

Standard and Processing of Photodegradable Polyethylene

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Abstract : The introduction of degradable plastic materials into agricultural sectors has represented a promising alternative to promote green agriculture and environmental friendly of modern farming practices. Major challenges of developing degradable agricultural films are to identify the most feasible types of degradation mechanisms, composition of degradable polymers and related processing techniques. The incorrect choice of degradable mechanisms to be applied during the degradation process will cause premature losses of mechanical performance and strength. In order to achieve controlled process of agricultural film degradation, the compositions of degradable agricultural film also important in order to stimulate degradation reaction at required interval of time and to achieve sustainability of the modern agricultural practices. A set of photodegradable polyethylene based agricultural film was developed and produced, following the selective optimization of processing parameters of the agricultural film manufacturing system. Example of agricultural films application for oil palm seedlings cultivation is presented.

Keywords : photodegradable polyethylene, plasticulture, processing schemes

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