



## Modeling Minnesota Corn Stover Biomass

*Joel Tallaksen, Biomass Gasification Project Coordinator*

In the future, biomass energy and bio-products derived from agricultural biomass will likely be important renewable resources for the nation and new markets for agriculture. Unfortunately, there is not a sufficient understanding of the amount and locations biomass feedstocks, such as corn stover. This lack of information could slow implementation of the technologies to convert biomass to energy and other products.

To better estimate corn stover feedstocks in Minnesota, WCROC began a study of stover production and producer interest in harvesting stover using producer surveys and GIS software. Eight statewide biomass supply regions were selected (figure 1) and evaluated to see how corn stover production and availability varied in different areas throughout Minnesota. Early results indicate that based on 2011 yields, total corn stover biomass production statewide was over 33 million tons. The highest production levels were found in southern Minnesota, where more land was dedicated to corn production and yields were higher. In southern regions, over 10 million tons of production was estimated to be available for purchase

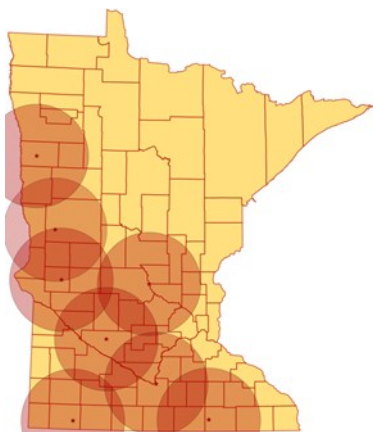


Figure 1. Minnesota Biomass supply Zones Selected For Study.

within a 70 mile radius. This compares with less than 1 million tons in the northern most region. Further results will be available later this spring on the websites of the sponsoring

organizations; AURI and the Minnesota Corn Growers.

### **Congratulations to Tom Holm 2013 NDNGA Distinguished Service Award Winner!**

Tom Holm of the West Central Research and Outreach Center has been chosen to receive the NDNGA Distinguished Service Award. Tom, an NDSU graduate, taught Vocational Agriculture at Walhalla, ND for 7 years during which time, the FFA chapter consistently won the top horticulture award at the State Fair. In 1984, Tom and wife purchased the Neche Greenhouse which became a full-service regional garden center destination. Through Tom's efforts, over 200 trees were planted on the Neche City Streets, and his 4-H club was recognized by the ND Forest Service at the Fargodome receiving the Tree Planters Award.

Tom served on the NDNGA Board of Directors from 1992—2001. As President in 1999 and 2000, he helped plan and implement changes in the NDNGA structure leading to revitalization and growth of the organization. Tom continues to serve the NDNGA by organizing and laying out the Trade Show each year for the Convention. He also serves the horticulture industry with his work at the beautiful display gardens in Morris, MN.

Congratulations Tom and thanks for your service to the NDNGA and the horticulture industry.

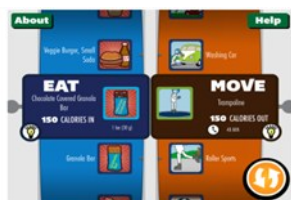
## Mobile Apps Connecting with Youth

Carrie Ann Olson, EE, Center for Youth Development

Sometimes it seems as though everywhere you look, people are using their phones. But what are they using them for? The Pew Internet Research Project reports that teen texting volume is up in 2012 while the frequency of voice calling is down. About three-quarters (77%) of teens have a cell phone; one in four say they own smartphones. American teens on average are sending or receiving 3,339 texts a month, or more than six for every hour they're awake, according to a Nielsen Company report: Calling Yesterday, Texting Today, Using Apps Tomorrow. Although texting is at an all-time high, the largest area of growth was in teen data usage, from 14 MB to 62 MB per month. Almost half of teens surveyed reported using an app 10 times per day -- more frequently than general grooming and eating.

So how are you connecting with this mobile youth society? Do you text? Do you push meeting reminders? Do you use mobile apps with youth to support and encourage youth to build mastery in areas of interest? A recent presentation by Barbara Chamberlin, Extension instructional design and educational media specialist, New Mexico State University states that technology is changing the way we work, think and play. Both formal and informal learning environments can utilize apps if they remember to focus on the learning objective. Check out the online recording of the presentation at <http://learninggameslab.org/presentations.html>.

Healthy Living is just plain smart. That's why it's been a core belief of 4-H since the beginning. Healthy living is also a popular supported learning objective with mobile learning apps. However, where some apps get complicated, the Eat & Move-O-Matic app at: <http://www.4-h.org/youth-development-programs/kids-health/programming-resources/health-nutrition-fitness/youth-voice/eat-move-o-matic> , will simply



help you learn about the foods you eat and how they help fuel your body for your favorite activities. The Eat & Move-O-Matic was developed to support the National 4-H "Youth Voice: Youth Choice" program, and offers a simple and fun way to engage kids and adults alike in learning about the relationship between nutrition and exercise.

Career Explorer – 4-H at

<https://itunes.apple.com/us/app/career-explorer-4-h/id457621702?mt=8>, is another app that meets it's learning objective of helping you connect the dots between the choices you make every day and the opportunities you could have in the future. You begin with a Luck of the Draw card and from there you are in control, making ongoing decisions about your education and future career opportunities. At each stage of the game you will be able to enter the workforce, get additional education, or explore training programs. You will have access to more than 450 careers with up-to-date salary information and summaries for each. Once you choose a career you will have the opportunity to see the positives and negatives associated with that career and how it's monthly salary will line up with your monthly expenses.

Mobile learning apps can go a step further and encourage anytime, anywhere learning, as well as reach a wide range of audience, because they are relatively low-cost.

### AgCountry Auditorium

Jan. 10—Quiz Bowl  
Jan. 11—Swine Interview  
Jan. 14—PRRS  
Jan 16—Ag Professional Update  
Jan. 19—Farm Beginnings  
Jan. 21—MN Wheat

### Seminar Room

Jan. 16—4-H Staff  
Jan. 23— Faculty Meeting  
Jan. 23 CNE