

## Cooling and Humidity Control

### Humidity Control

Humidity, the amount of water vapor in air, is affecting the growth quality of plants.

By controlling the humidity mid - day water stress can be reduced and better cell growth is achieved.

**Misting systems** delivering tiny droplets are suitable for adding humidity through evaporation.

For good humidity control, the use of non-drip valves enable short irrigation pulses



### Cooling

Cooling by water evaporation is used both for plants and livestock.

Plants cooling can be achieved by misting or mini sprinklers.

Livestock cooling can be achieved mostly by Mini sprinklers.



## Cooling Systems for Chicken Coops

Poultry suffer when the temperature rises above 27 c. Since poultry do not perspire, their heat is regulated by water evaporating from the body, and by inhaling and exhaling air through their breathing system. Spraying the poultry with water is a substitute for perspiration. One gram of water that the chicken evaporates is equal to -1/200 c inside the coop. The TAVLIT cooling system composed of the 866 or 803 minisprinklers is connected to a pipe in the upside down position and is suspended from the roof. Misters are not recommended since mist may cause the poultry breathing diseases.



It is not recommended to wet the poultry for a long period of time. It should be carried out in short intervals of 0.5-3 minutes, maximum. The time between intervals should be proportionate to the outside temperature, to the coop itself, structure, geographic area and specific location.

THE FREQUENCY OF INTERVALS		
OUTSIDE TEMPERATURE	FREQUENCY IN MINUTES	TIME IN MINUTES
28 <sup>0</sup> - 32 <sup>0</sup>	30	2
33 <sup>0</sup> - 36 <sup>0</sup>	20	2
37 <sup>0</sup> - 40 <sup>0</sup>	15	2
41 <sup>0</sup> - 44 <sup>0</sup>	8	2

## **Cooling System For Battery Coops (Eggs)**

Mini sprinklers 866 70-105 l/h connected to the 530 non-drip valve , (to prevent drops when opening and closing the water), connected to a pipe placed 1 meter 3 Ft) above the top of the battery, at a distance of 3-4 meters (10-12 Ft).

## **Cooling System For Fattening Coops (Meat)**

Mini sprinklers 866 70-105 l/h with 530 non-drip valve, connected to a pipe as high as possible in order to cool the air as high as possible in the coop with Mini sprinklers spaced at a distance of 6 x 4 meters.

For a standard coop of 12 meters (37 Ft) long, two rows of pipes are recommended.

### **Points to Consider:**

- The water should not be hot. (P.E pipes and a water tank placed on the roof may get warm).
- At a relative humidity of 70% there is no need for sprinkling.
- Ventilation of the coop improves the cooling. It removes part of the humidity and ensures that cool air enters.
- Shadowing the coop may help. It can be covered with a net with the Mini sprinklers irrigating the net or between the net and the roof