Notes from the Yuma growing region
Investigating an outbreak of E. coli O157 linked to romaine lettuce

Mackenzie Tewell
Tampa, FL
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Let’s talk a little bit about the Yuma growing region.
230,000 acres used for agriculture.
100% of these 230,000 acres are irrigated using water from the Colorado River
90% of the leafy greens grown in the United States from November to March are from the Yuma area.
the Yuma area is home to nine salad plants that produce bagged lettuce and salad mixes.
During peak production months, each of these plants produce more than 2 million pounds of lettuce per day.
Yuma County ranks number one in Arizona for lemon, tangelo and tangerine production, and for watermelons and cantaloupes;

Date production in the Yuma area is now total about 10 million pounds a year,
There also are more than 40,000 acres of wheat grown in this region. Desert durum comprises about 95 percent of Arizona’s wheat crop, with two-thirds of that exported -- mainly to Italy for use in making premium pasta. Yuma growers also grow kosher wheat to used by Orthodox Jews to bake matzo (or matzoh), the unleavened bread wafers that are eaten at Passover. Because the rules for kosher production include that the wheat not receive moisture immediately prior to harvest, Yuma’s desert conditions and controlled irrigation make it a perfect spot to grow this specialty crop.
However, the website also boasts that a local cattle company usually has more than 120,000 head of beef cows on its lot.
Most cases occurred in CA, PA, ID and MN. AZ had 9 cases and a lot of panic because the growing was happening right in our backyard.
9 cases total
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8/9 female
One case developed HUS
7/8 consumed romaine lettuce during their exposure period
We had a sub-cluster in this outbreak with 11 individuals eating at a restaurant we’ll call the Ruby Crustacean. Unfortunately, their Caesar salads led them astray. This restaurant did get a bit of media exposure after some folks spoke up. The restaurant was extremely cooperative and provided us invoices that we provided to FDA and were provided to use on the traceback. There were 6 locations in Maricopa County with associated cases.
9 individuals have filed lawsuits with Marler Clark, not all of them actually matched the outbreak.
When this outbreak got started we told all of our 15 counties that the centralized team at ADHS was going to conduct STEC interviews for two reasons. First, we are much quicker than the counties for the most part. We have a dedicated communicable disease investigator at the state health department who could devote all her time to these cases. Secondly, there was a lot of rapidly moving information. We were getting new information frequently from CDC and FDA. In addition, we were collecting shopper card information, requesting records from various stores, and obtaining restaurant invoices to provide to FDA.
The biggest hurdle we faced was with regards to lab testing.
We had problems with specimens being discarded before we could request them or not being forwarded even if we requested them. We had a notable issue with a local children’s hospital who didn’t know they were supposed to send CIDT specimens.
Another issue we ran into was that CIDT and broth samples did not culture out once they were received at our state lab. We believe this occurred due to 1) delays in getting specimens to the state lab, especially those that resulted later in the week and sat around over a weekend and 2) that samples were not collected in the correct media or were transported incorrectly. This is likely to have led to actual cases not being included in the outbreak. We even had some cases who reported eating at the Ruby Crustacean but were excluded because of their samples didn’t culture out.
Finally, like most other states and all Americans, we were confused about the messaging. The media messaging consumers received throughout this outbreak has been “Don’t eat chopped romaine from the Yuma growing region.” However, we couldn’t know if someone’s lettuce was chopped when it arrived in the restaurant or chopped at the restaurant. Secondly, restaurant employees and your average server was unlikely to know where their romaine was grown.
Of course then it expanded to say don’t eat any romaine lettuce, which we felt like people were already doing, and frankly made our investigation simpler, but I’m not sure how this may have impacted the trust amongst the general public.
And finally, we were safe to eat romaine lettuce, until the next outbreaks....

Resume romaine consumption.