



Soybeans as Chemical Feedstock Introduction-Teacher Resources

1) To engage students in thinking about Bioproducts and uses of soybeans beyond food and fuel, use these videos:

The Human Element <http://www.youtube.com/watch?v=QpydugTkt1U>

Biobased Plasticizers

<http://www.dow.com/performanceplastics/sustainability/electrical.htm>

GNG Bioproducts Career Video

<http://grownextgen.org/career-videos/video/bioproducts/>

GNG Entrepreneurship Career Video <http://grownextgen.org/career-videos/video/entrepreneurship/>

The perfect crop

<http://www.ncsoy.org/ABOUT-SOYBEANS/The-Perfect-Crop-video.aspx>

2) Before beginning with the processing activity, have students watch these videos:

ZFS Soybean Processing <http://youtube.com/watch?v=Bn05a7xx1KM>

Soybeans: "Science and Agriculture: The Soy Bean" 1939 ERPI Encyclopedia Britannica Films <http://youtube.com/watch?v=rKAFkiUM-ro>

Compare the technology used in each video.

3) Here is some price info to use as a guide for determining the costs of the products:

Info to use in calculations: (2013, June market) raw soybean, \$541.41/metric ton; hulls, \$91.32/mt; crude soybean oil, \$1084.23/mt, soybean meal, \$506.62/mt; soybean protein, \$1200/mt; Degummed Soybean Oil, \$1400/mt; soy lecithin, \$800/mt.