Think OINK! (Observe, Innovate, Network, Kinesthetic)

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Introduction

According to the American Farm Bureau, the average American is at least three generations removed from the family farm (Perry, 2018). As students across the country lose their personal connection to production agriculture, it is often the responsibility of the local agriculture teacher to provide authentic, experiential learning experiences to help bridge this knowledge gap for those in their communities. High quality laboratory instruction has often been considered a keystone in successful school-based agricultural education (SBAE) programs to provide these experiences as an opportunity to apply technical area concepts taught in the classroom (Phipps et al., 2008). These laboratories may include an agricultural mechanics shop, greenhouse, computer lab, land laboratory, food processing facility, or a school farm, among others (Twenter & Edwards, 2017). One type of laboratory not as commonly available to SBAE teachers is the livestock facility (Shoulders & Myers, 2012).

Due to lack of school livestock facilities nationwide and the experiential learning opportunities they offer, specifically related to production animal practices, SBAE teachers are searching for unique ways to repurpose their current facilities to become multi-faceted learning laboratories in hopes of providing enriching, hands-on experiences for their students in these areas. Lets see how one high school agriculture teacher created a hands-on animal science laboratory that not only provides a learning experience for his students, but for anyone with a social media account.

How it Works

The SBAE teacher at Streator Township High School initially developed the Think OINK (Observe, Innovate, Network, Kinesthetic) Project to provide students an opportunity to gain exposure and understand animal production practices through a hands-on initiative. In the fall of 2016, the SBAE teacher contacted a local hog farmer that agreed to provide a pregnant sow for students to farrow within the existing school greenhouse so students could learn about different swine production phases.

Each fall, the students in the agricultural science class travel to the local hog farmers facility to learn about swine genetics, semen motility and morphology, tools used in artificial insemination, and the proper procedure for artificial insemination. Students then assist the hog farmer in artificially inseminating the sow that will farrow in the school greenhouse the next spring. Just prior to its due date, the sow is placed in a farrowing crate in the school's greenhouse. As the sow enters labor, students gain a new aspect of education as emotional learning takes place. Additionally, the full labor process is live streamed via their Facebook page which allows for people all over the world to watch and engage in the process.

Students assist in the delivery, make sure all the piglets are healthy, and make reactive decisions to understand a deeper component of piglet health and wellness. As piglets age, the students process the piglets by removing their needle teeth and tails, give them the necessary vaccinations, as well as castrate the males with a local veterinarian. Students have the chance to

purchase a piglet for a SAE project to learn more about the production process through the summer.

Results to Date & Implications

The primary goal of this project was to provide hands-on training to students, but after livestreaming the entire process via their Facebook page, learner engagement took place with a wider audience than expected. In 2018 (the most interactive year due to the time of delivery), the Think OINK Project livestream had 45,000 views, 91 post shares, 802 comments, 30,647 engagements, and reached over 234,002 people. Additionally, the livestream was viewed from 29 different states and six (6) international countries. In 4 years, the project has provided hands-on training in pork production to 400+ ag students through 4 different litters and 41 piglets born on-site. To date, the Think OINK Facebook Page has 3,987 likes and is growing monthly.

The Think OINK project allows for a shift of understanding in modern production animal agriculture. This shift has been evident in our students, school, community, and even the throughout the country as people engage in the project personally and virtually. In 2020, a pinnacle point was reached in the project as four other Illinois ag programs implemented a sow farrowing project within their program to provide students with the same production experience.

Future Plans & Advice to Others

Future plans include adding two additional facets to the Think OINK Project. These include having students analyze performance data prior to the selection of the semen and utilizing the butchered hog carcasses as part of their meat science unit.

It is advised that all resources are lined up prior to bringing a sow on campus for student involvement. Identify potential donors in your community that are willing to house a sow during the gestation process or work with a current student that currently breeds pigs. Each step of the process can easily be sponsored or supported by local community members.

The biggest struggle in the first two years was ventilation and getting students involved because of the smell. Determine the best way to have proper ventilation within your facility as students are often deterred by the smell of the project. To limit the growth of odor releasing bacteria, the floor is disinfected under the farrowing crate daily. Additionally, find a pair of rubber boots for each student to wear while working with the sow. Students' interaction changed drastically when they didn't have to worry about their own shoes.

Costs & Resources Needed

There are several resources that made this project come to fruition. The SBAE program at Streator Township High School had been fortunate to work with industry sponsors and local donors that pay for all consumable items. Additionally, startup grants were written to pay for capital equipment such as the farrowing crate. Capital resources include the following: farrow crate ($1,000), sow ($500), video camera ($600), computer ($500), and feeding equipment ($50). Non-capital resources include the following: pig semen ($300), artificial insemination equipment ($25), pig feed ($150), veterinary supplies ($100), water supply, and bedding or shavings ($100).

References

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