PP-597 [Bee Health]
Healthy Bees - a serious game for improved honey bee health

Lotta Fabricius Kristiansen
Swedish University of Agricultural Sciences, Department of People and Society, Skara, Sweden

Maintaining healthy honey bee colonies is complex, as it is influenced by numerous environmental factors. Beekeepers often struggle to fully understand these factors, which can impact colony survival and productivity. To address this challenge, a serious game called "Healthy Bees" has been developed. The game aims to provide an engaging and accessible way for players to learn about the key aspects of beekeeping and colony management.

Beekeepers must navigate multiple challenges, such as ensuring sufficient pollen and nectar availability and controlling the varroa mite, a major threat to honey bee health. The complexity of these factors can be overwhelming, making it difficult for beekeepers—especially novices—to make informed management decisions. Traditional learning methods may not always be effective in conveying these intricate relationships.

To create an interactive and educational tool, a collaboration was established with master's students from the University of Skövde, specializing in Serious Games. Students with diverse competencies worked together to develop the first version of "Healthy Bees" as part of their course project. The game is designed primarily for mobile platforms and is based on scientific research on bees and pollination. In the game, players buy a bee colony, earn money by selling honey or answering knowledge questions, and reinvest in improving the landscape, winter food supply, or their beekeeping knowledge.

The initial version of "Healthy Bees" demonstrated that interactive learning can effectively simplify complex beekeeping concepts. The game allows players to experiment with honey harvesting and observe its effects on colony health, providing an engaging and hands-on approach to education. By making beekeeping knowledge more accessible, the game helps players develop a better understanding of how to maintain strong and productive colonies.

"Healthy Bees" offers a valuable educational tool for both new and experienced beekeepers. It highlights key factors affecting colony health, promotes better decision-making, and fosters an understanding of sustainable beekeeping practices. By increasing awareness of beekeeping challenges and best practices, the game contributes to improved pollination services and honey production, benefiting both agriculture and natural ecosystems.