty, dry conditions along the northern coast of Africa, storms in the Mediterranean Sea and cold, wet weather in Europe. The dust within the Sirocco winds can degrade mechanical devices and invade buildings, houses and of course chickens living in layer houses. These winds, with speeds of almost 100 km per hour, are most common during the summer.

Egg producers in Tunisia battle against Sirocco winds

Two layer farms, one in Menzel Chaker, just 11 km west of the Sfax city, and another in Ouzra, 16 km south of Tunis have always had to consider the consequences that this brutal environment has on the welfare of their hens.

In Menzel Chaker, where a layer farm of 65,000 hens is located, the very hot summers have a strong and negative effect on egg production as well as high hen mortality rates. While most chickens can lay 300 eggs per year, the capacity for this installation can run up to 19,500,000 per year – if all goes right.



The layer house in Menzel Chaker.

HUMICOOL: Case study, Egg production in Tunisia, North Africa



FACTS

With Climate Control System, egg producers in Tunisia achieved:

- Uninterrupted, even production all year round (no summer gaps)
- Increased productivity
- Lower mortality
- Short payback time



Founded in 1996, this layer farm is owned by M. Maher Mseddi. But there would be very few eggs to distribute if Mr. Mseddi not installed Munters' Climate Control System in his layer houses. In order to prevent unbearable conditions in the hen houses caused by extremely high temperatures from the notorious Sirocco winds, Munters' evaporative cooling pads and exhaust fans were installed. The customer's decision to invest in ventilation and cooling to gain better climate conditions and increase productivity has proven to be positive.

"Thanks to Munters' equipment," says owner M. Maher Mseddi, "We are not worried about lower egg production or increased mortality rate due to the Sirocco winds. So, our investment's pay-back time of only two summers is definitely profitable", he concludes.

DOGHRI Centre

In the Doghri Centre in Ouzra, there are five layer houses consisting of 40,000 chickens. The problematic winds also have a negative effect on egg production here. The capacity for this installation could be 12 million per year if conditions were perfect.

Founded in 1972, this layer farm is



Cooling part of the system (left) with CELdek evaporative cooling pads and ventilation part of the system (right) with Euroemme extraction fans.

run by plant manager Laaroussi Trabelsi, in collaboration with the Poulina Group. Here again, Munters' Climate Control System was recently installed in its layer houses to create cooler conditions for the chickens to combat the extremely high temperatures from the Sirocco winds.

"Thanks to Munters' equipment," says Mr. Laaroussi Trabelsi, "We now have no productivity gap through the summer season. During this windy, hot weather, productivity always decreased

around 25% compared to the other seasons. But now, we are seeing no negative fluctuations in productivity. So, the pay-back time, which is around four years, is very much worth it", he says.

Munters' equipment installed in both layer farms:

CELdek® 7090-15 evaporative cooling pads and Euroemme® EM50 exhaust fans, 1.0 hp galvanized.

Climate Control System from Munters

At the heart of a Munters' Climate Control System are two of the most trusted brands in the industry, CELdek® evaporative cooling pads and Euroemme® fans.

The CELdek® evaporative cooling pads are used in systems where high efficiency cooling is required. It can be used for many different cooling purposes but is particularly suitable for cooling of live stock buildings and greenhouses.

The green stripe pad consists of specially impregnated and corrugated cel-

lulose paper sheets with different flute angles. This unique design yields a cooling pad with high evaporation efficiency while still operating with a very low pressure drop. In addition, scaling is kept to a minimum and no water carryover occurs since the water is directed to the air inlet side of the pad.

Euroemme® extraction fans are special because they need to close very tightly when they are not in operation. To meet this special requirement, the extraction fans are equipped with specially designed shutters which close tightly when the fan is not in operation. When the fan is operating, a unique

centrifugal mechanism opens the shutters and keeps them fully opened, even in dusty agricultural environments. This ensures efficient ventilation. It also helps to retain heat and eliminate drafts when no ventilation is required.

Euroemme fans are products of choice when it comes to supplying ventilation to agricultural structures. Whether the required ventilation need is air extraction, air circulation, distribution of heated air, or breaking up of stratified air, there is a suitable fan in the Euroemme range.



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