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Special Report - Next Generation Biofeedstocks: Resources for Renewables

Report Overview

Subjects addressed:

- Economics and Regional Supply Estimates for:
  - Conventional Carbohydrate Feedstocks
  - Emerging Biomass Feedstocks Conventional Oil Feedstocks and the Produced Oils
  - Emerging Oil Feedstocks and the Produced Oils

Broad concerns about the future of the global economy and the environment have brought about a new goal for industries, consumers, and governments to strive towards in the twenty-first century: sustainability. First generation biofeedstocks for carbohydrates include corn, sugarcane, wheat, and sugar beets, while second generation feedstocks include all lignocellulosic biomass, such as on-purpose energy crops (e.g., biomass grasses and on-purpose wood), wood wastes, agricultural wastes, and refuse streams (e.g., MSW and food processing wastes). First generation oleaginous (oil containing) feedstocks include palm, soybean, and coconut, while next generation feedstocks include non-traditional oil crops, such as algae and jatropha.

The energy and chemical industries are among those most heavily scrutinized for sustainability. Many energy and chemicals majors are diversifying into biomaterials, which require biofeedstocks. As a result, biofeedstocks are expanding rapidly and their use is growing faster than conventional feedstocks. Serious attention is being given to development of next generation biofeedstocks such as on-purpose energy crops and agricultural residues.

Important recent developments have been focused on the development of bio-replacements. The potential for the development of breakthrough bio-based technologies is driving many established global firms to invest in R&D in this area to ensure that they are not left out of such developments. Similarly, the rapidly growing movement to label products as "green" is an important driver for durable goods manufacturers who are keen to discover ways to utilize growing volumes of renewable materials. Reflecting these trends, many fossil-based chemical producers have been diversifying into bio-based technologies through investments, partnerships and acquisitions.

Conventional carbohydrate feedstocks to be covered include: corn, sugarcane, sugar beet, and wheat. Some of the emerging biomass feedstocks to be covered include: biomass grasses, agricultural wastes, wood, MSW, and food processing wastes.

Conventional oleaginous feedstocks to be covered include: soybean oil, palm oil, palm kernel oil, rapeseed/canola oil, and coconut oil. Some of the emerging next generation oleaginous feedstocks to be covered include: algae, jatropha, and waste greases.

This report, ***"Next Generation Biofeedstocks: Resources for Renewables"***, assesses the supply and economics of producing conventional and emerging biofeedstocks and answer the questions:

- What are the costs of producing biofeedstocks?
- What biofeedstocks are available regionally?
- What biofeedstocks are abundant regionally?
- How do first generation biofeedstocks economics compare to emerging next generation feedstocks?
- What are the potential opportunities for bio-developers?

The study provides subscribers with a solid grasp of the existing markets for biofeedstocks, their production costs, as well as emerging feedstocks. This includes first and second generation carbohydrate feedstocks (e.g., corn and biomass), as well as first and second generation feedstocks for the production of and crushing of oil feedstocks (e.g., production of soybeans and algae along with crushing to produce oils). The issue of food versus fuels (and chemicals) is discussed. Nexant's multi-client report is useful to those firms operating in, developing for, or considering shifting toward renewables or to anyone who needs a comprehensive overview of progress in biofeedstocks, potential market implications, and product potentials.

For further information or to purchase the ***"Next Generation Biofeedstocks: Resources for Renewables"*** report, please contact STMC@nexant.com.

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