

PLASTICULTURE

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Simply put, Plasticulture is the combination of two words, plastic and agriculture. It is defined as the use of plastic in plant and animal agriculture. The first use of plastic film in agriculture was in 1948 in an effort to make a cheaper version of a glasshouse. Professor E.M. Emmert built the first plastic greenhouse, a wooden structure covered with cellulose acetate film. He later switched this to a more effective polyethylene film which has been used in large scale agricultural production around the world till date.

The plastic materials themselves are often and broadly referred to as "ag plastics." Plasticulture ag plastics include soil fumigation film, irrigation drip tape/tubing, nursery pots and silage bags, but the term is most often used to describe all kinds of plastic plant/soil coverings. Such coverings range from plastic mulch film, row coverings, high and low tunnels (polytunnels), to plastic greenhouses.

Polyethylene (PE) is the plastic film used by the majority of growers because of its affordability, flexibility and easy manufacturing. It comes in a variety of thicknesses, such as a low density form (LDPE) as well as a linear low density form (LLDPE). It is currently in use in The United States of America, China and some other countries in Africa and the Middle East.

These plastic products have numerous purposes. In short, plastics make agriculture more productive and efficient by cutting costs and saving time. They also conserve precious natural resources, such as water, nutrients, fossil fuels, and many forms of energy, especially sunlight. In some cases, plastic can be used to limit sunlight and retain moisture, especially in arid regions. Plasticulture also reduces competition from invasive weeds and insects.

In addition, Plasticulture has a couple of disadvantages which include a greater initial cost, increased management and monitoring, special machinery and supplies needed to install the plastics and lastly a difficult removal process.

In conclusion, Plasticulture is of a great benefit to Agriculture because it not only reduces pollution in the sense that plastic waste materials are used for an efficient agricultural system but it also helps to preserve soil nutrients which in turn increases productivity.

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