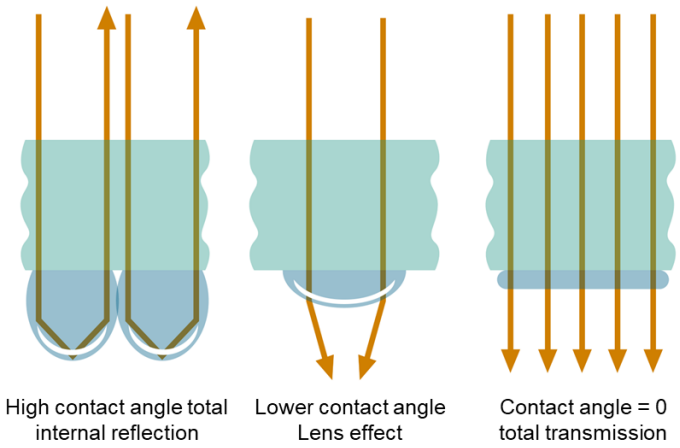
Case Study: Atmer™ 103 Anti-Fogging Additive

Improved crop yields in agricultural applications with our anti-fogging additives

The customer problem

With the increasing demand for food from the growing population, we were approached by a supplier of agricultural film to a tomato grower requiring improved light transmission in greenhouse tunnels in an attempt to increase crop yields. Poor light transmission in greenhouse tunnels is caused by water droplets forming on the inside surface of the film. Water appears as discrete droplets due to differences in the surface tension between the water droplet and the polymer surface. This not only causes a reduction in light transmission also considerable damage to the crop through constant water drip and through burning since water droplets act as lenses when sunlight shines through them.



How did Cargill help?

The film manufacturer was supplied with Atmer™ 103 specially formulated anti-fogging additive recommended for LDPE agricultural films. Having been incorporated into the polymer at 2% active level, Atmer103 anti-fogging additive improved the light transmission through the film by almost 50%, spreading condensed water droplets into a thin transparent layer of water on the surface of the film.

A reduction in the amount of damaged fruit was also observed. In the previous season's growth, 17 pieces of damaged fruit were observed, however just 7 were observed in the crop grown with the inclusion of Atmer103 additive - a reduction of almost 60%. The ripening rates of tomatoes also increased significantly each day. Over a 25-day period, there was a 26% increase in the amount of ripe fruit collected compared to the previous season.

If you have further questions do not hesitate to reach out to your local representative.

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