Arrigoni: agrotextiles allow to grow berries even in non-native climates

Arrigoni, a leading group in the design and production of agrotextiles for agriculture, held a workshop during the Italian Berry Day on Macfrut, the international fruit and vegetable exhibition that took place at Rimini Fiera from 7 to 9 September.

Giuseppe Netti, agronomist, and Technical Sales Support of Arrigoni, held a conference entitled **"Cultivating berries in non-native environments – Protective screens for every environmental need"**, arousing great interest among the public.

In fact, berry fruits are experiencing a phase of great success at an international level: the increase in interest in the organoleptic properties and health benefits of these fruits has led, in the last decade, to double the turnover in the world, generating around 2 billion euros, with more and more producers wishing to cultivate them locally. However, not all climates are suitable for the cultivation of small fruits, which are particularly delicate and suffer from high temperatures, excessive

radiation, rain, hail, and insects.

For these reasons **Arrigoni presented on the Italian Berry Day its agrotextiles tested in different places in the world** to ensure the possibility of growing berries by creating the environment of origin of the crop in terms of light and temperature, protecting the plants from new insects for that type of crop and extreme atmospheric agents, while reducing the use of plant protection products.

Two of the most relevant factors have been the use of white thermo reflective screens to reduce temperatures, which in fact can be up to 8/9 ° C lower than outside. Furthermore, the additives to diffuse the light (LD - Light Diffusion), increase the quantity of PAR light available for the plants, allow a better performance of photosynthesis, reflect, and diffuse the light in the short IR spectrum and consequently ensure less heat in input and they avoid burns on the vegetation, which instead is enriched with polyphenols compared to dark-colored solutions.

Taking for example raspberry plants, which naturally prefer partially shaded places, it has been shown how protection from the sun and the diffusion of light can be well balanced thanks to Arrigoni's white thermo-reflective screens. **Prisma®, made of polyethylene tape with LD additive**, allows a more uniform development of plants and reduces the temperature in the protected area, thus creating the microclimate suitable for different crops.

Robuxta® is the thermo-reflective screen made of tape and monofilament, resistant to abrasion. It is the ideal screen for the cultivation of berry fruits: in the white version, integrated with the LD additive for light diffusion, it reflects infrared rays and, thanks to the reduction of up to 5 degrees in temperature, has led to an increase in productivity up to 70% compared to the standard green monofilament network and better working conditions for operators. This also reduced the percentage of non-marketable fruit by around 20%.

Hail is also a particularly detrimental factor for the cultivation of small fruits, which Arrigoni can avoid thanks to its Fructus® and Iride® monofilament mesh systems. These, in addition to protecting from hail, modify the microclimate by increasing relative humidity and shading, also protecting plants from birds and some insects.

Against the rain, on the other hand, Protecta® is the single-layer multifunction screen made entirely of HDPE with high mechanical resistance and long life, which protects against the **negative effects of rain on plants by reducing its passage by 90%,** maintaining good conditions of permeability to air and protecting from late frost, wind, insects and sun.

Finally, against insects such as Drosophila Suzukii and Tuta Absoluta, the effective Biorete® insect screens. they are made of high tenacity transparent polyethylene monofilament and prevent harmful insects from reaching and compromising crops, without preventing the circulation of air inside and allowing to reduce the use of pesticides in crops, with consequent benefits for the

environmental sustainability.