

Exercise F2: Scanning seed or other objects

Tues., 13:05 – 16:50 (Time for two to three exercises)

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Logistics for Participants

- Teams of 1 to 3 people.
- This activity will be conducted inside the main MAC Building.
- This exercise is in parallel with Exercises D (sensor position), E (data logging) and F1.

Objectives

- I. Introduce how scanners can be used to acquire useful images.
 - A. Fujitsu SV600 SnapScan¹
 1. Seed
 2. Distortion target
 3. Three color sample
 - B. Epson flatbed scanner
 1. Seed with box to avoid shadows

Activity 1: SnapScan

- I. Seed sample
 - A. Place a sample on the cloth.
 - B. Push the Scan button on the scanner. The scanner is activated and saves a file to the previously assigned directory.
 - C. View the image with Image J.
 1. Zoom in and pan to view individual seed
 2. Use the measure tool to measure a seed. On Wednesday, we will use similar images to show how ImageJ can count and measure large numbers of seed.
- II. Distortion target (paper with grid lines)
 - A. Place the target on the cloth and scan as before.
 - B. View the scan with Image J.
 - C. Use the measure tool to measure various cells. Verify that the distance is correct.
- III. Three color sample

¹ Mention of trade names or other proprietary information is made for the convenience of the reader and does not imply endorsement by the USDA, the University of Arizona or K-State.

- A. Place the target on the cloth and scan as before.
- B. View the scan with Image J.
- C. Use the measure tool to measure various cells. Verify that the distance is correct.

Activity 2: Flatbed scanner

- I. Seed sample
 - A. Place a sample on the glass mounted over the scanner.
 - B. Push the Scan button on the scanner. The scanner is activated and saves a file to the previously assigned directory.
 - C. View the image with Image J.
 1. Zoom in and pan to view individual seed
 2. Use the measure tool to measure a seed.

Logistics for lecturers

1. Soldering stations
2. Solder
3. Wire
4. Multi-meter ...