Introduction:
There have been ongoing discussions with FFA over the past several years on how the ICCA program and FFA could work together for students to prepare to become CCAs. FFA has a National Agronomy Career Development Event (CDE) each year. We were contacted by FFA to discuss how they could utilize the ICCA POs and exam for their event and better align the FFA agronomy program with the CCA program.

ICCA POs and exam questions: (under development)
The discussions started with a focus on the ICCA POs and exam questions to upgrade the FFA agronomy CDE exam. An exam committee was formed and has been working to review the ICCA POs and develop new exam questions for the high school level agronomy CDE. The team is targeting the 2021 CDE.

Though the discussions started with the FFA CDE it was quickly realized that the overall program could be utilized by all high school Ag teachers as part of their curriculum for agronomy including the exam. We proposed an overall education program that would include the FFA CDE but also be open to all high school students that are interested in agriculture and agronomy specifically.

Proposed Education Component: (being considered)
- The education component of the CCA Apprentice program will be based on the FFA Performance Objectives (ICCA POs).
- Modules will be based on competency areas in the Performance Objectives.
- The FFA education program would use the ASA Learning Management System (LMS).
- The education program would be developed in conjunction with FFA educators.
- The FFA suggested that the education program would be offered in modules that coordinate with classroom timeframes of 40 to 45 minutes.
  - Modules of 15-20 minutes may be more useful in that they will keep a student’s attention and teachers could have discussion/add in information after if used in the classroom. We may also be able to insert practice scenarios/calculations after some modules to provide a more “hands on” learning experience.
  - Shorter time frames may work better for self-study.
  - There may need to be several “sub-modules” to cover all the material in a competency area. See example at the end of this document.
- Students will be required to take and pass a quiz at the end of each module.
  - Students will be required to obtain a minimum score of 80% prior to being allowed to move on to the next module.
  - Students can take quizzes as many times as they want to obtain the 80%.
- At the conclusion of a Section of modules, i.e., Nutrient Management, Soil and Water Management, Pest Management, and Crop Management, the student will take a section quiz to obtain a digital badge for that section.
The CCA program is considering a live seminar available to students finishing sections that will introduce them to a CCA that works in the field to talk about experiences and answer questions about their career.

- Once the student earns all 4 digital badges, they will be eligible to take the exam to become a CCA Apprentice.
  - We need to decide if there are “levels” to the modules and sections. FFA has asked to consider that students should not take the “final” exam until they are a senior in high school. This would infer that there may need to be levels of modules within the sections.
    - Breaking the modules up into sub modules will solve the working through the education components too quickly. It will take them time to get through everything.

- Students that compete at the CDE may not have gone through all of the modules but would still be eligible to take the CCA Apprentice exam as part of the CDE competition and due to the studying that they would do to be competing at a national level.

- Once a student takes and passes the exam to achieve the CCA Apprentice title within the CCA program, they will be invited to view a webinar on ethics and one on career preparation. These webinars will be taught by people in the industry to help the student prepare for their careers.

**Example using Soil and Water Management**

**Competency Area 1. Basic Soil Properties**

List of concepts:
- Anion and cation
- CEC
- General soil taxonomy
- Saline, sodic, saline/sodic, calcareous, acidic and alkaline soils
- Soil Texture
- Soil water
- Soil structure
- Soil organic matter and C:N ratio
- Tillage and soil properties and processes.
- Soil health

This is a lot of material to get through in one session, I would break this up into at least 6-7 small sections to adequately cover all the concepts:
  1. Exchange capacity: Anions and Cations and soil factors influence these properties.
  2. Soil classification and relation to texture and structure.
  3. Soil physical properties and relationships to management practices.
  4. Saline, sodic, saline/sodic, calcareous, acidic, and alkaline soils.
  5. Soil organic matter and its relation to soil management.
  7. Soil health

**Competency Area 2. Site Characterization**
List of Concepts:
- General soil genesis, morphology, and classification
- Understanding area and slope
- Soil hydrology
- Soil survey and mapping

While there is a lot of information that could be covered here, the typical CCA or FFA student will not need to know the same depth of soil science that a soil scientist would. This would provide the tools that they should have to determine an appropriate level of soils in relationship to being a CCA.

1. General soil taxonomy and the soil profile.
2. Determining slope and its effect on the soil profile and management.
3. Soil hydrology and reading the soil profile.
4. The soil survey; use in management and understanding mapping tools.
5. Using the Web Soil Survey.

**Mentorship Component: (consideration)**

We thought connecting the FFA student with a CCA mentor in their home region would help the student better prepare for a career in agronomy. A mentorship program would allow students to obtain classroom/book knowledge through the modules but also practical knowledge by talking with a CCA on a regular basis. However, this is not as simple as connecting an interested student with an interested CCA mentor. There will need to be policies in place to qualify the mentors such as background checks and reporting procedures to monitor performance of both the student and the mentor. A team of FFA and CCA advisors will be formed to workout the details and policies. Local CCA Board involvement would be very beneficial.

**Local Board Involvement: (consideration)**

The involvement of the local board would be critical to the success of this program. FFA programs are centered around the high schools. The FFA agronomy program has different levels of engagement starting in the high schools and working up through the states to the national level. Most activities take place at the high school and within the states.

There are about 150 students that reach the national level of the CDE but there are thousands students at the high school level with an interest in agriculture that may never make it to the national level but will pursue a career in agriculture after high school and/or college. We wanted those students to also stay engaged with the CCA program hence why we wanted to add an overall education process linked with the FFA CDE but not solely dependent on that event.

We think connecting the CCA local boards with the state high school programs would greatly enhance the success of the program.

**Next Steps:**
Discuss the overall program at the ICCA board meeting and seek input from the local boards on their potential involvement.
As the FFA CCA POs and exam questions are under development to support the FFA Agronomy CDE, the educational, mentorship and local board involvement are early in discussions. This program could start with FFA and then expand to other organizations like 4H.

We will need to seek outside funding to fully develop all aspects of this program.