April 2016

Working Together For a Better Future

# The S u s t a i n a b l e Agriculture & Forestry Scholarship Fund Newsletter

# Introducing the SUSTAINABLE Agriculture & Forestry Perpetual Scholarship Fund

### Who will feed and house future generations?

The answer to this question is much larger than this scholarship program, but one thing is for certain: It will take professionals and practitioners educated and trained in **sustainable** agriculture (food production) and forestry (wood production) in order to sustain a healthy population.

### We see huge problems that prevent sustainability

Current common practices endanger our

- water quality and quantity 1
- our soil and forests <sup>2</sup>
- ✤ food quality and the health of our people <sup>3</sup>

and

Kill our vitally important pollinators 4

*Sustainable* agriculture and forestry is the efficient production of safe, high quality agricultural and forestry products, in a way that protects and improves the natural environment, the social and economic conditions of farmers and related operations, their employees and local communities, and safeguards the health and welfare of all farmed and natural species.

*The Vision of this Scholarship Fund* is to make everything we do as pertains to water, soils, the environment, agriculture, forestry, local producers and communities be sustainable for us now and for future generations.

*The mission of this Scholarship fund* is to provide financial aid to individuals committed to sustainability in the fields of agriculture and forestry. The Fund will serve individuals living in SE Minnesota, is endowed, and will operate in perpetuity.

# Become a Donor. Let's Work Together to Protect our Resources

If you too are concerned about the indiscriminate use of chemicals which are killing our pollinators, polluting our water, and negatively effecting our food supply, then *JOIN US* by donating today. The Rochester Area Foundation is the administrator of this scholarship fund. Contributions to the scholarship fund are fully tax deductible.

The goal is to grow the endowment into a significant source of scholarship money for applicants. An anonymous donor is supplementing the current year dividends in order to enable payout of up to \$5,000 to qualified applicant(s).

### The successful candidate will...

- Have a strong interest in sustainable agricultural and/or forestry practices,
- Be committed to protecting and preserving our natural resources,
- Have strong communication skills,
- Possess leadership characteristics,
- Be a junior or higher college student or be non-traditional students who are pursuing avenues other than a University degree, and
- \* Demonstrate academic and/or farming skills and aptitudes.

Sustainability embraces many disciplines, methodologies, and institutional practices. Therefore scholarship recipients are those who seek to be exposed to skill and knowledge building about changing environments and human health; energy, climate, and built environments; the power of culture and society; and ethics, economics, and public policy. (This is as described in University of Iowa's Certificate of Sustainability overview.)

Eligible Scholarship recipients must be residents of the 10 Southeast Counties of the State of Minnesota (Rice, Goodhue, Wabasha, Steele, Dodge, Olmstead, Winona, Freeborn, Mower, Fillmore, and Houston counties) and attend educational institutions/programs in the five state area of Minnesota, Wisconsin, Iowa, South Dakota and North Dakota.



# Sustainable Agriculture and Forestry **REQUIRES...**

### **Healthy Soils**



Healthy soils need 75,000 species of bacteria and 25,000 species of fungi in every teaspoon of soil. In GMO fields sprayed with herbicides like roundup and soaked in synthetic

fertilizers, fields have minuscule species of bacteria and fungi in their soils. Farming is a biological process with plants cultivating a vast variety of bacteria and fungi to create a healthy soil which will nourish them.

### Clean, Safe Water



Clean, safe water is essential to a healthy life. Nitrogen contamination in the southern half of Minnesota is so severe that 27 percent of the state's lakes and rivers

could not be used as drinking water. 41 percent of Minnesota's streams and lakes have excessive nitrogen, all of them in the state's southern and central regions. The nutrient, which is used as fertilizer in agriculture and comes from wastewater treatment plants, can be toxic to fish and other forms of aquatic life. It is a primary cause of the vast oxygen-depleted area in the Gulf of Mexico known as the dead zone.

Human health depend upon the ecosystem services provided by wild organisms like worms, woodlice, millipede and a host of other creatures which help with soil formation, prevent soil erosion, regulate water flow and enable forests to produce oxygen. Birds eat insect pests, flies and beetles break down animal dung, bees and other insects pollinate crops. Biological control mechanisms that are non-chemical are increasingly being discovered to be effective in controlling pests and weeds. We hope to fund more of that kind of research.

Future newsletters and the website will expand on these topics and provide informative links about how problems are solved.

### **Healthy Forests**



Forests are critical from every angle. Animals and people rely on them for food, clean air and fresh water. Businesses count on them to supply materials for products we

need every day. Local and global economies depend upon them to create jobs and foster growth. Sustainable forestry maintains a delicate balance among all these demands, so forests can serve as a viable resource now and in the future.

## Clean Safe Air



Clean, safe air is essential to a healthy life. Air quality is a measure of the amount of pollutants in our atmosphere, which includes indoor and outdoor air. Pesticides in

agriculture and urban settings have the potential to contaminate our air, affecting human, animal and plant health. Some pesticide ingredients stay in the atmosphere for only a short period of time, while others can last longer.

### **Complete Set of Pollinators**



More than one third of our common fruits and vegetables depend on pollinators. If we lose the pollinators, we are endangering our food suplly. Pollinators include native bees and

insects, the non-native honey bees, and humans. Yes, pollinators were all extinguished in a large apple growing region in a south west province in China because of overuse of agricultural chemicals. They have pollinated their apple crop *manually* since the mid 1980s! The results were greatly increased cost and reduced yield.

- 1) https://www.pca.state.mn.us/news/few-waters-far-sw-minnesotameet-swimmable-fishable-standards
- 2) https://www.leopold.iastate.edu/news/leopold-letter/2015/fall/ soil-erosion
- 3) http://www.sustainabletable.org/491/food-economics
- 4) http://www.pbs.org/newshour/rundown/loss-honey-beespollinators-mean-malnutrition-millions-around-world/