

**EGGcellent Work: Utilizing a School Based Enterprise SAE to Foster New Agricultural Experiences for Students**

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**Introduction**

School-Based Agricultural Education relies on three delivery mechanisms for a complete agricultural education program: Classroom and laboratory instruction, leadership development through membership in the National FFA Organization, and participation in a Supervised Agricultural Experience program (SAE). Increasingly, SAE has been identified as the most challenging component of the agricultural education program model (Rank & Retallick, 2016; Talbert et al., 2014). The National Council for Agricultural Education has identified a variety of challenges contributing to the difficult implementation of successful SAE programs such as: 1) limited teacher time needed to adequately supervise projects, 2) less students with agricultural backgrounds and access to agricultural employment opportunities, and 3) lack of resources to support SAE design, implementation, and development (National Council for Agricultural Education, n.d.). Consequently, agricultural education teachers and researchers have sought solutions to these challenges to more fully implement the complete agricultural education model, while also meeting the needs of their students and community within time and resource constraints.

What began as an animal nutrition experiment to focus on different feed types for Black Sex Link Chickens developed into a School-Based Enterprise SAE after Melissia Grant, Agricultural Science and Business Instructor at Western High School in Russiaville, Indiana noticed students were lacking both community involvement and the ability to work collaboratively with one another in the classroom. Before introducing the idea of a School-Based Enterprise SAE to the Western FFA Alumni, nearly 33% of students enrolled in the agriculture program participated in an SAE. FFA Alumni members suggested looking for an alternative to get the non-traditional student involved within the agricultural program while at school, as several home environments were not suitable for a traditional SAE project. Through this School-Based Enterprise SAE, students raised pullets for egg production, serving their school and local community, and developed an interest in further developing their own poultry production SAE projects at home.

**How it Works**

Twenty Black Sex Link pullets were initially obtained to conduct an animal nutritional feed trial in which students examined their daily rate of gain while utilizing classroom instruction to conclude the importance of the six essential nutrients and their effect upon different growth stages. After the feed trial project concluded, Grant capitalized upon the opportunity for students to continue raising the pullets at school as part of an SAE project. All students enrolled in “Advanced Life Sciences: Animals” agriculture courses were required to be involved with this School-Based Enterprise SAE program by raising the pullets to produce eggs for the local community and school food services program. With the help of several FFA Alumni members and local community stakeholders, supplies were donated to construct housing facilities that included bedding, initial feed, and troughs for food and water. As development of the chickens progressed, several hands-on learning experiences were available to the students in Grants’ agricultural courses. Grant saw a boost within the school morale by incorporating others in the school system with the School-Based Enterprise SAE. With the involvement from others within the school system several other opportunities opened up for students to visit and present to

elementary classrooms, students with intellectual disabilities, and at the local Howard County Ag Day. These additional opportunities created key educational experiences for students and building relationships with the community while operating under limited funding.

### **Implications**

Recently the National Council for Agricultural Education implemented “SAE for All” resources intending to introduce and expand SAE opportunities for 21<sup>st</sup> Century learners. The National Council for Agricultural Education defines a School-Based Enterprise as, “student-led business enterprises that provide goods or services and are operated from the school campus utilizing facilities, equipment, and other resources provided by the agricultural education program or school in general” (2017, p. 20). For many students in School-Based Agricultural Education courses this practical hands-on learning approach can provide them with their first real world work experience and opportunities to build management and leadership skills. This particular School-Based Enterprise SAE can be implemented to incorporate “SAE for All” into the curriculum by reaching students who would otherwise not have access to a traditional SAE project at home while also taking advantage of resources for other animal science labs including nutritional trials and animal behavior experiments. Providing a hands-on learning experience throughout any grade level can allow for the flexibility to reach students with several different abilities within the classroom.

### **Future Plans**

As of May 2019 the School-Based Enterprise SAE utilizing Black Sex Link Pullets for egg production completed its fourth year at Western High School. Nearly 105 pullets were raised on the premises from 2014-2019 and over 325 dozen-egg cartons have been sold to community members or the school food services program. It was advised by FFA Alumni members that egg candling curriculum be added into the “Advanced Life Sciences: Animals” course work in hopes to begin using embryology to study the growth and development inside the egg as chickens were previously purchased at three days old and students missed the initial hatching experience. Several students expressed they truly felt a passion for poultry meat and/or egg production while working with this program and opted to personally buy chickens to begin an Ownership/Entrepreneurship SAE for themselves, hoping to provide a needed good to the local community.

### **Resources Needed**

In order to implement this program, agricultural education staff should first work with their FFA Alumni, advisory committee, or local community stakeholders to secure donations to set up the initial facilities for the chickens. Securing such donations can help alleviate the burden of using classroom supply money to initiate such a project. Dependent upon the number of chickens purchased it is important to make note that live animals in a school setting can be a distraction. If the climate allows, it is recommended to construct a secure facility outside of the classroom to combat the noise and odor and allow for adequate ventilation. In addition to the facility resources, the National Council for Agricultural Education provides “SAE for All” learning guides for both student and teacher on their website. The pdf documents are available for free download at <https://thecouncil.ffa.org/sae-resources/>. Finally, the National FFA lesson plan “SAEs- Start Small Grow Big” which was also used in the initial stage through the delivery of this program is available for free download at <https://ffa.app.box.com/s/ae3oypecwsqx2b9tutstnzzggvnnke6lx>.

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