

INL Biomass Research Timeline



Idaho's national laboratory has been conducting research related to bioenergy for decades. This snapshot of the lab's history in this area shows some of the research highlights.

1990

1993: A memorandum of understanding between DOE and the U.S. Department of Agriculture initiates precision agriculture research, which involves GPS-guided systems, remote sensors and yield mapping.

1999: Cooperative Research and Development Agreement (CRADA) signed with CNH Industrial to study selective harvesting using combines sets the stage for future biomass program.

2000

2001: Researchers win grants for projects with Amalgamated Research (to study membrane separations for sugar beet processing) and NatureWorks (to study polymers from renewable resources).

2002: The lab's work expands to include harvest and collection studies, biomechanics laboratory testing and separation of components.

2005: DOE goal drives research aimed at delivering biomass feedstocks to biorefineries for \$35 per dry ton by 2012. INL research expands into chemistry and value of feedstocks.

2009: Construction begins at INL's North Boulevard Annex to create a full-scale, fully integrated modular biomass feedstock processing system — the Process Demonstration Unit (PDU).

2010

2012: Research broadens to focus on an array of feedstocks (wood, municipal solid waste, energy crops). An agreement is signed with Origin Oil (later renamed Origin Clear) to develop biofuels from algae.

2014: Biomass Feedstock National User Facility attracts its first users.

2016: DOE releases "Regional Feedstock Partnership Summary Report: Enabling the Billion-Ton Vision" (co-authored by INL) summarizing research suggesting that the nation's abundant supply of corn stover could be sustainably harvested as a bioenergy feedstock.

2017: INL expertise and equipment helps produce the biocoal necessary to fuel a 5,000-ton test burn at Portland General Electric's Boardman coal plant.

2020