

Tools We Used:



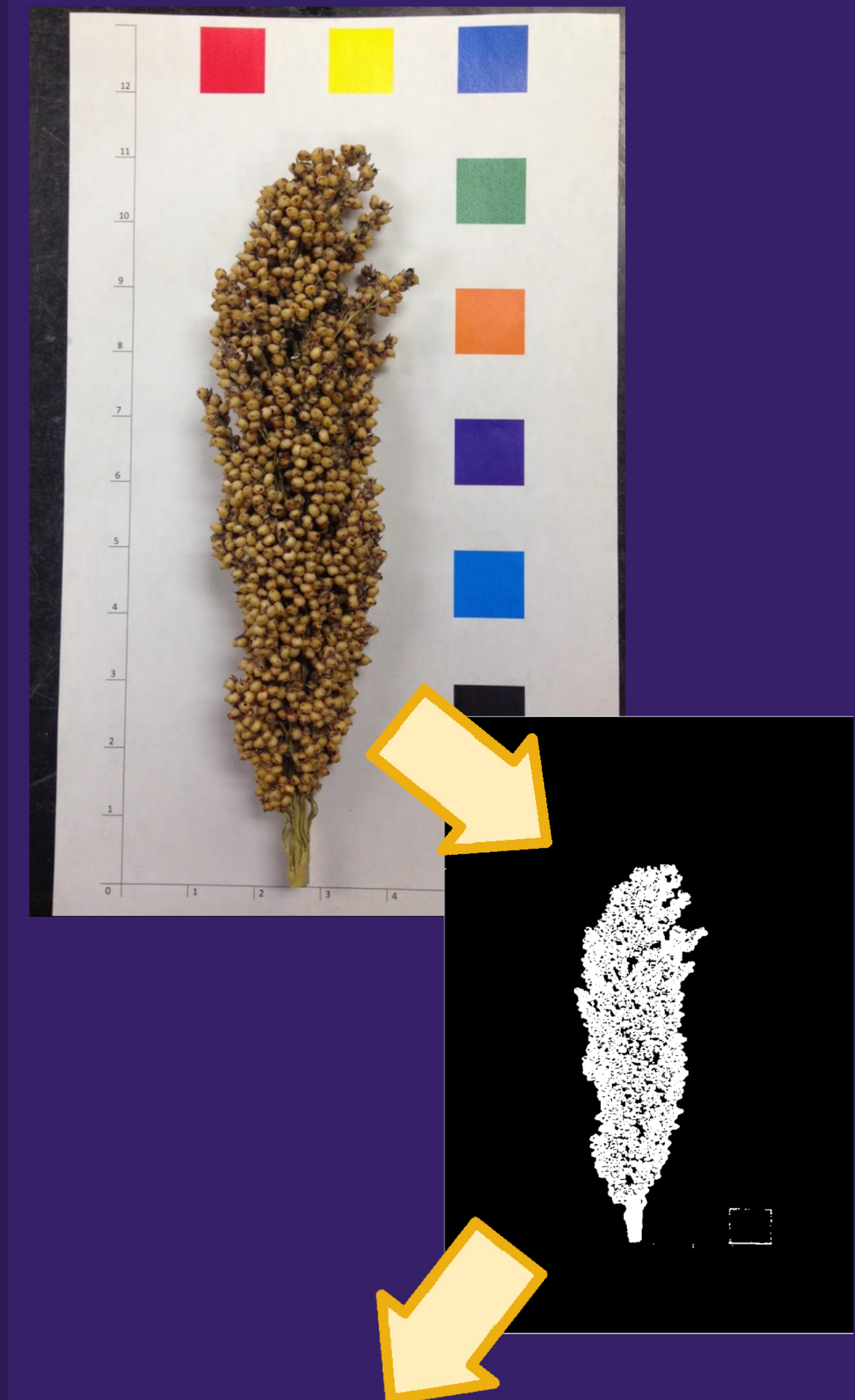
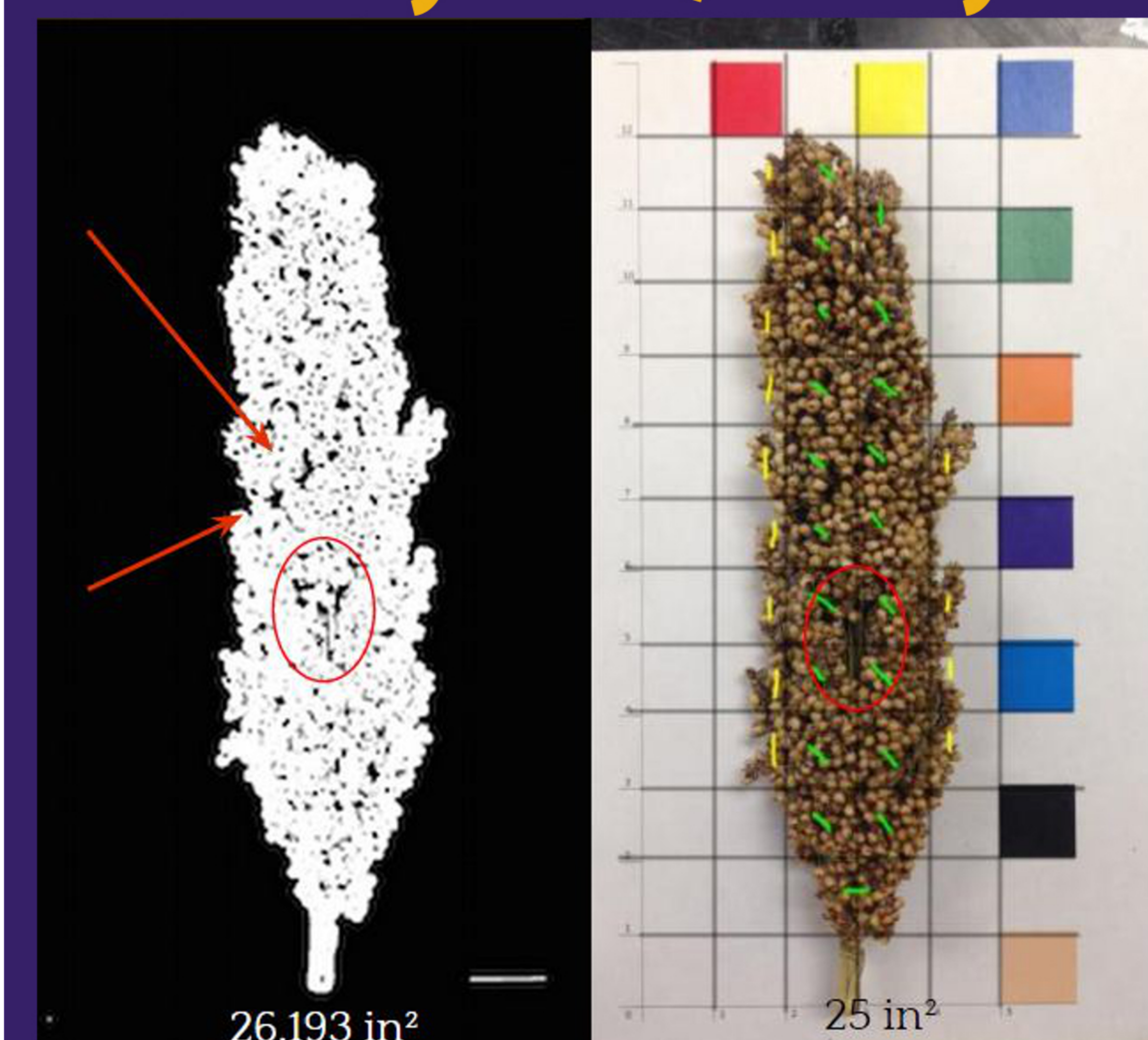
The Problem:

- Traditional yield estimations are expensive and time consuming. Special machines or a large number of people must be used to count seeds.
- Yield estimations are crucial to planning storage and how much sorghum will be sold.
- Actual seed counts per head are accurate but require considerable time and effort.
- Farmers must physically count multiple heads to estimate yield or use expensive machines.

Our Solution:

- Developed for Dr. Ignacio Ciampitti in K-State's Agriculture Research and Extension Department, SorghumYield is an Android application that eliminates the need to manually or mechanically count the number of seeds per head.
- The application uses computer vision and the camera of an Android device to analyze the seed count of the head and provide an accurate yield estimation.
- The user provides field data such as: the distance between sorghum rows, acre count, and heads per acre then takes or selects as many photos as they want. Each photo must have the provided SorghumYield sheet behind the head to determine the pixel to inch ratio.
- After image selection, the application provides the user with bushel per acre yield, weather data, and soil information to determine if either will have an impact on yield.
- Data is backed up online so users can access information across multiple devices and track previous analysis.

Analysis Quality



**122.6 Bushels
per Acre**