

TG-FOG SYSTEM

COOLING DOWN - TREATMENT APPLICATIONS

TG FOG – AGRICULTURE

The TG-FOG System technology has been deployed include the following: The TG-FOG system has been successfully deployed for the last 10 years in multiple greenhouse installations (over 800ha. so far), crop types, greenhouse types, nursery houses, propagation houses etc. over 20 countries worldwide.

GREENHOUSE TYPES:

The greenhouse models, where the TG-FOG technology has been installed are the following:

- Multi-span plastic greenhouses with and without screening installed within the greenhouse, and with any type of ventilation (natural, exhaust fans etc.)
- Glass Greenhouses such as Venlo etc.
- Tunnels and Multi-span
- Shading Greenhouse Structure

TYPES OF INSTALLATION:

The various TG-FOG installation types delivered comprise the following:

- Fixed TG-FOG atomising spray nozzles installation ranging from 10m²/nozzle through 20m²/ nozzle.
- Fixed fan or oscillating fan installation type including TG-FOG atomising spray nozzles coupled to the fans (4 through 8 nozzles/fan).
- Fixed installation air fed by tractor driven air compressor.

www.tgrok.com / tgrok@tgrok.com

CROP VARIETIES

The several crop types we have worked with are:

- Fruit and vegetable growing (50% through 70% target relative humidity)
- Nursery houses and Seed Production (50% through 90% target relative humidity)
- Cut flower crops: liliium, roses etc.
- Ornamental plants

Following up from our clients' feedback, own research, development centres and studies carried out in greenhouses, the TG-FOG installation is proved to be paid by itself within one year from kick-off. The business case is based on the following tangible and intangible benefits;

CLIMATE CONTROL

1. **Even and homogeneous increase of relative humidity** within the greenhouse up to 90%.
2. **Greenhouse cool down:** up to 15°C of temperature drop

AERIAL AUTOMATED TREATMENT APPLICATION

1. Automated, **100% homogeneous and effective treatment application** within the greenhouse: phytosanitary, fungicide, nutrients or any product which can be dissolved in water
2. More **preventive and effective product treatments** i.e. no mixing of products, cheaper phytosanitary and fungicide products applied etc.
3. **100% product homogenisation** across the entire greenhouse ambient, including the whole plant foliar mass, and the upper and lower part of the leave.
4. **Man labour savings** due to automatic controlled treatment application.
5. **No toxicity** due to nil exposure of humans to the treatment application itself.

COMPETITIVE ADVANTAGES

The main TG-FOG system competitive advantages are:

- **Maximum energy savings and increased productivity** due to low water pressure (2bar through 6bar) and low compressed air pressure (1bar through 2,5bar) mix.
- TG-FOG spray nozzle **liquid flow rate** (2ltr/h through 10ltr/h) and **droplet size** (5microns through 100microns) **can be adjusted at any time**, simply by regulating the liquid pressure at main liquid pump exit.
- **Micronising fog-distance up to 8,5 meters**, resulting in a better and quicker product homogenisation within the greenhouse.
- **Little maintenance of the system and no clogging** (0%) occur at the TG-FOG atomising nozzle regardless of the product micronised through the nozzles. This is due to the wide external TG-FOG orifice (both 0,8mm and 1mm orifices available).

Important Remark: the 0,8mm external orifice TG-FOG nozzle has a section 16 times larger than the section of a 0,2mm external orifice high pressure nozzle.

- Easy mounting process. The TG-FOG nozzle can be connected to any flexible and/or rigid air and liquid feeding pipes via clamps, direct connection, micro-tube etc.
- The TG-FOG **spray nozzles are made out of the top quality polymers**, which resist any chemical attack and temperature exposure.