

January 2017

Working Together For a Better Future

USTAI

Flowerless

Landscape

POLLINATOR

DECLINE

CAUSES

Parasites

Lack of Crop

Diversity

Pesticides

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

Applications for the 2017 College Student Scholarship are due by April 15, 2017 See page 2 of this newsletter and our web site www.protectourresources.org

Our Pollinators are in danger of DISAPPEARING

Headlines give us a clue to what is happening:

- "How neonicotinoids can kill bees."
- "To save Monarchs we need more than just milkweed."
- "Firefly populations are blinking out."
- "At-risk bumblebees."

"The Plight of the Honey Bees." (National Geographic)

"An Icon of Nature is disappearing, The Bumble Bee is on the Endangered Species list"

The causes are multiple and interactive:

Habitat loss and fragmentation, pesticide use, pharmaceutical company collections (fireflies), agro chemicals, pathogens, alien species, climate change all contribute the pollinator decline. (Source: sciencedirect.com) Human activities have destroyed and fragmented many native pollinator habitats. Many remaining habitat areas are isolated and degraded by invasive plant species, making them less suitable for native pollinators and other wildlife.

These changes in habitat can lead to a reduction of native pollinator food sources and sites for mating, nesting, roosting, and migration. Excessive use and improper application of many pesticides impact Management pollinators and their Practices habitats. Some insecticides directly kill pollinators, particularly pollinating insects, and herbicides reduce forage plant Diseases diversity by killing wildflowers. Non-native pollinators, such as honeybees, can out-compete native pollinators for local nectar resources, placing them at greater risk of decline. The destruction and fragmentation of pollinator habitats have led to significant declines in many populations. At least 185 species of pollinators are considered threatened or extinct by the World Conservation

Union (IUCN), and at least 2 bat and 13 bird species listed as endangered in the United States are pollinators. (Source: Plants.usda.gov)



What you can do

Plant lots of different flowers

Cultivate a landscape with diverse

colors, shapes and bloom times

AND ASSAULT AND AND

Go Organic

Choose organic foods for your

table and organic seeds and

seedlings for your garden

Owing to the lack of bees from overuse of pesticides. Chinese farmers in a southwest province have pollinated their orchards by hand since the 1980s. Photograph: Li junsheng /Imaginechina



PESTICIDE FREE

Go to the Minnesota Department of Agriculture Website and make the Pollinator Hero Pledge. Direct link can be found on our website.

Lay off the spray

Use alternatives to

pesticides and

insecticides

The graphic at the left is adapted from the Minnesota Department of Agriculture's excellent brochure on Pollinator Best Management Practices. A link to the document is on our website.

Good news on soils: Emerging land use practices rapidly increase soil organic matter

"...thus, within a decade of managementintensive grazing practices soil Carbon levels returned to those of native forest soils, and likely decreased fertilizer and irrigation demands. Emerging land uses, such as management-intensive grazing, may offer a rare win–win strategy combining profitable food production with rapid improvement of soil quality and short-term climate mitigation through soil Carbon accumulation." read more at http://www.nature.com/articles/ ncomms7995#f1

"Soil needs to be protected just like the skin on our bodies. Just as we don't like to be poked, prodded, cut, burned or frozen in any fashion, the soil doesn't like that either..."

— Rick Bieber

How he farms 5,000 acres without adding ag-chemicals can be found at <u>http://www.notill.org/sites/default/files/</u> 098_rick_bieber_ctg_0814_v2.pdf

We see huge problems that prevent sustainability

Current common practices endanger

- our water quality and quantity
- our soil and forests
- our food quality and the health of our people, and kill our vitally important pollinators

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.

Key criteria used in evaluating scholarship candidates. Goal: Fund strong future advocates

The successful candidate will:

- have a demonstrated strong interest in and commitment to completely sustainable (as defined above) agricultural and/or forestry practices,
- be committed to protecting and preserving our natural resources and related economic and social conditions,
- have strong communication skills and
 possess leadership characteristics.

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.

The successful applicant will be from the counties of Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha and Winona.

Undergraduate students:

- 1. Must be entering Junior or Senior year bachelor's studies in agriculture and/ or forestry.
- 2. Must be enrolled at one of the higher education not-for-profit institutions in the states of Minnesota, Wisconsin, Iowa, South Dakota, or North Dakota.
- 3. Must submit a letter of recommendation from the advising professor.
- 4. Priority will be given to students active in agriculture/forestry outside of school and who are demonstrating leadership and communication skills.

Graduate students must in addition:

- Be eligible to begin the first or second year of a Master's degree program or pursue doctoral studies,
- 2. Submit a written statement from the applicant's academic advisor.

Announcing the 2017 scholarship program

College students at junior or higher level studying sustainable agriculture and/or forestry—in accordance with the scholarship's definitions—are invited to submit applications for the school year starting in the fall of 2017 for the \$5,000.00 scholarship to be awarded this year.

Applications are due by April 15, 2017.

For details and application information, visit the Scholarship website:

http://protectourresources.org

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Two ways to donate:

You can go directly to the Rochester Area Foundation and donate. Go to our website, click on the Donate button. This will bring you directly to the Scholarship's donation page on their website.

You can also use the enclosed form and mail a check directly to the Rochester Area Foundation.

In all cases, make sure you specify that your donation shall go to the Sustainable Agriculture & Forestry Scholarship Fund.

Thank you for your willingness to help with the goal of achieving sustainability for our children, grandchildren and their futures.

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Our website contains more information about pollinators with links to great information sources and references to the quotes used herein.

All links referenced are available on or website: www.protectourresources.org

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