



## 2020 POSTER CONTEST

# Where Would We BEE Without Pollinators?

NACD Auxiliary  
Rules, Poster Ideas and Tips



National Association of  
Conservation Districts

- **The importance of pollination**
  - **Who are pollinators?**
  - **How are they threatened?**





**One in Every Three Bites**



# The Food We Eat

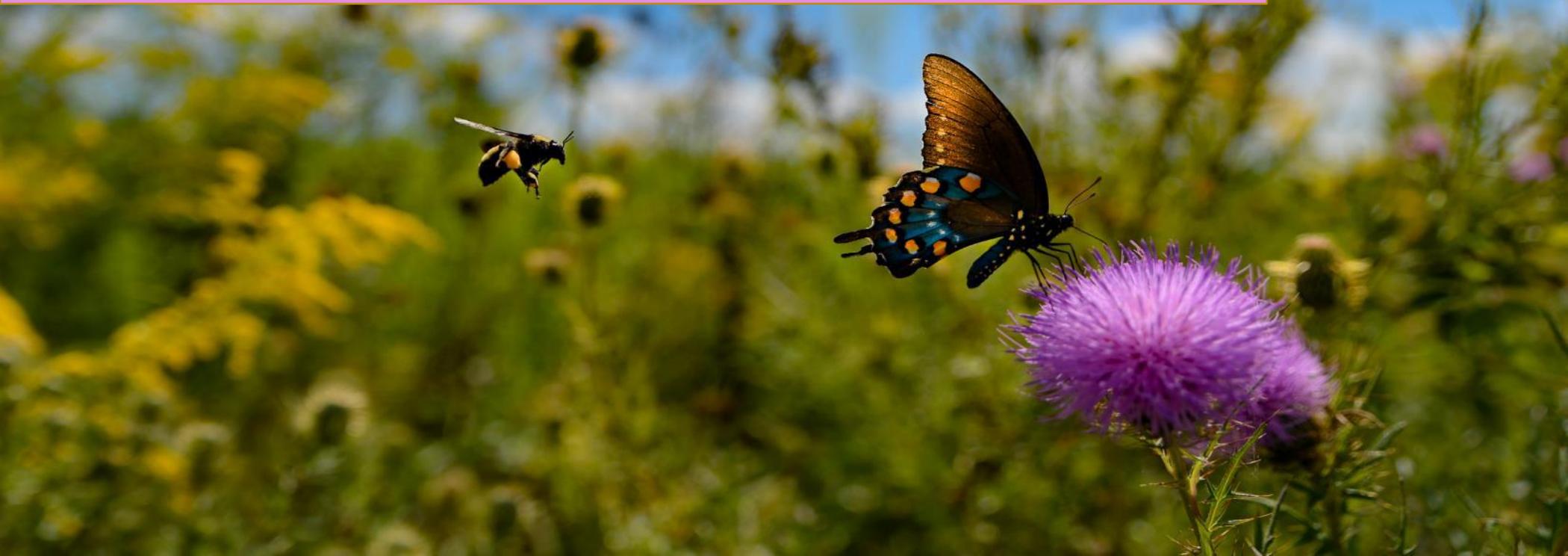
## Pollinators:

- Provide an ecosystem service that enables plants to produce fruits and seeds
- Affect 35% of global agricultural land, supporting the production of 87 of the leading food crops worldwide.
- Affect crops that are valued at over \$24 billion in U.S. (\$277 – 577 billion worldwide)



# Annual Value of Insect Pollinated Crops

- **Alfalfa (seed and forage) - \$7 billion**
- **Apple – Over \$1.5 billion**
- **Almond – Over \$ 1.1 billion**
- **Berries – Over \$ 2.5 billion**
- **Canola, soybean and cotton**



# Native Plants Need Pollinators

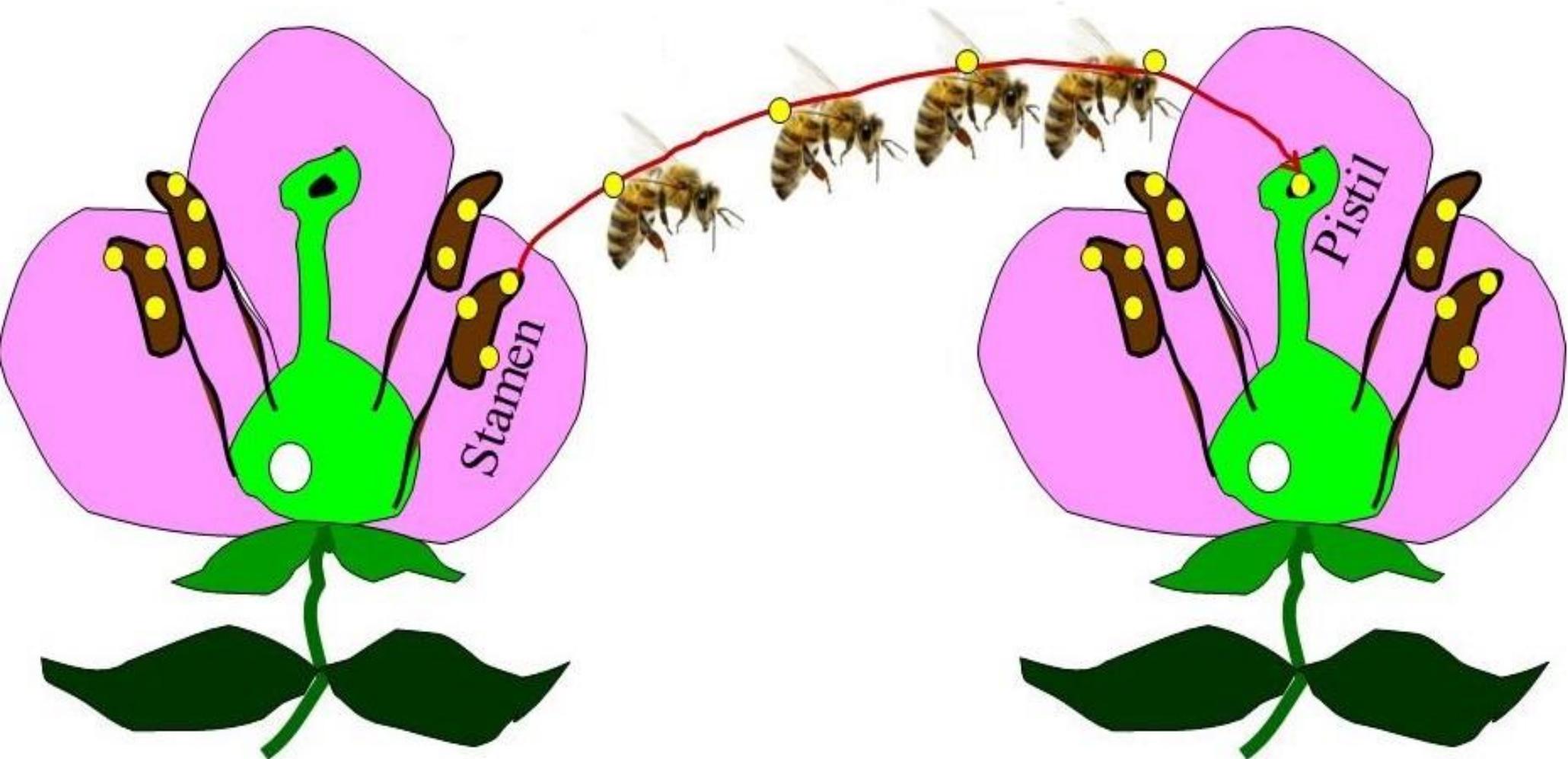


# Wildlife Food web

- Fruits and seeds are a major part of the diet of about 25 percent of birds and many mammals.
- Pollinators are food for wildlife.



# What is Pollination?





## Types of Pollination:

- **Self-pollination:** transfer within a flower or flowers of the same plant
- **Cross Pollination:** transfer between plants



## Who Are Pollinators?



# Bees: The Most Important Pollinators



- **Actively collect and transport pollen**
- **Exhibit flower constancy**
- **Regularly forage in area around nest**

# Honey Bees: Non-Native Pollinators

- Most crop pollination is done by the European honey bee.
- Many crops are reliant on this single pollinator, which is experiencing many problems.
- Native bees are efficient pollinators



# Honey Bees in Decline

Varroa mite

- 30% decline in managed hives since 2006
- Cropland requiring bee pollination has doubled
- 60% decline in feral colonies

**Causes:** Diseases, pests, honey prices.



# Native Bees as Pollinators

## Native bees are efficient pollinators:

- Active earlier and later in the day
- Collect both pollen and nectar
- No rental fees
- Can supplement honeybees if honey bees are hard to acquire



# Native Bees in Agriculture

## Contribution of native bees to crop pollination:

- \$3 billion in pollination services per year
- 80+ bee species recorded visiting berry crops in New England
- 100+ species documented in Wis. cranberries
- 100+ species visiting apples in N.Y. and Pa.
- 50+ species visiting tomato, sunflower or watermelon in Calif.

# Buzz Pollination by Native Bees

## Example: Cherry Tomatoes

When native bees were present, the production of Sungold cherry tomatoes almost tripled.



## Hybrid sunflower production:

When native bees were present the seeds in hybrid sunflower fields more than doubled.



# Pollinators in Peril

## Threats include:

- Habitat loss
- Pesticides
- Pests
- Climate change
- Invasive plants

**Yellowbanded**



**Rusty Patched**



**Four Sister Species of  
Bumble Bees in Decline**

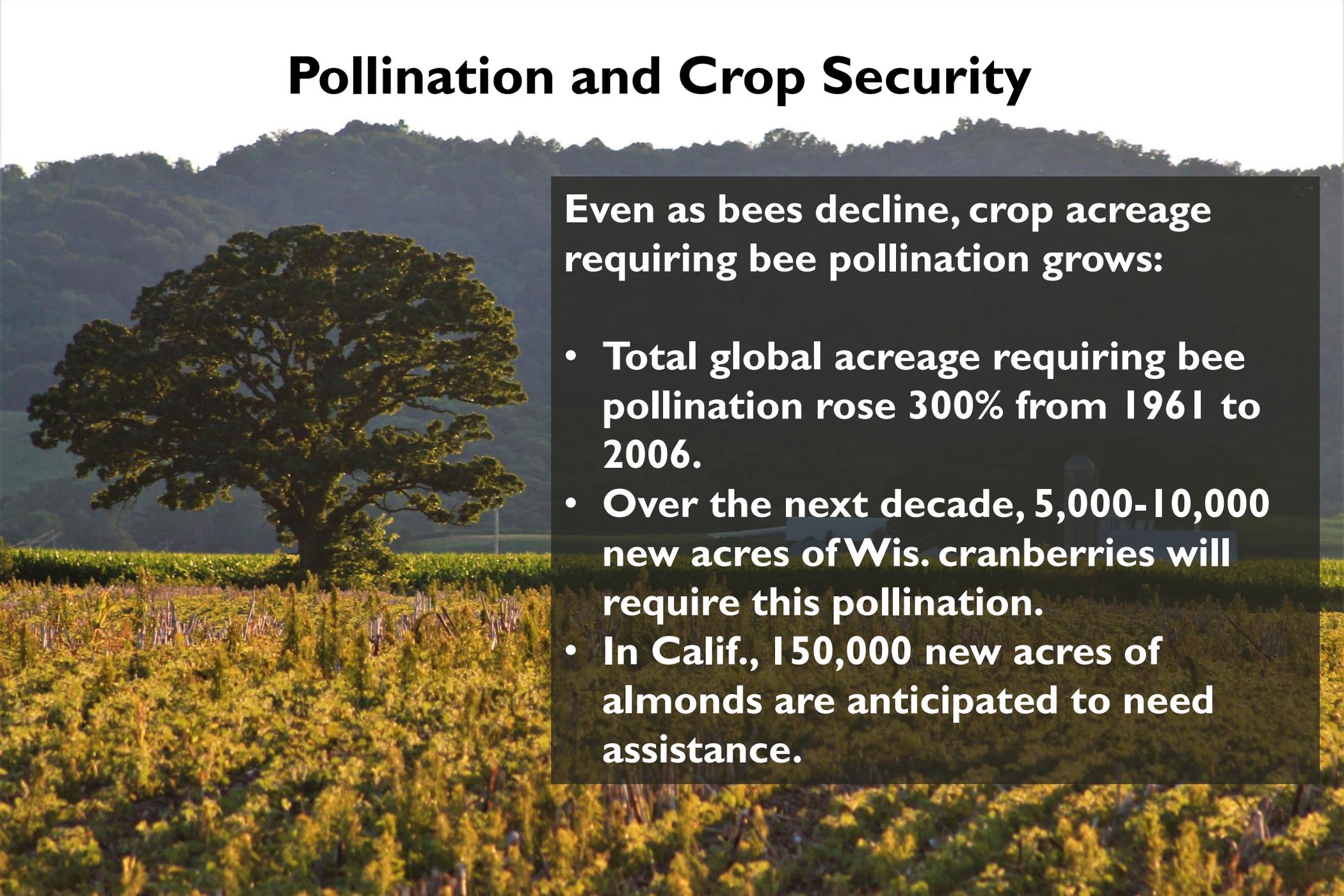
**Western**



**Franklin's**



# Pollination and Crop Security

A large, leafy tree stands in a field of crops, with rolling hills in the background. The scene is bathed in warm, golden light, suggesting late afternoon or early morning. The tree is the central focus on the left side of the image, with its branches spreading out over the field. The field appears to be a mix of different crops, possibly corn and soybeans, with some rows of taller plants in the foreground. The background shows a range of hills or mountains under a clear sky.

**Even as bees decline, crop acreage requiring bee pollination grows:**

- **Total global acreage requiring bee pollination rose 300% from 1961 to 2006.**
- **Over the next decade, 5,000-10,000 new acres of Wis. cranberries will require this pollination.**
- **In Calif., 150,000 new acres of almonds are anticipated to need assistance.**

# 2020 Poster Contest

## Where Would We BEE Without Pollinators?

The Poster Contest is open to all public, private and homeschooled students in 6<sup>th</sup> grade in the West Greeley Conservation District service area.

Send entries to your local conservation district:

Attention: Kristi Helzer, Community Outreach and Education Coordinator

4302 W. 9<sup>th</sup> St. Rd., Greeley, CO 80634

<http://www.nacdnet.org/general-resources/conservation-district-directory/>

***Contest entries due before 4 p.m. – Fri., October 2<sup>nd</sup> !***



# POSTER CONTEST DETAILS

Winning entries will be selected by West Greeley Conservation District and sent to the state level for judging in November.

State winning entries will then be sent to the national level, where one overall winner will be selected and announced at the 2020 NACD Annual Meeting in Las Vegas, Nev. on February 9. Winners will be posted to the NACD website.

Monetary prizes will be awarded to the 1<sup>st</sup> - 3<sup>rd</sup> place winners in each category.

***WGCD and State Awards : \$100-1<sup>st</sup> place; \$75-2<sup>nd</sup> place; \$50-3<sup>rd</sup> place.***

***NACD National Level Prizes: \$200-1<sup>st</sup> place; \$150-2<sup>nd</sup> place; \$100-3<sup>rd</sup> place.***



# POSTER CONTEST RULES

- Poster must be turned in on time for judging.
- Attach the poster entry form, signed by a parent or guardian, to the back of the poster.
- Entry must be contestant's original creation.
- Any media may be used to create a flat poster (ex. paint, crayons, stickers, etc.)



# POSTER CONTEST RULES CONT.

- Posters must be 14” x 22” with the theme clearly stated.
- **Only digital posters** (photographs or scanned copies of the hand drawn posters in a JPEG format) will be accepted **at the national level.** Photographs must be clear and well-framed.



# WHAT MAKES A GOOD POSTER?

- Attracts attention
- Is simple and concise
- Uses colors and white space effectively
- Text is large enough to be easily read



# WHEN FORMING IDEAS FOR YOUR POSTER...

- Research the topic of the theme
- Brainstorm ideas and make a list
- Use the theme as your title:
  - **“Where Would We BEE Without Pollinators?”**
- Use some of the important issues from this presentation
- Look around your community for ideas
- Talk to professionals in the industry
- Research Pollinators and use the information you find



# POSTER TIPS

## Do...

- limit text and balance a combination of illustrations and words.
- be as neat as you can and be sure to erase any penciled sketches or guidelines.
- blend colors when using crayons or colored pencils.
- research the theme topic as a way to brainstorm poster ideas.



# POSTER TIPS CONT.

## Don't...

- use staples, tacks, or tape.
- use fluorescent-colored posters.
- create a poster that is all words or all illustrations.
- have your parent or others draw your poster for you to color in.
- try to include too many ideas. A single message – clearly illustrated – is most effective.



# JUDGING

Judging Criteria	Weight
Conservation Message	50%
Visual Effectiveness	30%
Originality	10%
Universal Appeal	10%



# FOR ADDITIONAL INFORMATION...

Visit <http://www.nacdnet.org/general-resources/stewardship-program/>

Entry Forms, Rules and Resource files are also available for download on the contest page at

<http://www.nacdnet.org/education/contests> and  
[www.conservationlearn.org](http://www.conservationlearn.org)





Questions – Contact Kristi Helzer  
Community Outreach and Education  
Coordinator

970-534-2320 / [kristi.helzer@wgcd.org](mailto:kristi.helzer@wgcd.org)

