

## Why be concerned about pollinators?

The critical loss of honey bee populations due to disease and toxic chemicals after 2010 brought the importance of pollinators to the attention of the federal government. In June 2014, President Obama established a Pollinator Health Task Force, co-chaired by USDA and EPA, to create a National Pollinator Health Strategy that promotes the health of honey bees and other pollinators (including birds, bats, butterflies, and insects). The goals of the National Pollinator Health Strategy are to:

- Restore honey bee colony health to sustainable levels by 2025.
- Increase Eastern monarch butterfly populations to 225 million butterflies by year 2020.
- Restore or enhance seven million acres of land for pollinators over the next five years.

## Monarch Butterfly

We know about the commercial importance of the honey bee, but why was the Eastern monarch butterfly singled out by the National Strategy? Monarchs are international citizens unique among butterflies in their annual migration from Canada to Mexico. As a result of declining habitat all along the route, the populations overwintering in Mexico and returning to the US have been in catastrophic decline. It takes several generations for the Monarch to accomplish its trek—



- 1) Overwintering butterflies fly north to the Gulf Coast; mate and a new generation is started;
- 2) That generation develops and flies further north starting a

new generation in the MidAtlantic;

3) A third or even fourth generation is born in Canada.

The most northern generation are characterized by stronger body structure suitable for enduring the long flight to overwintering grounds in Mexico. That generation overwinters and heads back to the US in spring.



The Monarch lays its eggs on milkweed plants; the caterpillars need the milkweeds specifically to survive. The Common milkweed, Swamp milkweed and Butterfly milkweed are suitable for larvae sustenance—and also provide nectar for bees and other pollinators. Milkweeds contain a chemical that is distasteful to birds (and poisonous in quantity). Consequently, Monarchs avoid excessive predation reducing one challenge to survival. The Viceroy butterfly has evolved a strategy to benefit from this avoidance although its larvae feed on nonpoisonous willows—it mimics the Monarch in appearance. Can you tell which is which?

