BLUE & GOLD NEWS

Pennsylvania FFA Happenings

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Pennsylvania FFA photo

State officers Greg Gipe, vice president, and Trevor Maxwell, reporter, visited with landscape and horticulture students of the Central Pennsylvania Institute of Science and Technology during the Christmas trees event.

FFA Students Celebrate the Holiday Season

Trevor Maxwell
State Reporter

The Festival of Trees is an event that the Bellefonte community looks forward to attending each year. During this event, the Central Pennsylvania Institute of Science and Technology hosts Christmas trees that its landscape and horticulture department students arrange. The trees are "purchased" by a donation to be decorated however the donor chooses.

The public was able to tour 65 astonishing Christmas trees this year, meet with and write letters to Santa, as well as support the students of the landscape and horticulture department by purchasing poinsettias from the Poinsettia Tree on Dec. 10 to Dec. 11.

After the event, all of these trees, along with their decorations will be packed up and donated to families in need of holiday decorations.

Seize Your Time, Live Life Half Full

From the Officer's Station

Abigail O'Neil
State President

Six months. Six months of learning, growth, joy and challenges. As my teammates and I inch toward our six-month anniversary of being elected to state office, I am left reflecting on the idea that it is halfway over.

When I was growing up, my mom would always remind us that the cup of life is halfway full rather than halfway empty, and to do the things in life that fill the cup to its rim.

Maintaining this mindset is often easier said than done, but a true testimony of gratitude. When I look at the last six months, I constantly remind myself of the timer that started ticking the second I was elected.

As a state officer, I often feel like time is fleeting. It is almost like this "cup of a year" has a hole in the bottom; however, in that empty half there is much to be celebrated.

This October, Pennsylvania FFA gathered for the first time in nearly two years for an in-person conference. My six teammates and I have been honored to visit and spend the entire day with over 50 agriculture programs across the commonwealth. And I attended my very first National Convention this year alongside my best friends.

In order to fully enjoy the remainder of our cups, we must appreciate those in our lives who fill them. Those exhilarating moments during the beginning half of this journey have continued to fill my cup, but it's the people that have made the first half of this journey so monumental.

It's the members, advisers and supporters who have encouraged me that have kept my cup full.

In the second half, I plan to embrace more gratitude and spend more moments filling my cup with the remarkable members of the Pennsylvania FFA Association.

As I prioritize viewing my cup as half full, I encourage each of you to do the same.

Embrace each moment, spend the time with those you love, and never stop filling the cups around you, because it all goes by faster than you would think.

FFA Member Presents Spotted Lanternfly Research

Member Spotlight

Erin Horack
Conrad Weiser FFA

In the past four years, I've conducted studies on the spotted lanternfly and created a device that captures them using vacuum techniques.

Inside the chamber of the vacuum, the lanternflies are exposed to a toxic chemical, which causes them to die, but does not affect the surrounding ecosystems. This was one aspect of my project.

The device was created with assistance from my lab partner, Brady Moyer, and won the state STEM design and build challenge. The rest of my SAE was lab experiments.

The first year, I was determined to find the ideal temperature and humidity for spotted lanternflies to hatch. I also worked on growing them in the lab, which was very challenging.

I was surprised to learn that it was hard to grow them in a lab when they spread rapidly in the environment, so I started conducting studies on their feeding preferences, using high performance liquid chromatography.

I also found that the sap concentrations of plants that the lanternflies preferred had a higher concentration of sucrose and a lower concentration of fructose and glucose.

This means that we as a society need to better protect vegetation that has that preferred monosaccharide concentration like grapes.

Along with conducting this study I was comparing the DNA — ND6 mtDNA of spotted lanternflies in the United States — to spotted lanternflies ND6 mtDNA in Asia including China, Japan, and Korea.

With this test, I could determine if the spotted lanternflies had mutated since their arrival to the United States.

I found that their DNA was roughly 97% the same, meaning that they have yet to mutate their ND6 mtDNA since their arrival.

This shows that the spotted lanternfly are adapting to their environment quickly without the need to mutate their DNA.

My final study looked at using Wolbachia, a naturally occurring bacteria, as a control method for the insect. Wolbachia works if the males have Wolbachia and the females do not, which is why I tested the lanternflies for Wolbachia, using DNA sequencing.

I found that one of the males that I had tested already had Wolbachia. While more studies are needed, I proposed that we inject Wolbachia into more male spotted lanternflies, which then should be released into spotted lanternfly populations.

When the infected males mate with uninfected females, the bacteria cause the zygote to not form because it creates cytoplasmic incompatibility.

These damages require more than just me to work toward a solution. They require everyone in the community to work together to combat this insect.

Erin Horack, a recent alumna of the Conrad Weiser FFA chapter, was a national proficiency winner at the National FFA Convention. She received the honor for work on her supervised agricultural experience.

Horack is currently attending Penn State, majoring in biotechnology to pursue her passion in genetics.

FFA state Reporter Trevor Maxwell assisted with this story.

Photo provided by Erin Horack

Erin Horack's SAE project involved laboratory research on the spotted lanternfly.

Embrace: The New Year

Pennsylvania FFA Officer Team

As we approach the end of 2021 and anticipate the beginning of a new year, we recognize the opportunity of a restart or recharge to our lives. Therefore, the state officer team will be embracing new beginnings, and we encourage you to do the same.

New beginnings offer the opportunity to find excitement in the mundane moments, seize new opportunities, and seek more fulfillment in your endeavors.

How will you embrace new beginnings in 2022?