

Extension Volunteers

Amy Rager, Extension Educator, Environmental Science Education

Recently I attended the National Conference on Volunteering in Chicago, Illinois. It was an invigorating and renewing experience to learn more about the value of volunteers. Minnesota Extension has a long and proud history of training and utilizing volunteers. Over time, we have changed and created new volunteer programs and opportunities. 4H youth development has been around for a long time in Minnesota and has had a positive impact on thousands of youth from all walks of life. Master Gardeners provide communities with current horticulture information and best practices. In more recent years, programs such as Woodland Advisors, Tree Care Advisors, and Minnesota Master Naturalists have emerged to meet the needs of the citizens of Minnesota. These more recent programs provide training and service opportunities in the natural resource field.

Volunteers provide a way for all parts of Extension to increase their educational reach exponentially. This happens in informal workshops, writing news articles, answering consumer questions and sharing information with friends, families and neighbors.



Utilizing volunteers successfully has a full field of research behind it and we are always striving to incorporate these best practices and keep our volunteer programs current and relevant to best meet the needs of the volunteer and the organization.



AgCountry Auditorium

June 22—4-H Demo Day
 June 26—WC Master Gardeners
 June 28—4-H Aquatic Robotics

Seminar Room

June 27—Experiential Learning





New Technologies Continuing To Transform The Ethanol Industry

Joel Tallaksen, Biomass Coordinator

In the 1980's, WCROC built a pilot scale ethanol production plant and worked with regional farmers and industries to demonstrate the potential of ethanol for agriculture. Ethanol technology research had been driven by the oil embargo of the 1970's, when many Americans suddenly became concerned about limited energy supplies and rapidly increasing fuel costs. Higher yields of corn and low corn prices convinced many farmers to begin investing in the new ethanol industry. Various state and federal incentives, combined with tax credits, helped foster the fledgling industry as it began to convert Minnesota corn to a value added product.

Since commercial production of ethanol started, there has been a significant change in economics. Though corn yield has dramatically increased, demand for corn for a wide variety of non-food products has also increased. As a result, the price of corn has risen to a point where the 1980's technology for ethanol production was no longer competitive or profitable from a business sense. Ethanol production facilities have been responding to higher corn price by upgrading to new technologies to make their facilities more productive and supply more co-products. These technologies are maintaining the ability of ethanol plants to add value to Minnesota agricultural products.

On June 5th and 6th, I had the opportunity to attend the 28nd annual International Fuel Ethanol Workshop in Minneapolis, MN. A common theme among speakers and vendors at the event was broadening the range of products made in ethanol plants and further increasing the efficiency of production. The more broad based biorefinery model (figure 1, bottom pane) highlights both the technical know-how and financial incentives for ethanol producers to expand on the early ethanol model (figure 1, top panel). Already, many ethanol biorefineries are producing corn oil as a co-product of the ethanol process. In Minnesota and other states, facilities are being built or retrofitted to produce the higher value fuel butanol from corn. These technologies are allowing corn based alcohol production to remain financially viable as incentives and tax credits reach their expirations.

The next big leap for the biorefinery model will be the use of cellulose from plant biomass (stems and leaves) for production of ethanol as well as a number of biochemicals and energy. Though this new cellulosic technology has been in development for many years, the costs of the needed equipment and supplies is coming down while the value of the products generated is rising. Pilot plants are beginning testing to examine the feasibility of large scale cellulosic biorefineries. Should this technology prove ready and cost effective, larger cellulosic plants could be operations in the next 10 to 15 years. This would complete the transformation of the fledgling ethanol industry of the 1990's into a more stable value added agricultural products industry for the future.

