



# Action in Agroforestry

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Michael Gold and  
Savannah Kannberg, editors

## KUDOS

### Alley Cropping: Tree/Crop Interface Competition with Silver Maple Reduces Crop Yields

Udawatta, R.P., K.A. Nelson, S. Jose, and P.P. Motavalli. 2014. Temporal and Spatial Differences in Crop Yields of a Mature Silver Maple Alley Cropping System. *Agronomy Journal* 106:407–415.

**Abstract:** Although alley cropping practices improve ecosystem services, they can reduce crop yields, especially at the tree-crop interface and progressively at increasing distances from that interface with time. The objective of this study was to evaluate temporal and spatial yield differences in a no-till corn (*Zea mays* L.)–soybean [*Glycine max* (L.) Merr.] rotation in a mature (11–19 yr) silver maple (*Acer saccharinum* L.) alley cropping system in the claypan region of the temperate climatic zone.

Silver maple saplings were planted in 20m wide rows at 3.6m spacing between trees in 1990. Crop yields were measured at 3.3, 6.7, and 10m distances

from the tree row from 2001 to 2008. Corn yields in 2002, 2004, 2006, and 2008 and soybean yields in 2001, 2003, 2005, and 2007 were determined using a small plot combine and analyzed in a split-plot in space and time design. Corn yield was 86 and 24% lower at 3.3 and 6.7m compared to 10m. The greatest reductions were recorded in 2006 when the site recorded the greatest yields. Late planting may have affected the corn yield despite 156% of the normal rain in 2008. Soybean yield was 77 and 24% lower at 3.3 and 6.7m, respectively, compared to yield at 10m. Soybean yields declined over time at all three measured distances. A reduction of competition and selection of drought and shade tolerant crops may help increase productivity while providing ecosystem services of the perennial tree rows.

## OUTREACH

### UMCA presents at Permaculture, Minority Farmer conferences

UMCA's Michael Gold presented "Chestnuts: Building a Perennial Specialty Crop Industry From Scratch" at the inaugural Permaculture Voices Conference on March 13 - 16, 2014 in Temecula, California.

Some nationally-known authors, including Michael Pollan and Joel Salatin, headed up the speaker list. Six hundred enthusiastic people attended this conference.

Agroforestry practitioner and author Mark Shepard presented "Alleycropping and Silvopasture: Transitioning to Restoration Agriculture." Local livestock expert and author Greg Judy also traveled from Missouri to present "Profitable methods Used to Heal the Land with Mob Grazing and Multi-species Grazing on Leased Land."

Gold and Dusty Walter also attended the Missouri Minority and Limited Resource Farmers' Conference at Lincoln University's Carver Farm on March 21 - 22, 2014. Gold presented "Tapping Unused Land for Agroforestry" and Walter presented "Integration of Silvopasture for Livestock and Maintaining Wildlife Biodiversity."



Photo courtesy of Ranjith Udawatta.

Silver maple and corn shown at Ross Jones Farm in northeast Missouri.

## KUDOS

### Undergraduate awarded for research

Working with UMCA's Dr. Chung-Ho Lin and George Stewart of the Department for Veterinary Pathobiology, undergraduate researcher CheMin Su received the Excellence in Undergraduate Research award, Organismal Biology, Health and Disease, for his eastern redcedar phytochemistry project entitled "Role of bacteriophage in Diterpenoid-A Resistance in *Staphylococcus aureus* (MRSA)".

## SAVE THE DATES

### Mo. Nut Growers Association, Walnut Council meetings ahead

The MNGA Spring Grafting Meeting and Scion Wood Exchange will be held on May 3, 2014 from 9 a.m. until 2 p.m. Head to the Brunswick Lodging and Event Center in Brunswick, Missouri. RSVPs are due by April 30 to Sara Jean Peters at 417-275-4422.

The annual meeting of the Walnut Council is from June 8 - 11, 2014, in Manhattan, Kansas. The meeting will include field trips, indoor presentations, the Landowner Show and Tell, as well as their annual awards banquet on Tuesday, June 10. Register to attend by May 26, and can be done online at [www.walnutcouncil.org](http://www.walnutcouncil.org).

### Agroforestry workshop, riparian field day

#### Agroforestry Outreach Workshop

The SE IA Agroforestry Workshop is a day-long workshop in Centerville, Iowa, where you can learn more about agroforestry, followed by an afternoon of learning about black walnuts, chestnuts and aronia berry. There will be a field trip to Bill Hansen's black walnut planting in the afternoon as well. Several members of the Iowa Nut Growers Association will also present on various nut crops.

The workshop will be held on Thursday, May 8, 2014, from 8 a.m. until 5 p.m. Registration is \$30 for materials and lunch. Visit Trees Forever at [www.treesforever.org](http://www.treesforever.org) to register, or contact Jeff Jensen for more information at [jjensen@treesforever.org](mailto:jjensen@treesforever.org).

#### Riparian Buffer Field Day

On May 6, 2014, Trees Forever, Iowa DNR District Forestry and Jaime Sorenson and family will host a riparian field day at the Sorenson Farm in Hanlontown, Iowa, from 1 - 4 p.m. The afternoon will involve learning about planning and designing a riparian buffer, the benefits of having one, maintaining a planting, implementing a project, and more. Attendees will have the opportunity to plant trees, too.

For more information, contact Jeff Jensen at [jjensen@treesforever.org](mailto:jjensen@treesforever.org).

## Upcoming Events

### April 25, 2014 —

Mark Shepard:

"Introduction to Restoration Agriculture" from 7 - 9 p.m., St. Louis University.

Location and more information on this free, public event:

[www.slu.edu/nutrition-and-dietetics/directions](http://www.slu.edu/nutrition-and-dietetics/directions)

### May 8, 2014 —

SE IA Agroforestry Workshop, from 8 a.m. - 5 p.m., Centerville, Iowa.

Workshop details:

[www.treesforever.org](http://www.treesforever.org)

### May 6, 2014 —

Riparian Buffer Field Day, from 1 - 4 p.m., Hanlontown, Iowa.

Details on the afternoon:

[www.treesforever.org](http://www.treesforever.org)

### Mid-May 2014 —

New Green Horizons edition heads to mailboxes and inboxes.

To get the e-version sent to you, email:

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