

**News Note**

Breaking New Ground Outreach Program  
ABE Building, 225 South University Street  
West Lafayette, IN 47907-2093  
(800) 825-4264 (Voice/TDD)  
www.breakingnewground.info

Nonprofit Organization  
U.S. Postage  
PAID  
Purdue University

Address Service Requested



A QUARTERLY LETTER TO FRIENDS OF THE BREAKING NEW GROUND OUTREACH PROGRAM/INDIANA AGRABILITY PROJECT

**Questions?  
Contact Us!**

[www.breakingnewground.info](http://www.breakingnewground.info)

1-800-825-4264

ABE Bldg.  
225 S. University St.  
West Lafayette, IN 47907

[bng@ecn.purdue.edu](mailto:bng@ecn.purdue.edu)

**BNG Staff:**

Bill Field -  
Project Leader

Paul Jones -  
Program Manager

Kylie Hendress -  
Engagement Coordinator

Steve Swain -  
Rural Rehab Specialist

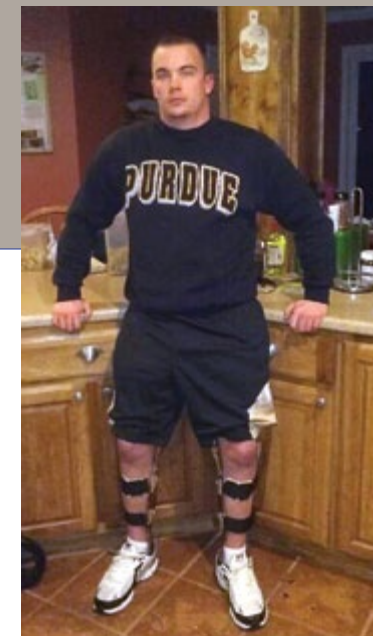
Denise Heath -  
Administrative Assistant

**JAMES MELROY  
CONTINUES TO FARM  
IN SPITE OF INJURY**

In November 2010, 19-year-old James Melroy of Flora, Indiana was involved in a car accident in which he sustained a spinal cord injury. While he recovered in the hospital, James knew that he had to figure out what he would do next. Just out of high school, where he had been active in FFA, he was unsure whether farming was still a possibility.

Fortunately, Steve Swain of Indiana AgrAbility was contacted and was asked to visit with James to discuss his options and opportunities. Steve met with James and his family at the Rehabilitation Hospital of Indiana. During this visit, James expressed his desire to continue farming and stay involved in agriculture in any way possible.

Steve showed items from The Toolbox Assistive Technology Database that could help James continue to work on the farm and do what he loved. Later, Steve made visits to the family's



farm to assess what modifications could be made to the house and the equipment to help make things a little easier for James.

Today, James continues to be active on his stepfather's grain farm, and enjoys working ground, planting, spraying, and any other tasks that arise. When asked what AgrAbility has done for him, James replied that AgrAbility "changed his life after his accident." He said that he has "worked with great people at AgrAbility who helped [him] get back to work and accomplish [his] goals."

**Purdue Students Design Lawn Mower Conversion**

When tasked with thinking of an idea for their senior capstone project, Purdue Agricultural and Biological Engineering (ABE) students Caleb Leiberling, Dane Buuck, and Matt Fox decided that they would adapt a John Deere lawn tractor to make it accessible for individuals with lower limb impairments.

The majority of John Deere lawn mowers use foot pedals for forward and reverse and to operate the clutch. The students recognized that individuals with lower limb impairments find it difficult or impossible to operate these mowers. To remedy this issue, the ABE seniors developed a conversion package that can be used on standard John Deere lawn tractors.

The students installed manual hand controls, which could be done without dramatically changing the existing construction of the tractor and would therefore not diminish the resale value. Manual hand controls also allows for a low conversion cost to the individual. Additionally, the students made sure that installing the hand controls would still allow able-bodied individuals to use the tractor with minimal inconvenience.

The students presented a poster and narrative on their design project at the end of the school year that included a description of the problem they addressed, an explanation of their research, and the project goals and objectives.



Indiana  
FFA State  
Convention  
June 17-20  
West Lafayette,  
IN

Indiana State  
Fair  
Aug 2-18  
Indianapolis, IN

Indiana  
Rural Health  
Association  
Annual  
Conference  
Aug 7-8  
Indianapolis, IN

Bartholomew  
County Garden  
Celebration  
Aug 10-11  
Columbus, IN

## GARDENING WITH ARTHRITIS

Now that spring has finally sprung in Indiana, many people's minds are on planting their gardens and flowerbeds. While this is an enjoyable task for many, some may feel as though they have to give it up if they suffer from arthritis pain. Don't hang up the shovel yet, though, because gardening can be an excellent activity, even with arthritis.

There are many benefits of gardening in addition to the vegetables one harvests and the beautiful flowers that are grown. Gardening can be a stress-relieving activity and is also good exercise. It is great for maintaining range of motion, bone density and strength, and joint flexibility.

One way to keep gardening with arthritis is to slow down. Gardening should be a leisure activity, rather than something that has to be finished quickly. Avoid rushing because this can irritate arthritic joints. Also, take frequent breaks. If people push themselves, they are not taking the time to let their bodies rest and recover. Additionally, as with any other physical activity, remember to stretch before beginning to loosen up muscles and joints.

Next, be mindful of the types of plants that are chosen. Do not choose large, vining plants that are hard to control, rather choose plants that have colorful flowers and are easy to maintain and can



Photo courtesy of [www.gardeners.com](http://www.gardeners.com)

be enjoyed throughout the summer. The same goes for vegetable gardens. When possible, choose plants that do not require a lot of bending to be picked; for example use "pole" green beans rather than the shorter "bush" green beans. For flowers or vegetables, it may be helpful to use small containers, hanging baskets, or raised beds which are easier to maintain and will also limit some of the bending and kneeling that is required in a large garden plot.

Lastly, consider the tools you use for gardening. Using ergonomically-designed tools and equipment can protect from unnecessary stress, strain, and injury. Look for hand tools that allow for the least amount of force on joints, which means avoiding straight handles in favor of curved handles or pistol grips. For long handled tools, try to use a two-handed grip with enlarged or foam handles on a lightweight tool. Visit [www.agrability.org/toolbox](http://www.agrability.org/toolbox) and explore the "Lawn and Garden" category for additional assistive gardening tools.

If you would like more information about gardening with arthritis, view the archived webinar, "Gardening with Effective Arthritis Management" at [www.agrability.org/online-training/archived](http://www.agrability.org/online-training/archived). With the right tools and a few tips, you can continue to do what you love and enjoy the fruits of your labor all season.

## UPDATES FROM OUR PARTNERS

Arthritis Foundation Project Coordinator, Amber Wolfe, has a summer full of community educational events related to arthritis and agriculture.

In May, Amber will be speaking at the Jackson and Jennings County Senior Services meetings, with help from Linda Tarr of Hoosier Uplands.

Amber continues to serve on the Indianapolis Mayor's Advisory Council on Disability (MACD) and is the events co-chair for the Access & Inclusion Awards Ceremony. An Indiana AgrAbility display will also be hosted at this event. July starts county fair season, followed quickly by the Indiana State Fair.

In August, Amber will be hosting a display booth at the Indiana Rural Health Association annual conference where she has also submitted a proposal to be a speaker.

Amber will also be a speaker and exhibitor at the Bartholomew County Gardeners' Association annual two-day celebration.

Linda Tarr of Hoosier Uplands has been very busy with AgrAbility awareness in Southern Indiana.

Linda attended the first Indiana Joint Asthma Coalition state conference and also participated in the Floyd County Extension Services first Armed Forces Day program.

Some upcoming presentations include the Generations Aging Well retreat, Hoosier Uplands Home Health Care training, Foster Grandparent Program Senior Mentoring Group, Annual REMC Health Fair, and Safe Night Lawrence County.

Programs were done for three Eastern Greene High School classes using the Assistive Technology for Rural Youth Curriculum. A presentation was also done at their FFA annual awards banquet.

Linda is also working with several area clients to make their operations safer for them. Additionally, she will be exhibiting at county fairs and the Indiana State Fair.

Virtually eliminating the need to bend, the Perfect Garden Tool System is designed to reduce lower back pain, muscular and skeletal stress, and formation of blisters while making gardening tasks easier. The Perfect Garden Tool System consists of two ergonomic handles and seven interchangeable tool heads: trowel, spade, planter, hoe, aerator, cultivator, and bow rake that are aimed at maximizing leverage, force, balance and safety, while minimizing back and joint pain.



The Foxtail Ergonomic Faucet Adapter reduces the amount of hand strength (and physical pain) to open and close a faucet valve. The product comes with four different-size adapters to fit most faucet handles, nuts/bolts to secure it to the handle, and a sliding-bar handle on the top portion of the unit, which the user turns right/left to open/shut the faucet. The Foxtail Adapter can be used with main-water, emergency, and hot-water shut-off valves as well as on outdoor faucets.

Visit:

[www.agrability.org/toolbox](http://www.agrability.org/toolbox)