

Bioplastics and Biopolymers – InCrops event 16 July 2009

Summary of the discussion "What is needed to accelerate innovation in renewable biopolymers and bioplastics?"

The event stimulated a lively discussion between the audience and the speakers. The issue of LCA analysis of biopolymers was discussed widely. Paul Fowler from Bangor University stated that end of life scenario depends on the material and referred to the paper on "Compostable cutlery and waste management - an LCA approach" carried out by Novamont (available for non-commercial use and education from him or InCrops). Academics raised the question about the necessity of continuous screening of new plant varieties and industry representatives confirmed that significant investment of resources in matching properties to genebank data and screening for new genotypes. Following general discussion, those points were recorded:

1. Communication and education to foster a deeper understanding of opportunities and challenges

This issue was seen as a major factor for accelerating the use of bioplastics and biopolymers. It was proposed that the advantages and challenges associated with the use of bioplastics and biopolymers need to be publicised to a wider audience via TV featured programs, schools and universities campaigns, and public events. We do not have 50 years to disseminate this knowledge - immediate action is needed. Councils and recycling authorities need to develop the logistics associated with mass production and disposal of bioplastics and biopolymers. Representatives of businesses amplified the point that implementation of bioplastics and biopolymers on a mass scale requires tax advantages and supportive legislation. This will boost production and lead to lower prices.

Senior industry representatives suggested one route to successful takeup would be to target major retailer brands and work to develop the whole supply chain for bioplastics-based products.

2. Barriers for market penetration and economic growth

All participants agreed that the end of life issue is a major barrier for mass production of bioplastics and biopolymers. End users need to be educated to understand the correct methods of disposal. Bioplastics can be recycled, existing systems can already recycle PLA. Representatives of the industry and recycling associations stated that the technology for composting and recycling already exists, the logistics of recycling and composting needs to be addressed by local councils as soon as possible. It was also noted that a step change in government perception of bioplastics and biopolymers is already evident - with a new renewables strategy having been announced on 15 July 09. A lot of academic research into bioplastics and biopolymers is funded by government.

3. Market needs for bio-based polymers sector?

The construction industry needs bio-based polymers for insulation foams, though issues with water resistance and fire retardancy need to be solved before these materials find wider application. It was reinforced that performance is an important issue and if 100% biopolymers cannot provide it, it is necessary to work with blends in order to demonstrate a precedent of using bio-based material in industrial products, until technology moves forward. Super-absorbant polymers are seen as having significant potential and would attract major commercial interest.

4. What can InCrops and its partners do to facilitate this process?

The majority of participants suggested that InCrops needs to be involved in lobbying for bioplastics and biopolymers. It was pointed out that it is important to understand the structure of the supply chain for bioplastics and biopolymers and to act as a facilitator of interaction between different layers of the supply chain. InCrops needs to create designated projects on using bioplastics and biopolymers in end-user products and follow them through to market. Need to invite government representatives to participate in events like this so that they become aware of the relevant issues.