**Making the switch from fossil- to biobased film-formers and rheology additives**

**(amynova polymers GmbH)**

The starch-based polymer amylofol® represents a platform technology that allows for a switch from fossil to renewable carbon in a wide range of applications. Persistent polymers such as polyacrylates used in personal care or fossil-based oils and surfactants in agriculture can be replaced.

We have developed a homogenous modification process for starch that allows us to achieve unique properties, such as excellent film formation, thickening ability and moisture retention of our biopolymers. amylofol® is produced from locally sourced, renewable raw material.

In agriculture, amylofol® is used as an adjuvant to tank mixtures of crop protection and fertiliser products. As a film-former, amylofol® significantly reduces the wash-off of the active substances from the leaf's surface. This allows for a reduction of plant protection products up to 50 % and 20 % in fertilisers.

Cosmetics and personal care products often contain water soluble, poorly biodegradable synthetic polymers. They are required for achieving the desired viscosity or film forming abilities of shower gels, creams and many other cosmetic products. As they are not degraded in wastewater treatment plants, they are released into the environment. Due to its viscous properties and film forming ability, amylofol® can replace these fossil-based and persistent chemicals as a formulation aid.

In the paper and packaging industry, amylofol® has the potential to replace poorly biodegradable fluorochemicals as e.g. greaseproof barrier coatings. In addition to an excellent fat and oil barrier, the material offers very good oxygen and aroma barriers, as well as being mechanically flexible. In the medical field, applications requiring properties such as moisture binding, film formation and controlled release could be supported by amylofol®.

The flexible modification of product properties facilitated by our process technology allows us to develop biobased and biodegradable polymer alternatives for a large number of different applications.