

Cannabis greenhouses with DryGair concept

DryGair Energies concept was integrated into Cannabis greenhouses located in different countries and different climate conditions.

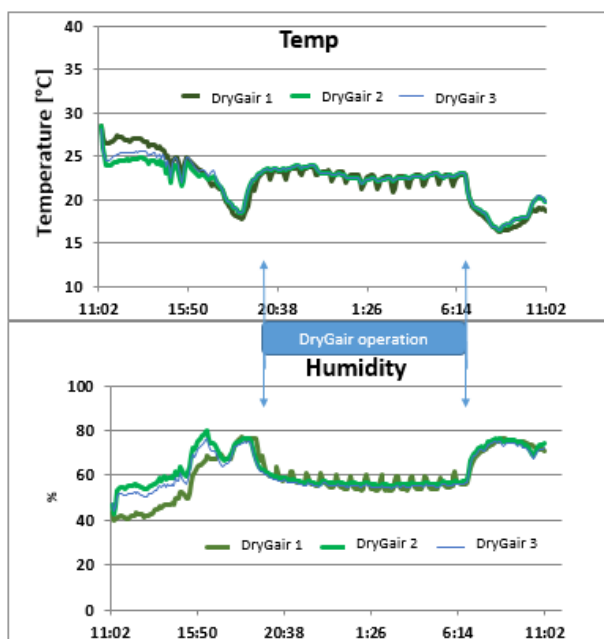
Some greenhouses were located in cold areas: low temperatures, heating system, with or without a thermal screen, low radiation (CO2 enrichment), and other greenhouses were located in areas with moderate climate conditions: relatively high temperatures throughout most of the year (with heating system and without), high radiation levels, etc. DryGair gathered data during these greenhouses' operation.



1. Controlling the humidity and the temperature.

a. Humidity:

Humidity is kept at the desired level during DryGair's operation hours. The outside RH level reached 90% and above, while the inside RH level was controlled at 60% RH (the required level) during the operation of DryGair.



Uniformity

Both graphs are from the same date. Each graph presents 3 different sensors in different locations inside the greenhouse.

The blue textbox presents the DryGair operation hours (19:00-7:00). As can be seen, the temperature and humidity are controlled and the lines are uniform and homogenous.

When DryGair wasn't working, the lines are spread (different temperature and humidity in different locations of the greenhouse) and not uniform.

b. Temperature:

DryGair air distribution concept creates uniform climate conditions inside the greenhouse-temperature and humidity. In addition, DryGair concept can save heating energy by re-using all the energy invested in the operation of the unit and the energy released from the water condensation process. The released energy can increase the temperature inside the greenhouse (2-13°F, depending on the greenhouse structure and needs).

c. Homogenous climate conditions

DryGair maintained optimal climate conditions. In order to have better understanding of the climate conditions DryGair Energies and the growers installed sensors in different heights and at different distances from the DryGair unit. In all greenhouses, despite the high

cannabis branches, when DryGair was operated the temperature and the humidity were uniform.

2. Energy Saving

Cannabis is a highly sensitive plant which requires special attention and climate control. It is well known that cannabis is one of the crops with the highest carbon footprint due to the high energy consumption. In many cannabis greenhouses, in order to maintain the required temperature and humidity, growers use a heating system or HVAC. The energy costs are a massive part of the total growing costs. Governments often subsidize energy saving technologies in order to promote greener environment and reduce the CO2 emission. DryGair concept allows the grower to save energy and enjoy a significant financial advantage.

3. Yield

Using DryGair to control humidity and improve the climate conditions inside the greenhouse:

- a. Using DryGair prevents humidity diseases such as botrytis, mildew, alternaria alternata. Botrytis is highly contagious, if not treated it can harm all plants in the greenhouse. Even when treated with heating, ventilation and other materials the infected plants usually constitute approx. 30% of the yield. When treated with DryGair solution, according to growers, less than 3% infected plants.

DryGair solution reduces humidity and prevents humidity diseases in the greenhouse.



- b. Quantity: DryGair solution allows the grower to grow all year long (isolating the greenhouse from outside conditions), and enjoy more flowers in healthy plants.
- c. Quality: According to the growers, the cannabis flowers were more uniform when using DryGair.. DryGair solution enables the grower to achieve a uniform produce that is suitable for medicinal needs.

4. Integration: simple integration



5. DryGair operation:

DryGair can efficiently operate as:

- a) Dehumidifier
- b) Air circulation system
- c) Heating system- if needed
- d) Chilling system- if needed

6. ROI:

In all greenhouses the ROI is between 1-3 years, deriving from increase in production and energy saving.

The ROI calculation is conservative, and doesn't include additional advantages such as decrease in pesticide use, loss CO₂, decrease in working hours etc.