

Plants: Map Table Front-End Evaluation

August – September 2022

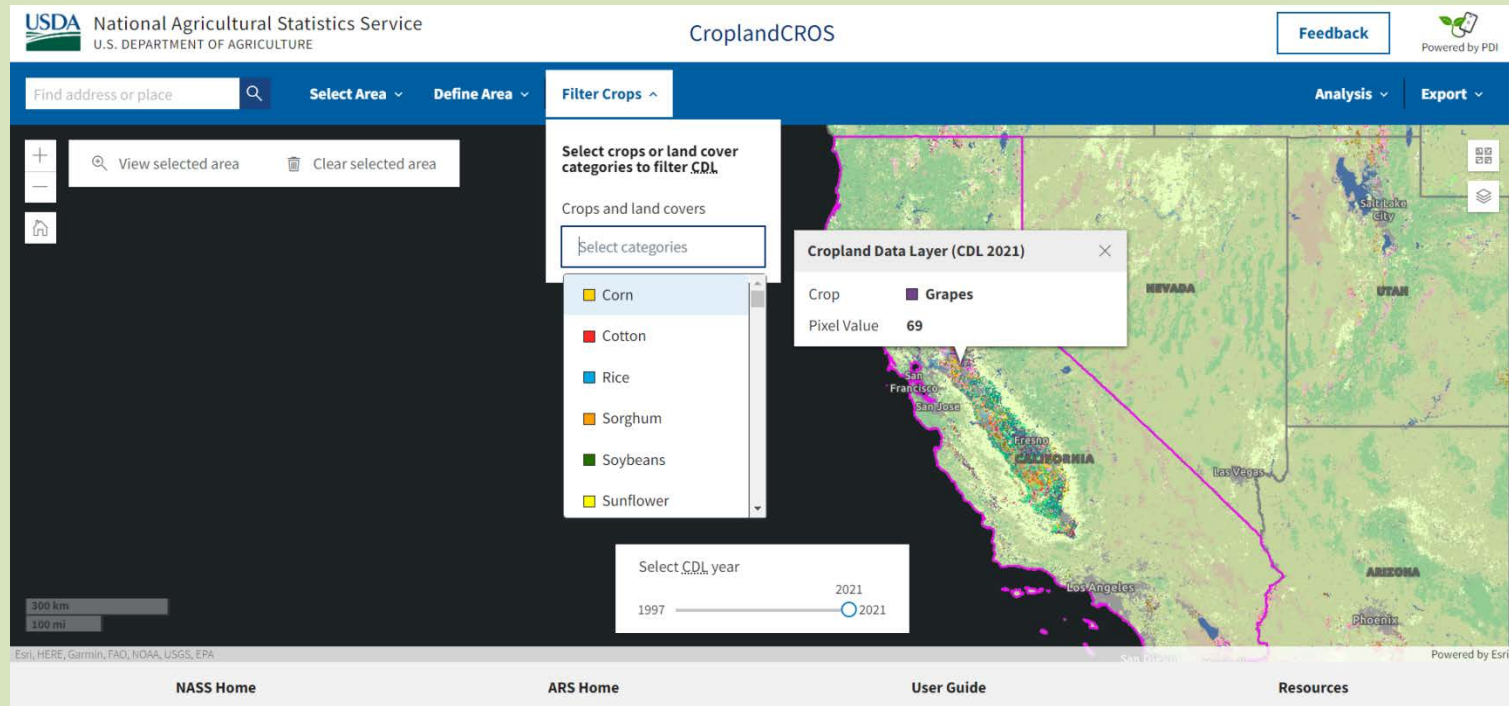
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Purpose of Front-End Evaluation

- Identify visitors' personal stories about (California) plants
- Identify visitors' questions about California plants
 - Determine whether visitors ask why some plants grow in certain areas?
- Determine whether non-CA visitors engage with the exhibit differently than visitors local to CA
- Identify aspects of the data sets that are most interesting to visitors (possible entry points)
- Determine which crops visitors most want to know about

Prototype Description

- CroplandCROPS app from USDA was pulled up on a large touchscreen table (typically used for Mapping Migrations exhibit)



Evaluation Description

- Recruitment
 - Visitors were recruited by an evaluator and led to roped-off exhibit
 - Only groups of 2 or 3 visitors were asked to participate
 - Participants had to be at least 8 years old
 - Visitors under 18 years of age needed parental/guardian consent to participate
- Cued think-aloud and interview
 - Evaluator briefly explained the exhibit and asked visitors to use it as long as they wanted while the evaluator took notes of what visitors said
 - After visitors were done, evaluator asked them interview questions

Limitations

- CroplandCROS app was somewhat incompatible with the touchscreen, which was frustrating to visitors
 - The zoom function was glitchy
 - It was easy for visitors to navigate away from the app
 - The tiny pixels on the huge touchscreen made it difficult for visitors to accurately select what they wanted to look at

Composition of Visitor Groups

Gender

	Count	% of groups
Female only	10	23%
Male only	11	25%
Mixed gender	23	52%

Age

	Count	% of groups
Adult only	32	73%
Child/Teen only	2	5%
Multigenerational	10	23%

Group members living in California

	Count	% of groups
All live in CA	33	75%
Some live in CA	3	7%
None live in CA	8	18%

Prior relevant experience

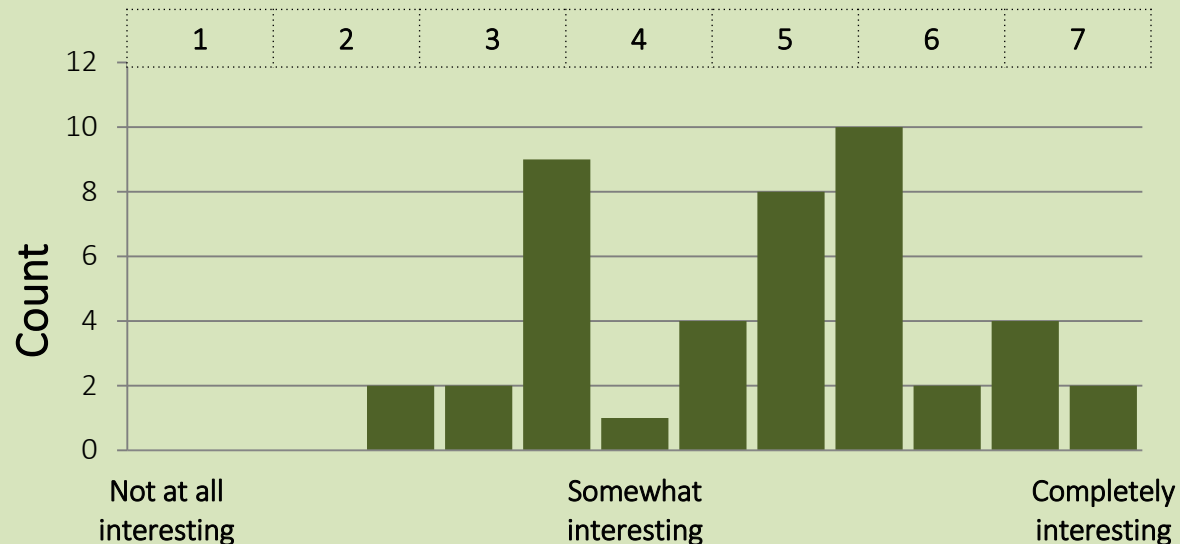
	Count	% of groups
Profession	6	14%
Education	6	14%
Gardening hobby	3	7%
Interest in farming	3	7%
Have CA knowledge	3	7%
No prior experience	28	52%

Visitor Engagement

Median Holding Time* at prototype

7 min 22 sec

Interest Rating (7-point scale, averaged by group)



* Typical holding time for cued interviews since July 2020 is ~ 2 min

Visitor Engagement (cont')

Visitor Experiences	Count	% of groups
Expressed interest in why certain crops grow in certain locations	34	77%
How climate and weather affects crops grown at different locations	10	23%
How soil type affects crops grown at different locations	4	9%
Which crops are grown near each other and why	4	9%
Said they learned something new	26	59%
Interested in looking at crops outside of California ¹	21	48%
Interested to see where crops grow ²	20	45%
Liked the variety of crops shown on the map	18	41%
Liked looking at changes in crop coverage over time ³	18	41%
Interested in comparing crops growing at different locations ⁴	16	36%
Interested in which crops grow in places familiar to them	15	34%
Wanted a legend/key of the crops shown (instead of drop down menu)	14	32%
Wanted photos or icons of each crop	7	16%
Wanted information about the farmers and/or farms	6	14%
They grow crops at home	5	11%
Wanted to know more about certain crops' environmental impact ⁵	5	11%
Curious about the technology used to identify crops	5	11%

¹ In other states or other countries

² Where they come from, where they are able to grow, etc.

³ Some were interested in historical events that may have affected changes in crop coverage

⁴ Within California or between CA and other states

⁵ e.g. water usage, harvesting, distribution, etc.

Specific Crops

31 visitors searched for or mentioned specific crops

Crop	Count	% of groups
Almonds	9	20%
Rice	7	16%
Corn	6	14%
Grapes	5	11%
Potatoes	3	7%
Avocado	3	7%
Soybeans	2	5%
Citrus	2	5%
Tomatoes	2	5%
Watermelon	2	5%
Alfalfa	1	2%

Crop	Count	% of groups
Garlic	1	2%
Apples	1	2%
Bananas	1	2%
Coconut	1	2%
Peaches	1	2%
Carrots	1	2%
Mangoes	1	2%
Beans	1	2%
Cotton	1	2%
Wheat	1	2%
Sugar cane	1	2%

(cont')

Design Considerations

(We don't have to—nor should we—adhere to all of these!)

- Include information about individual farmers (ideal) and/or farms (if farmers is not possible)
 - Consider building the exhibit around stories of the people who tend to the food we eat
- If year selection tool stays, consider adding significant events that may have impacted crop growth certain years
- Include information about crops' environmental impact

Design Considerations (cont')

- Add context layers
 - e.g. climate, topography, soil type, cities, roads
- Broaden map beyond CA
- Show a variety of crops on the map but narrow the list significantly
- List all the possible crops in a single key (no scrolling)
- Facilitate comparing locations where crops grow

Possible Entry Points

- Encourage visitors to look at places on the map they are familiar with or, for non-CA tourists, suggest well-known locations
- Ask visitors about their favorite plant-based food* or about crops they grow at home
 - Encourage them to try locate the crop on the map
 - Prompt them to guess where it might grow
 - Especially if context layers are included

* Note: the term “plant-based food” confused many visitors, making them think of meat substitutes.