



mikrosera

Mobile Szélgép

FROST IS
NOT FATE

felhasználóbarát, hatékony, megfizethető



What is Frost?

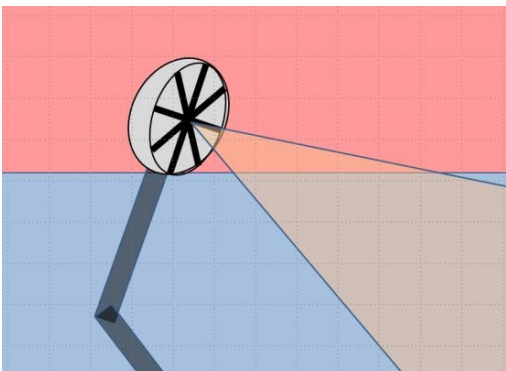
Radiation frost is a natural phenomenon, that might take place in fall, winter or spring months during cold nights, when there is no wind and the sky is open without any clouds.

A frost night can decrease the yield amount, jeopardize product quality, and can sometimes damage the whole crop ending in no production.



Losing one year worth of effort in one night has deep personal, sociological and economical impacts.

Frost fans offer an effective solution in fighting radiation frost to protect valuable crops.



How Does the Fan Help?

During the day, sun heats the earth. When the sun goes down, then the earth starts to radiate back the heat it stored.

This heat elevates warm air which starts to create an inversion layer, a strip of warm air, starting from 8 – 10 mt above ground level.

When the crops are freezing on the ground, there is warmer air up above. The fan sucks this hot air and blows it below to the cold, mixing the two to raise temperature. The stronger the inversion layer, the more increase in temperature occurs.

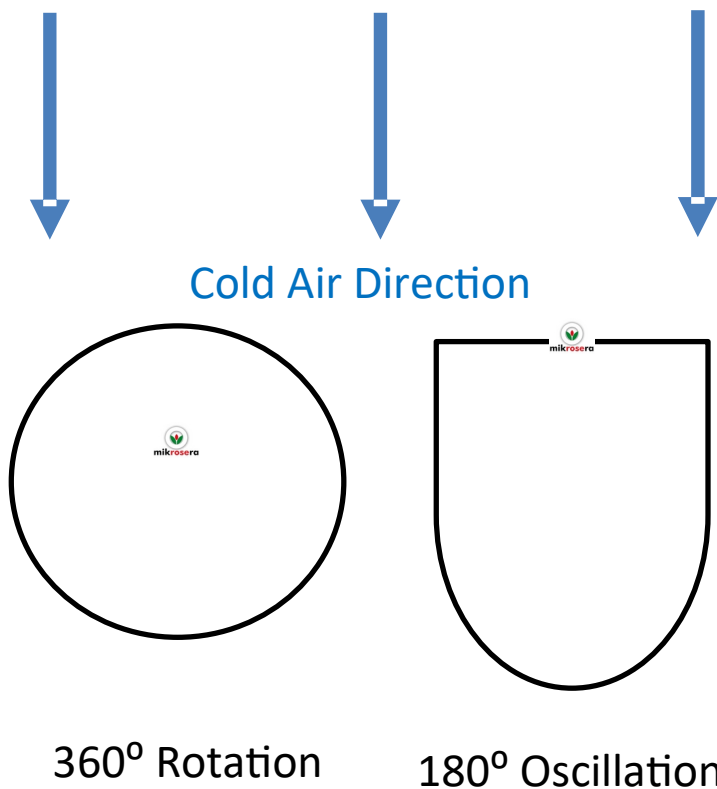


Protection Area

On an average frost night, it is possible to protect 4 hectares of land with one machine.

In larger orchards where more than one machine is deployed, or with fields with certain slope, the coverage area will be larger per machine.

Depending on the field topography, the machine can work in rotation or oscillation mode. Protection area would be roughly the same but the shape of the area would be different.



Mikrosera prepares the optimum positioning plans for each client considering site topography and other custom needs.



MP-1 Benzin főbb műszaki adatok

Motor teljesítménye	: Honda 22,1 HP V-Twin air cooled
Üzemanyag típusa	: Unleaded gasoline (min 91 octane)
Üzemanyag fogyasztás	: 5 lt/hr
Üzemanyag tank kapacitása	: 60 lt
Ventilátor	: 5 lapát, 2 mt átmérőjű, kompozit
Ventilátorház	: Kompozit
Váz	: Tűzihorganyzott acél
Működési magasság	: 3 m - 8 m
Forgási mód	: 360°
Oszcilláló mód	: A felhasználó határozza meg
Száraz súly	: ~1485 kg
Szállítási méretek	: 2850 mm x 2315 mm x 5850 mm
Szenzorok és adatok	: Hőmérséklet 1 mt Hőmérséklet 10 mt Szélesség 10 mt Üzemanyagszint Akkumulátor állapot
Fajlagos teljesítmény	: 3-4 hektár (hőmérséklettől függ)
Hang	: 40 dB @ 300 mt 55 dB @ 150 mt 59 dB @ 75 mt 66 dB @ 25 mt
Távoli kapcsolat:	: GSM GPRS
Elhelyezés	: Műholdas GPS-en
Automata indulás	: Standard
Párolgásos hűtőmodul	: Standard
Conformity	: CE EC



MP-1 Elektrik Technical Specs*

Total Power	: 11 kw
Rated Input Voltage	: 400V AC
Frequency	: 50/60 hz
Phase	: 3P1N1PE
Fan	: 5 blades, 2 mt diameter, composite
Shroud Material	: Composite
Main Chassis	: Hot dip galvanized steel
Operation Height	: 3 mt - 8 mt
Rotation Mode	: 360°
Oscillation Mode	: Between user defined angles
Dry Weight	: ~1530 kg
Dimensions in Transport Mode	: 2850 mm x 2315 mm x 5850 mm
Sensors and Data	: Temperature at 1 mt Temperature at 10 mt Wind Speed at 10 mt Fuel level
Noise	: 40 dB @ 300 mt 55 dB @ 150 mt 59 dB @ 75 mt 66 dB @ 25 mt
Auto Start	: Standard
Evaporative Cooling Module	: Standard
Conformity	: CE EC



* Mikrosera reserves the right to change the technical specs any time without notice.

Additional Uses

When not used for frost, the machine has the capability to be used for other jobs throughout the year. That is why it provides the fastest possible ROI.

The machines' uses are limited by the clients' needs and imagination. Some sample uses;

- + Increasing pollination
- + When in need to increase/decrease relative humidity in the field
- + To decrease the temperature in hot days
- + Spraying over the trees
- + For cooling people and animals in summer
- + For dust suppression
- + For noise reduction
- + For de-icing
- + And in all occasions where artificial wind is needed



Other Advantages

- No need for concrete foundation
- No need for building permits
- No need to cut down trees for installation
- Extremely quiet during operation
- Very low maintenance costs
- Easily stored when not in use



Premium Services

On request, Mikrosera offers advanced services.

As a first step in the project, high resolution aerial photographs of the field is taken with the drone.

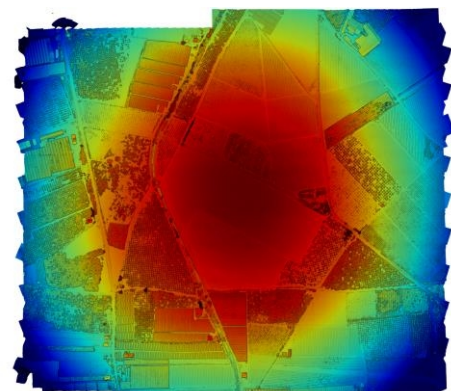
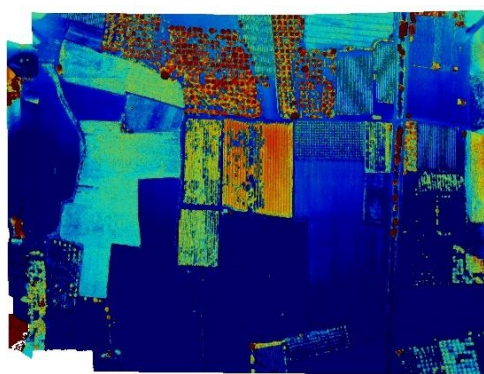
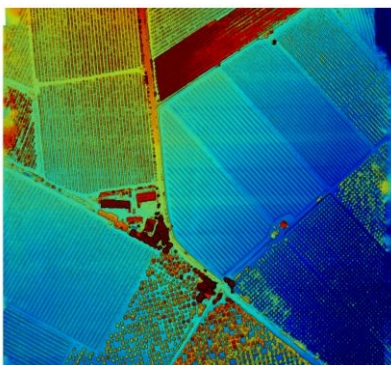


These photographs are then processed in special software to create an accurate topography map in digital.

In the next step, this data is used to predict how the frost enters the orchard, where it pools up, and how it floods to leave.

Once the frost movement in the orchard is mapped, this data can be used in positioning of the machines considering this frost path.

This service is not necessary for orchards in flat land, but it is most useful for larger orchards and orchards situated around valleys, hills, water etc.





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Mikrosera Tarim Bilgisayar A.S.

Factory:

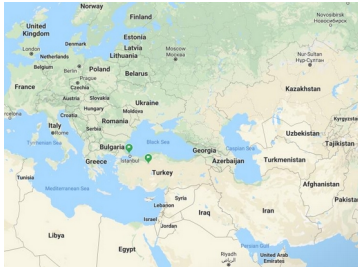
Saray Mah.

Gimat Depolama San. Sit.

106. Cad. No:16/A

Kahramankazan 06980 Ankara

Türkiye



GOAGRO

MINŐSÉG. INNOVÁCIÓ. MEGBÍZHATÓSÁG.

GoAgro Korlátolt Felelősségű Társaság

Székhely: 4741 Jánkmajtis, Arany János út 30.

A dószám: 26609953-2-15

Tel: +36 20 5567703, +36 70 4534198

Közösségi adószám: HU26609953

email: goagrokft@gmail.com

Cégjegyzékszám: 15-09-085898

web: www.goagro.hu

Tel/Fax : + 90 312 241 59 90

GSM : + 90 541 208 36 08

Web : www.mikrosera.com

Web : www.mobilefrostfan.com

E-Mail : info@mikrosera.com
