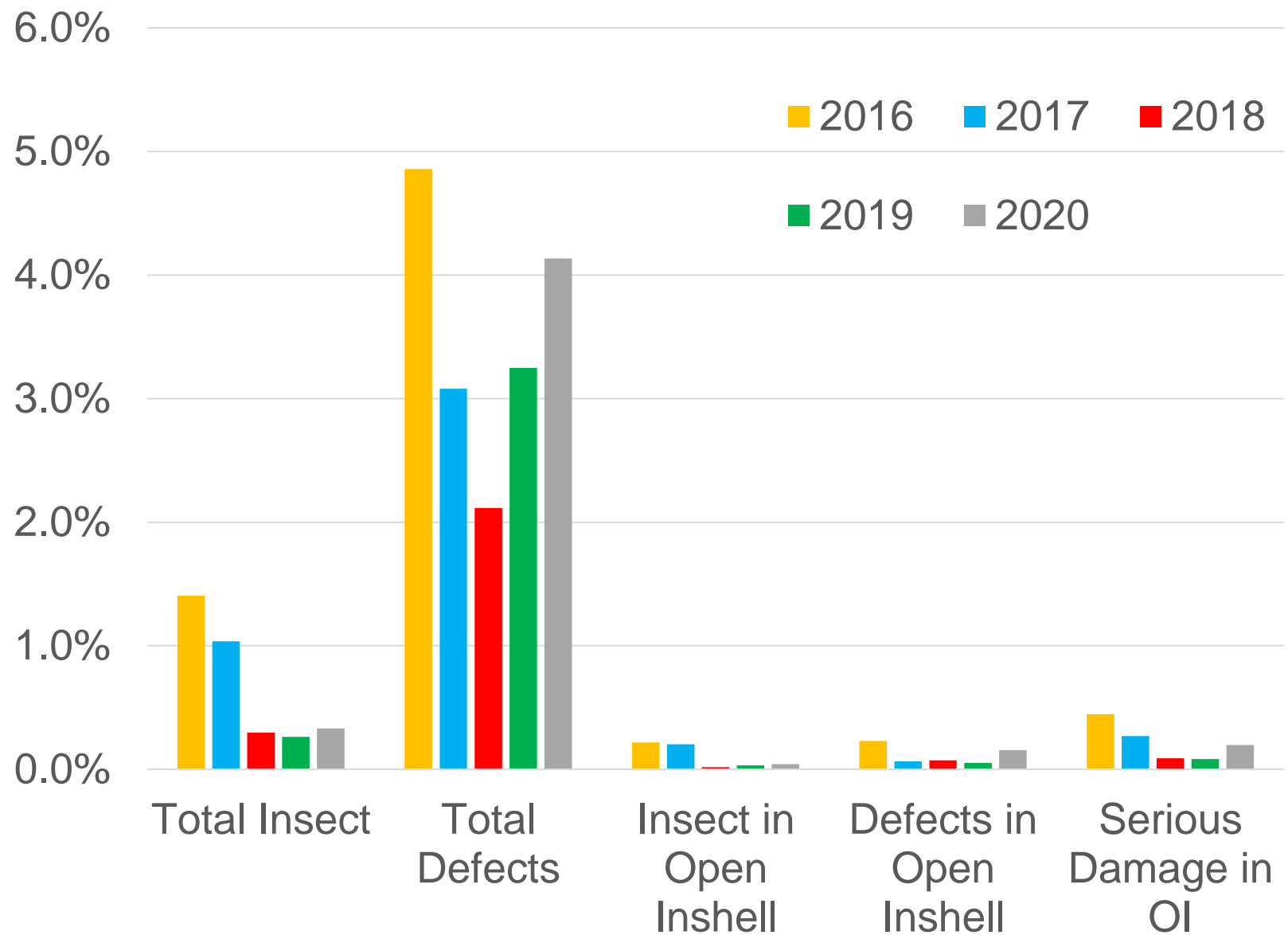
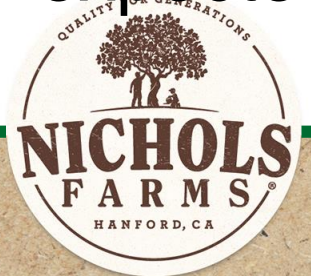
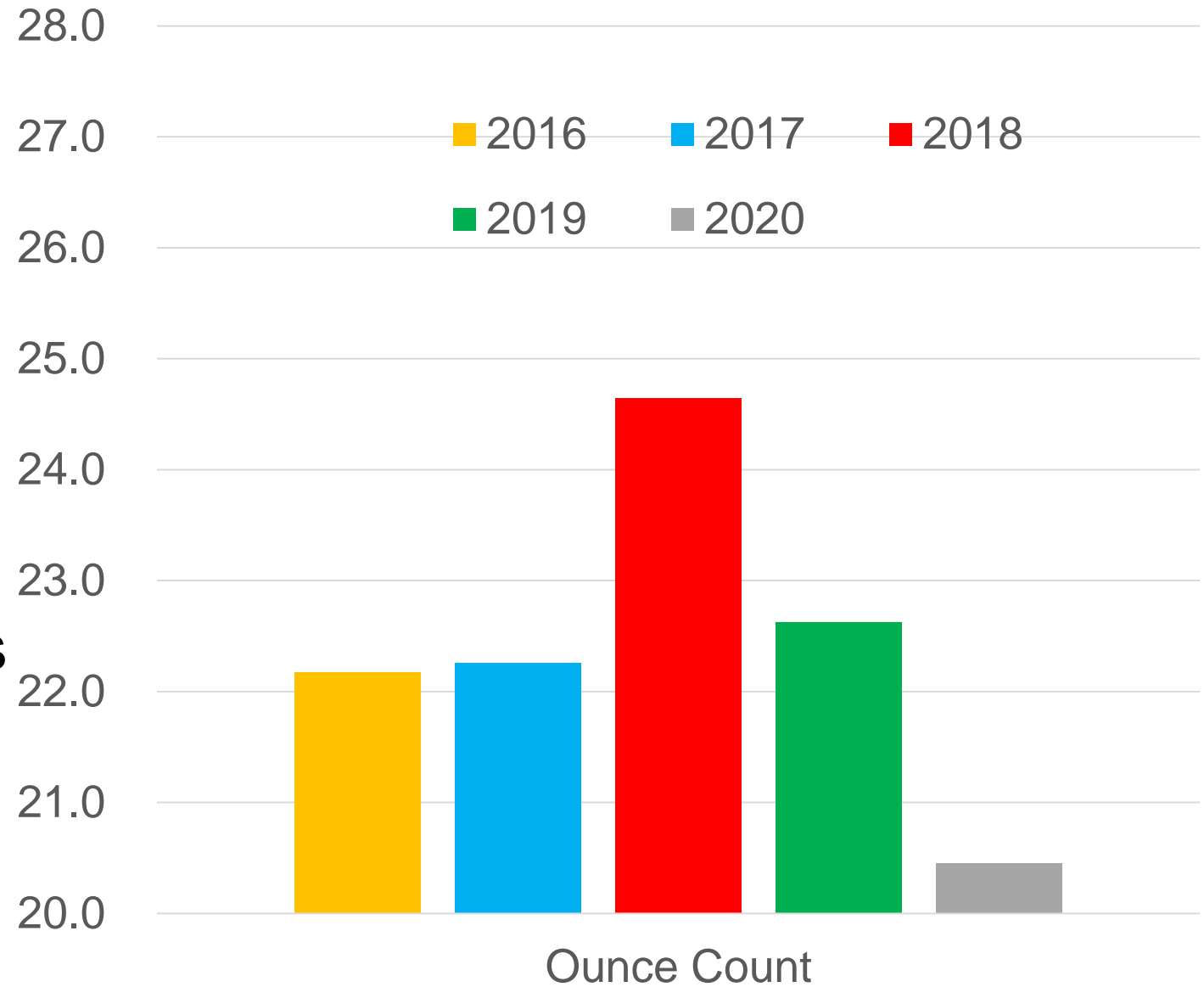


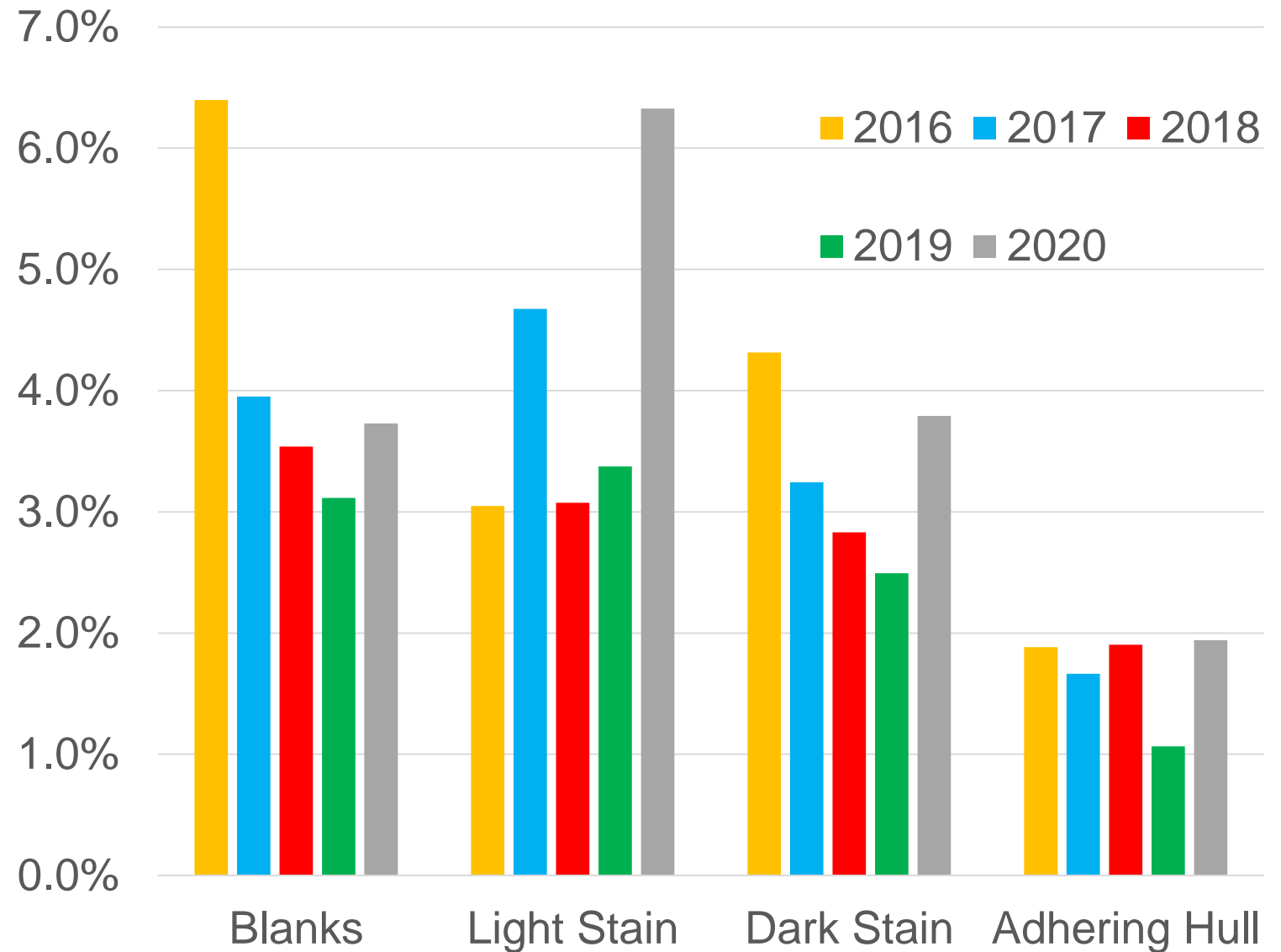
- Slide shows possible issues in processing the crop
- Defects are caused by stinging insects and physiological injury
- Insect is navel orangeworm
- 2020 crop no issues so far!



- Number of nuts to make an ounce in the grower sample
- 2020 very large sized nuts
- Kerman is much larger than usual
- Golden and Lost Hills slightly larger
- Nut size is 10% larger than 2016, 2017, and 2019 crops
- 20% larger than 2018 crop
- Indicator of larger than expected crop?

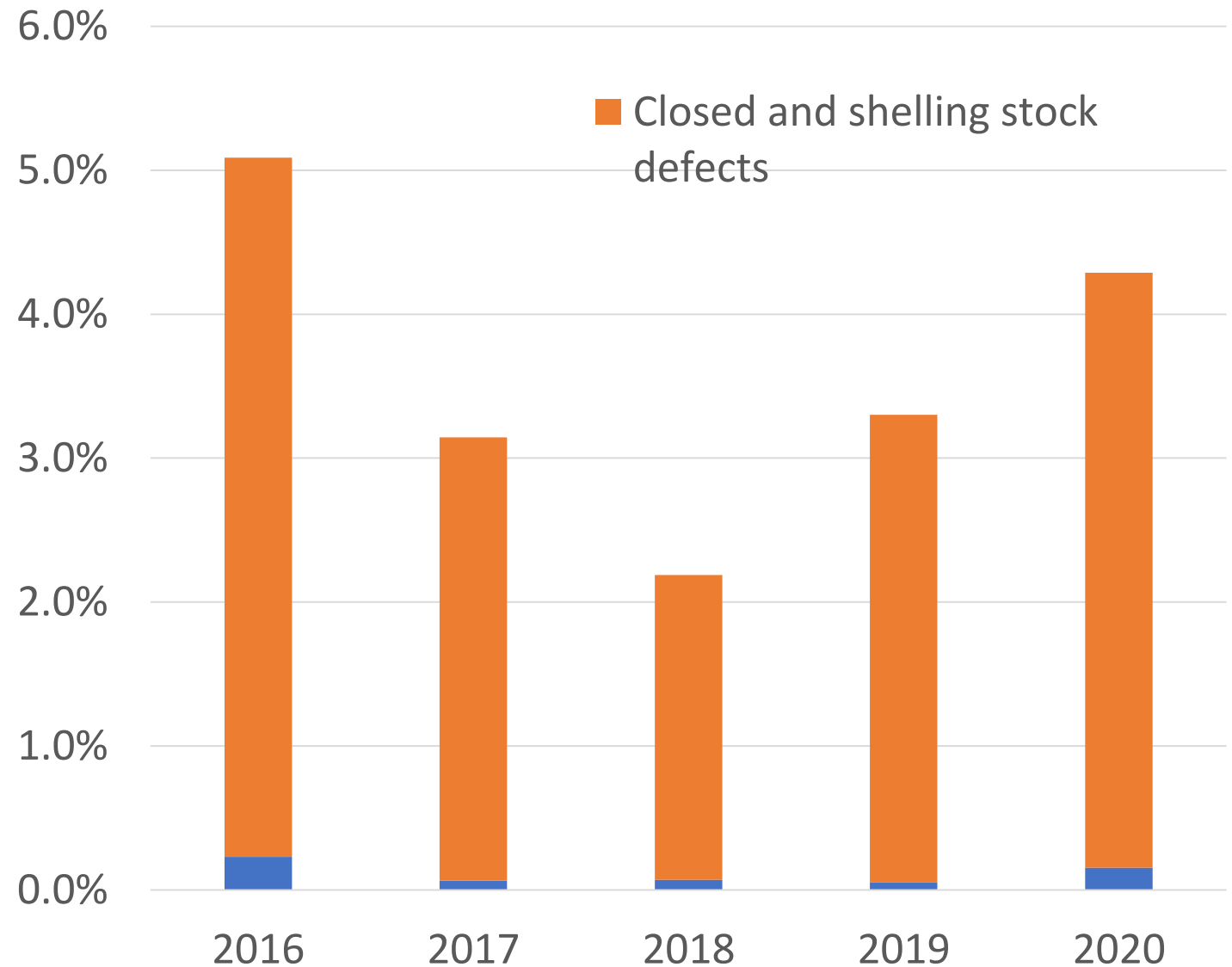


- Blanking was a potential concern, but about average so far
- Staining caused by variable maturity and excessive heat in late August and early September
- Adhering hull about typical

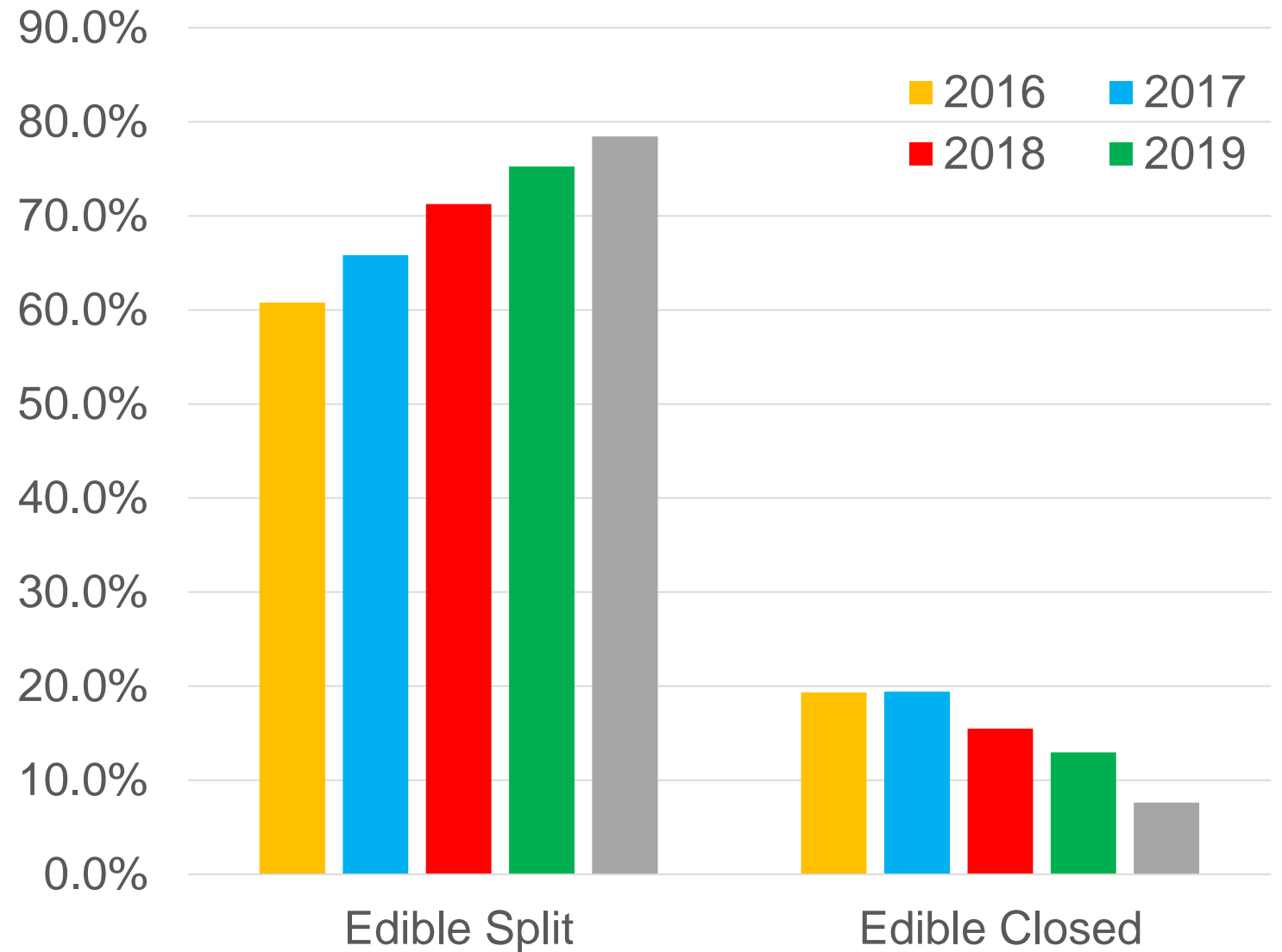




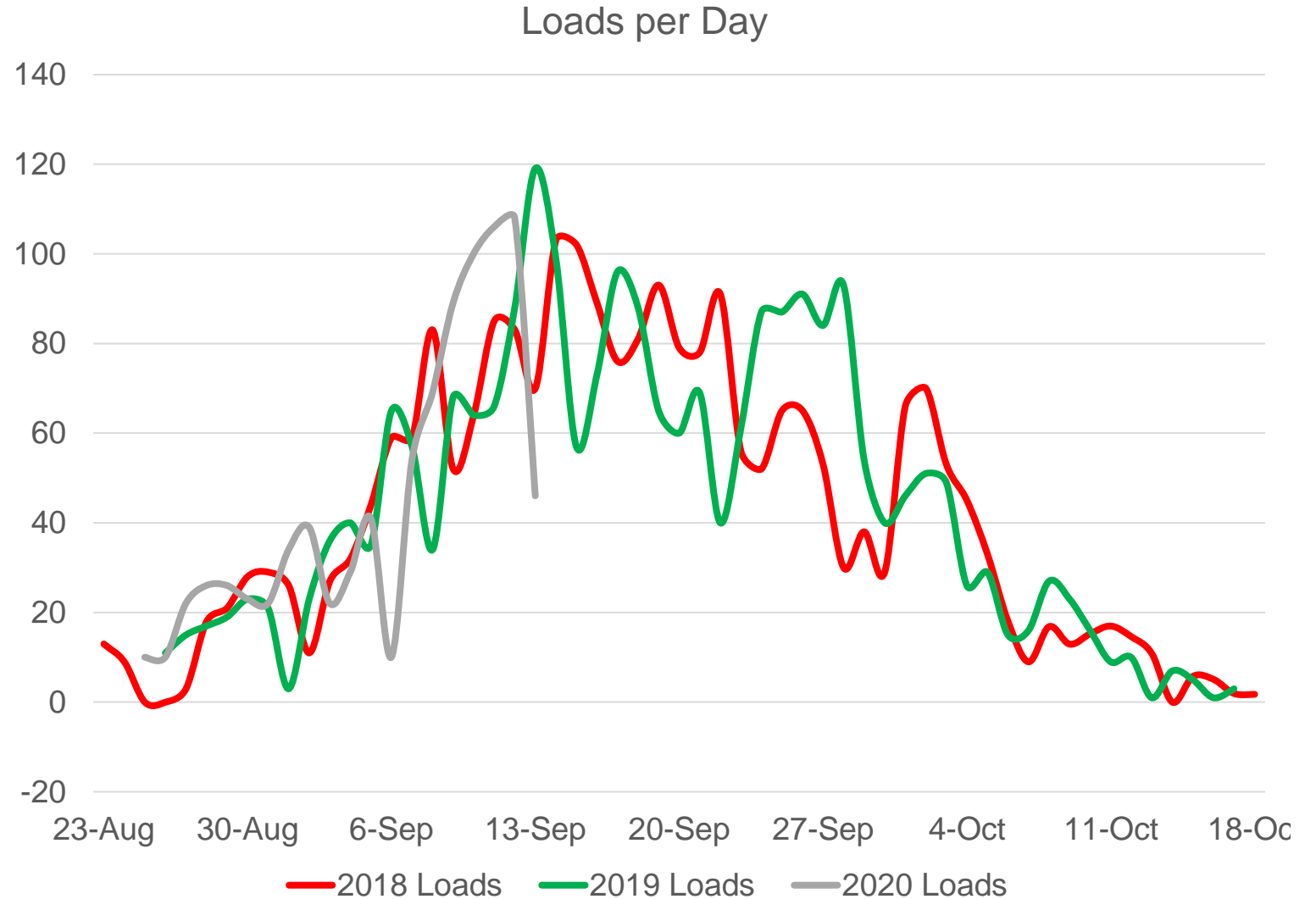
- Defects in shelling stock and closed versus open inshell
- Has been increasing for several years
- Caused by stinging insects, fungal/bacterial pathogens, and physiological tree responses (aborted nuts due to crop size)
- Higher levels in 2020 than previous years



- Data is not for full year, but both Kerman and Golden Hills have good split percentages and lower blanking than prior years

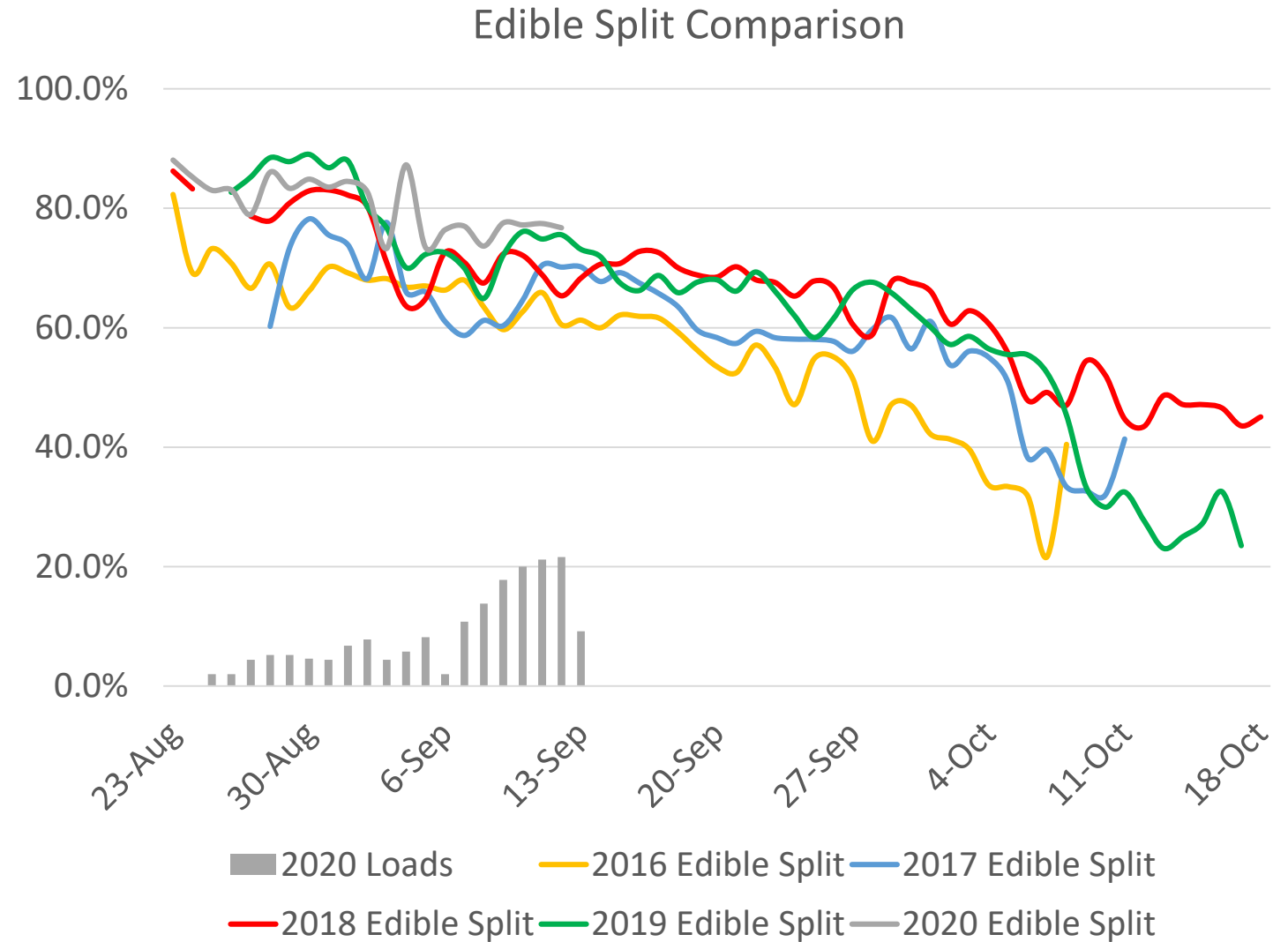


- As of September 13<sup>th</sup>, load count was slightly ahead of 2018
- Weak indicator of industry crop size, especially this early in the season

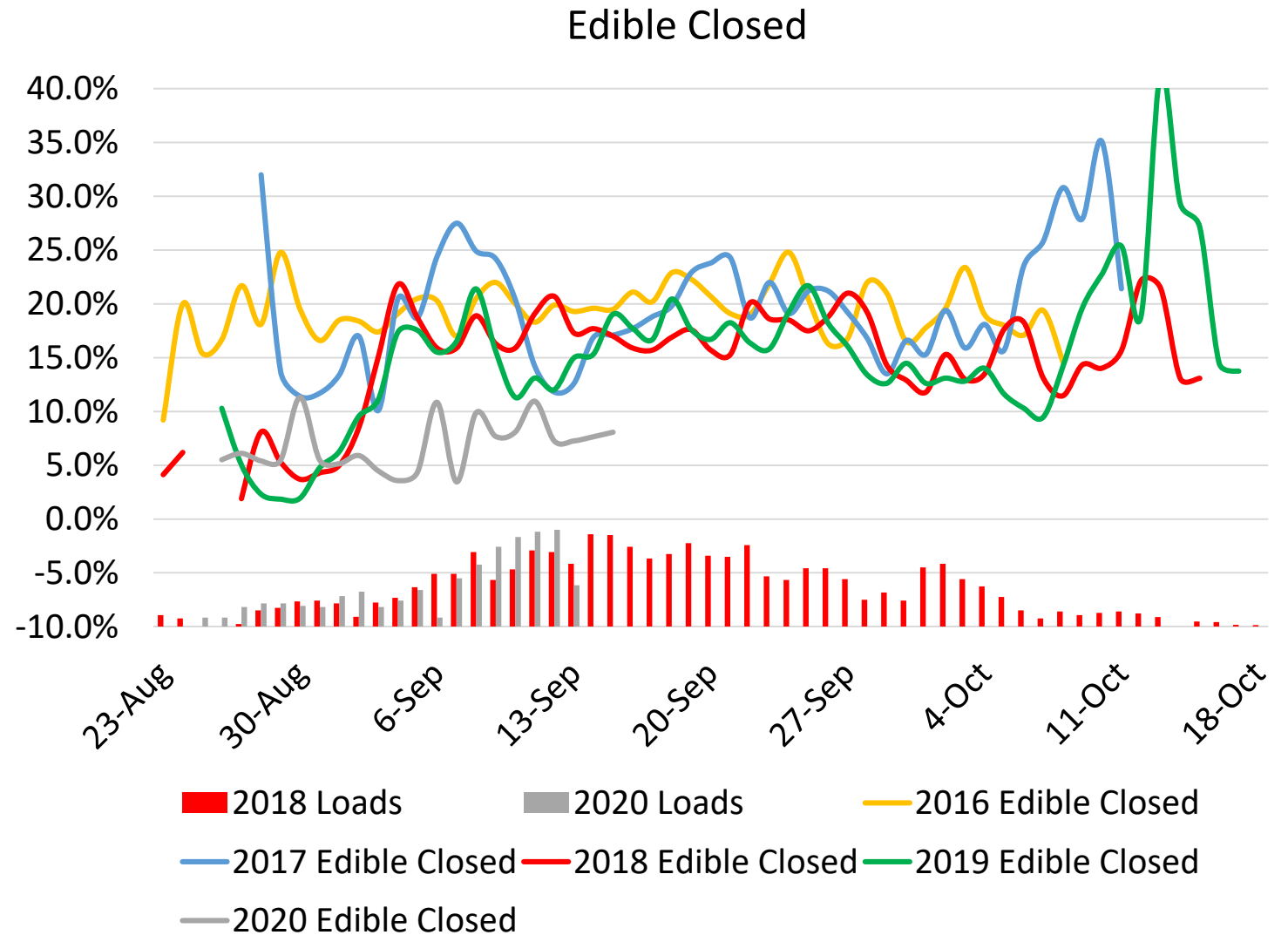




- Weighted average by date
- Split inshell higher for Golden Hills and Kerman relative to prior crops

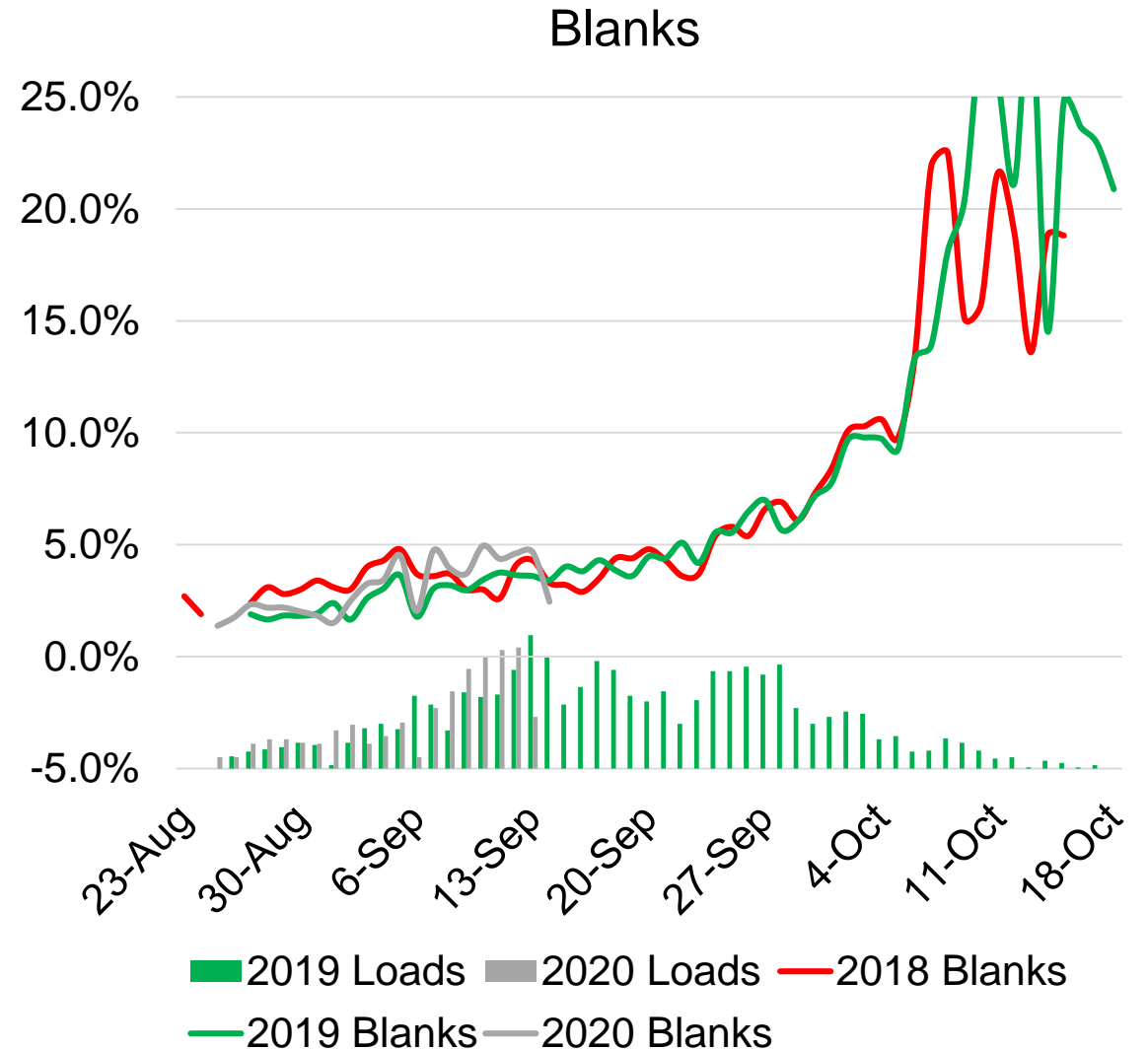


- Closed shell lower in both Golden Hills and Kerman
- Lowest in many years

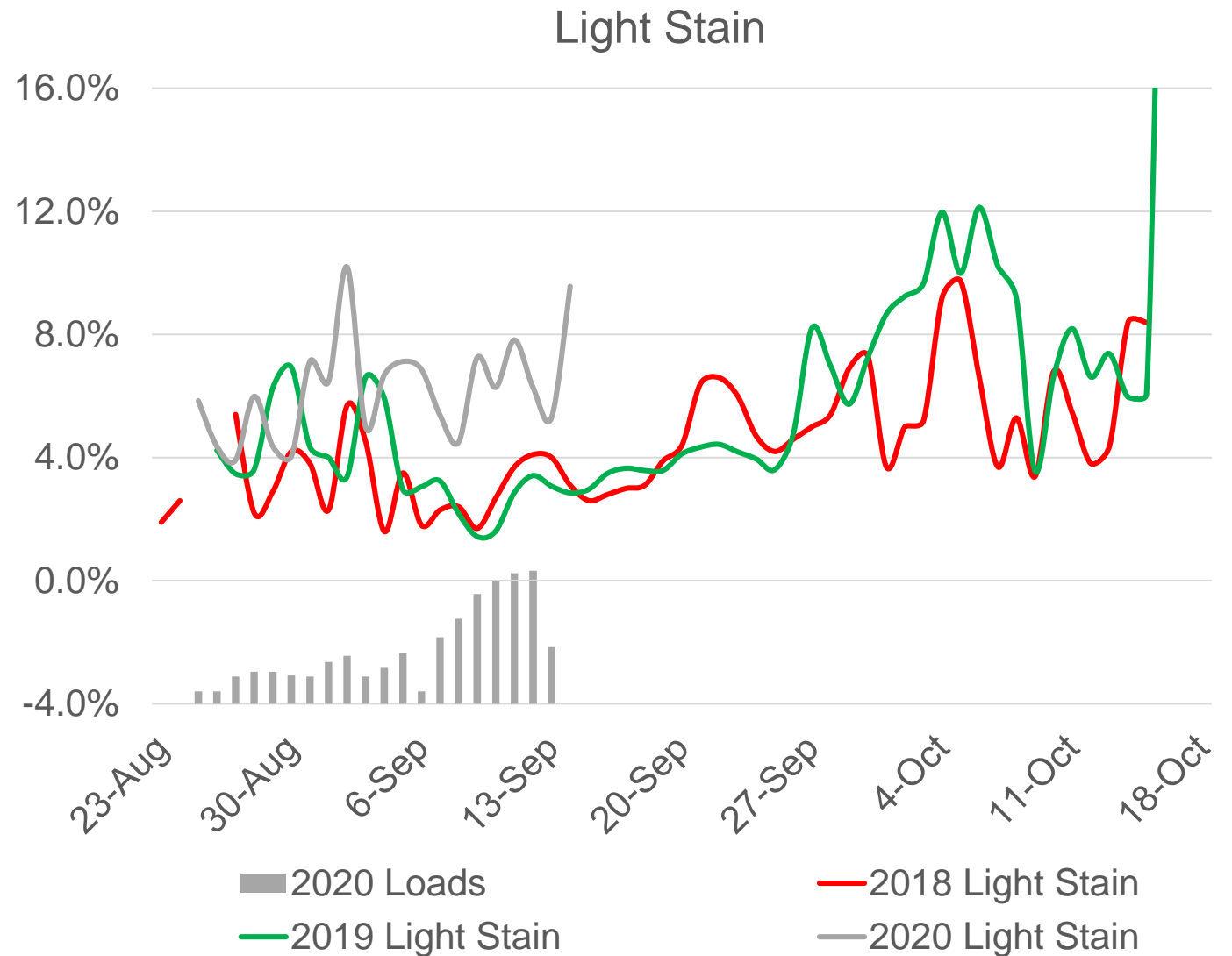




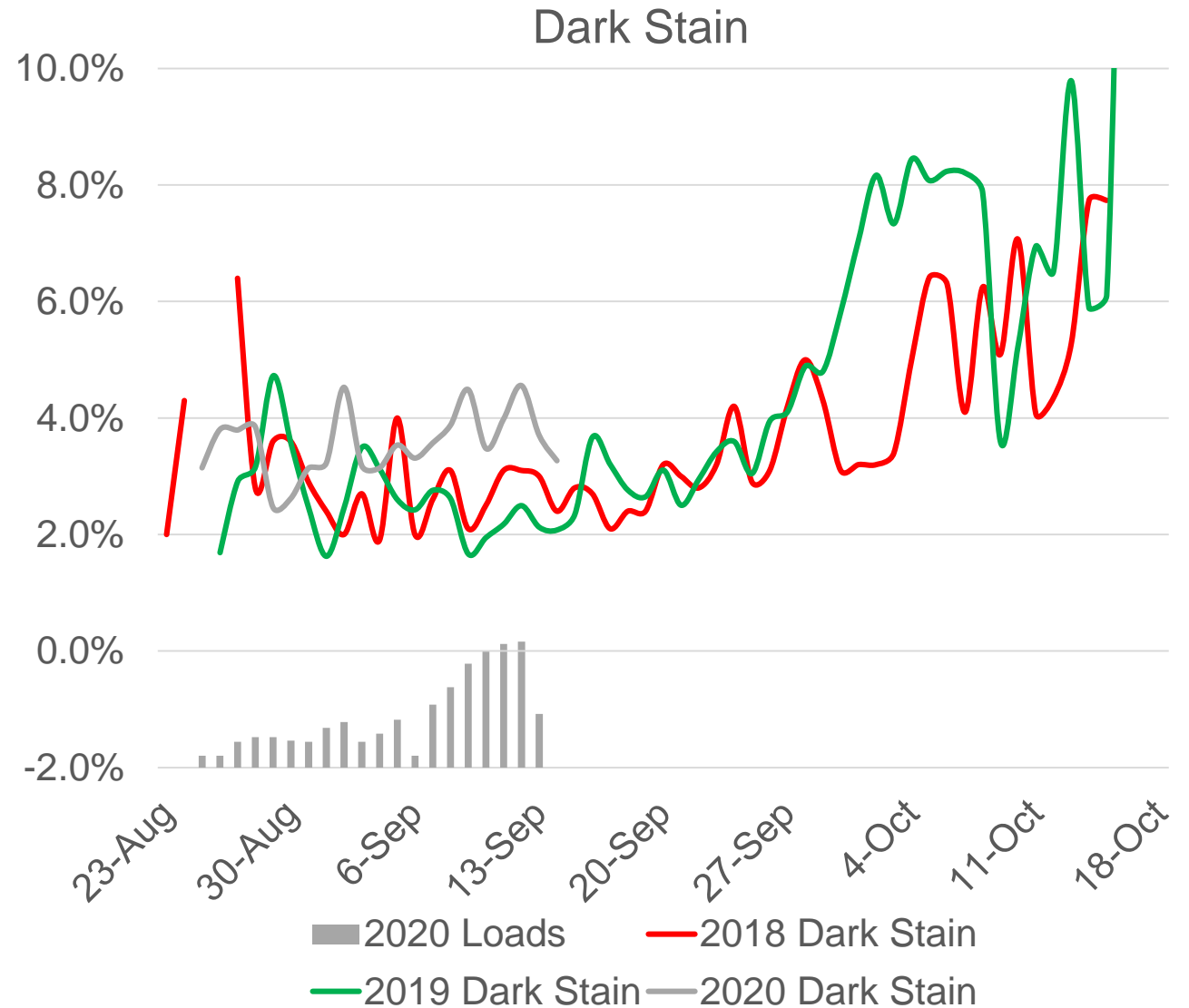
- Blanking was a concern heading into harvest, but levels thus far into the season are comparable to previous crops
- Blanking increases dramatically during reshake, but load count is low



- Light stain higher than past 5 years.
- Can be an issue for processing over 7% to 8%
- Caused by variable maturity of crop and excessive heat during August and September

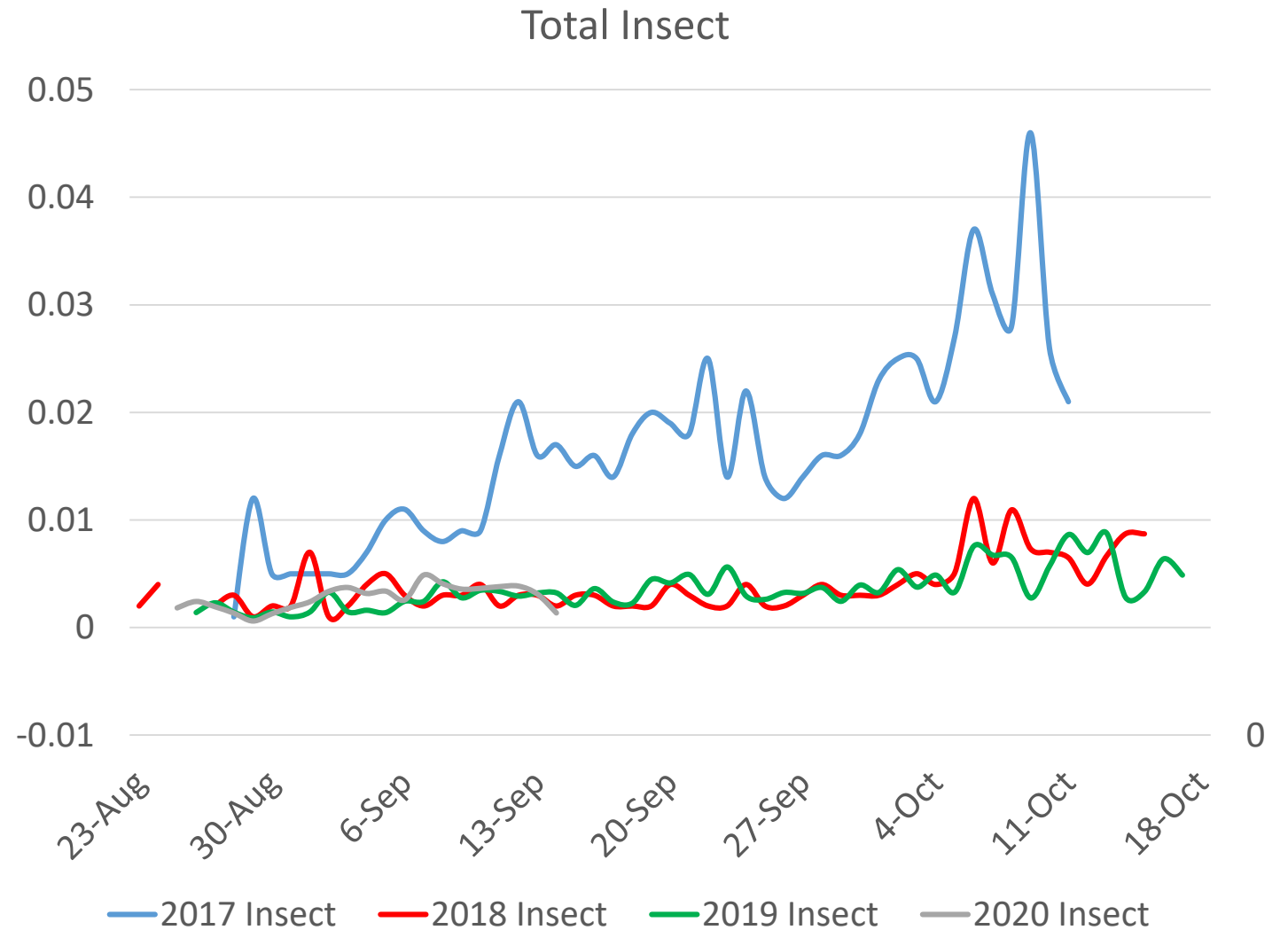


- Dark stain higher in 2020 crop
- See light stain slide for explanation

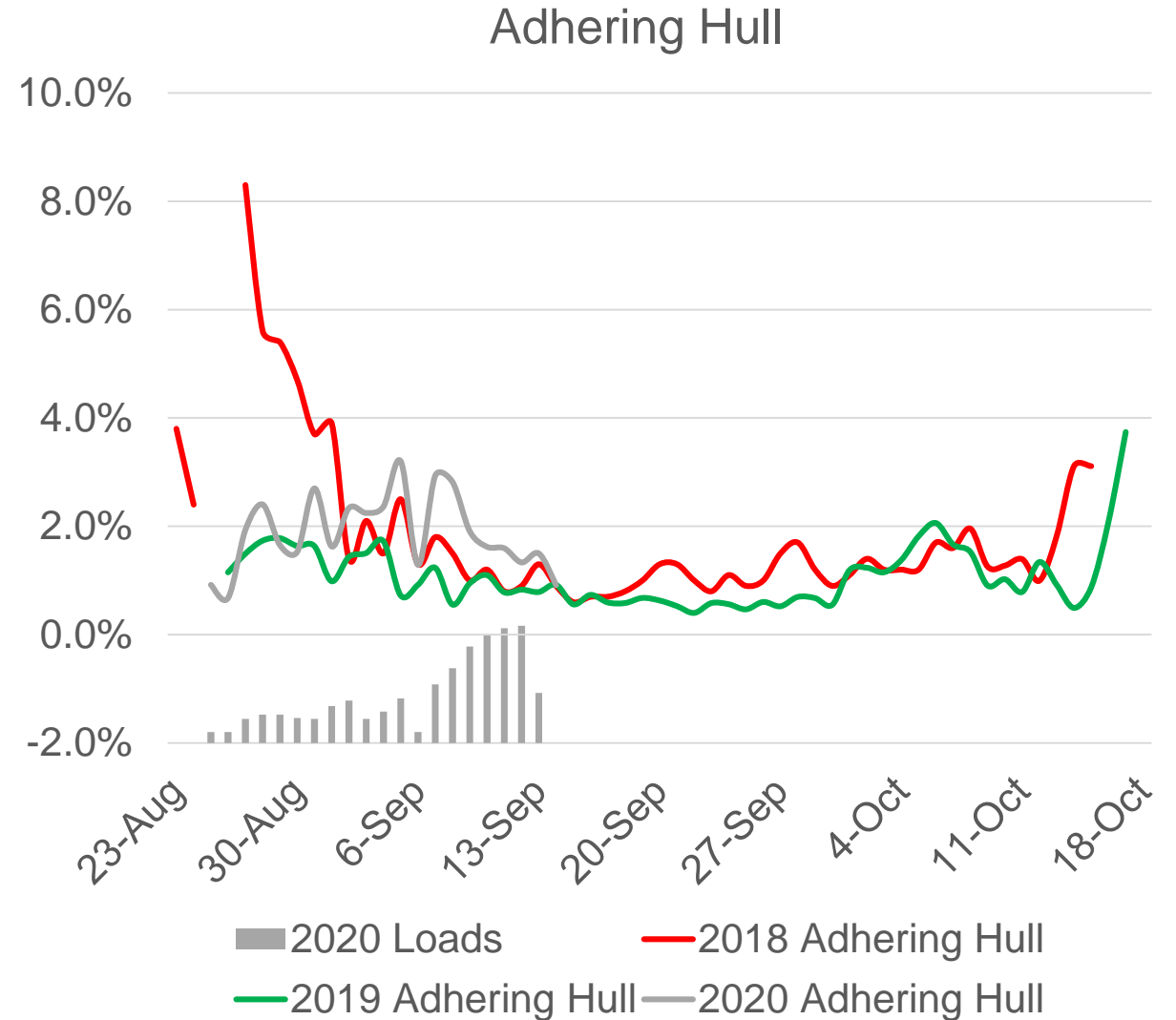




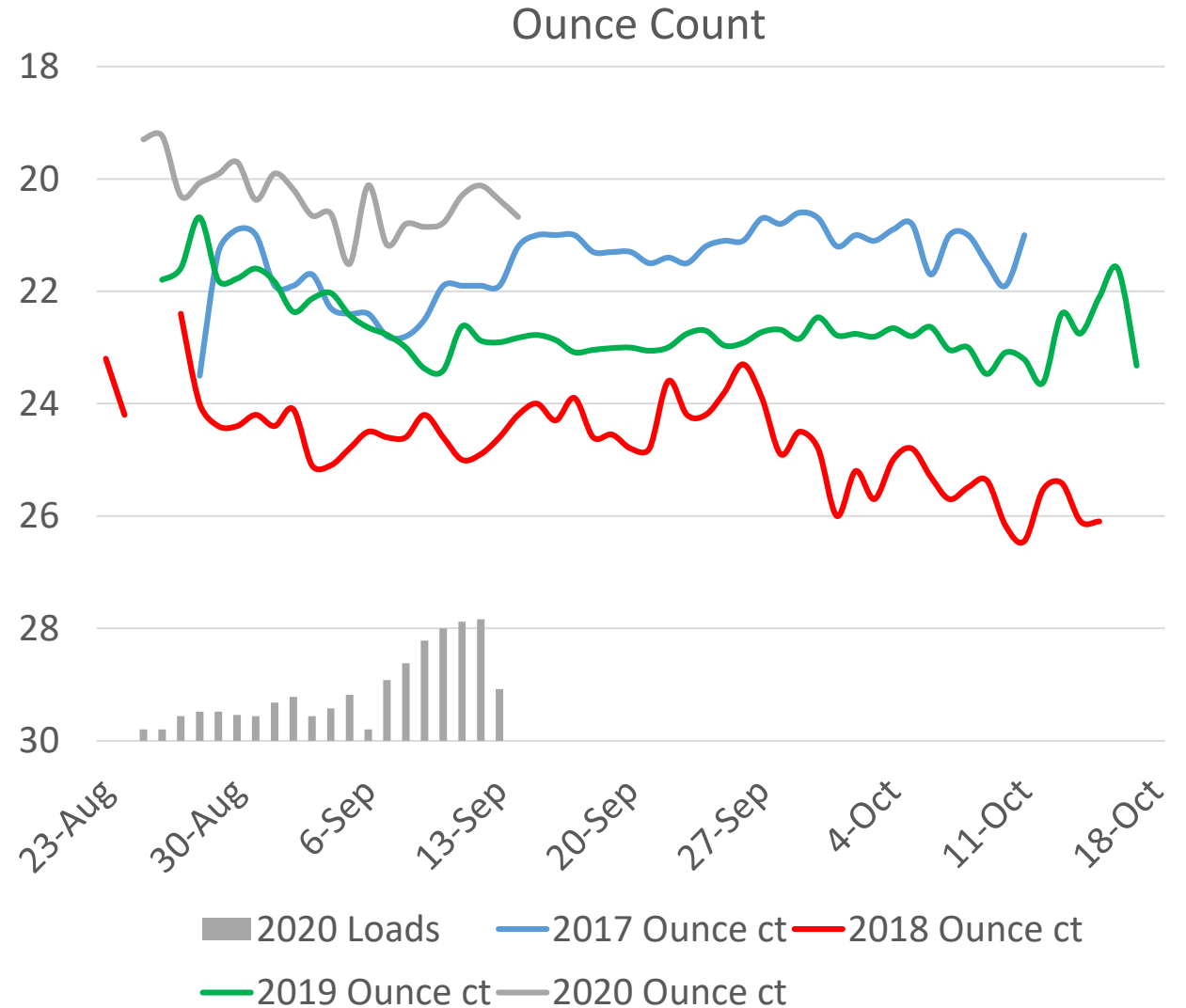
- Insect damage on reports is 100% from navel orangeworm (NOW)
- 2017 was worst year on record
- 2018 and 2019 very clean crops
- 2020 slightly higher, but as of now, not a significant concern



- 2020 crop higher than last 2 crops, again due to variable maturity
- Also caused by harvesting too early or too late
- So far this year, it has been too early for some growers
- Not a quality concern, but an issue to meet the grade specification

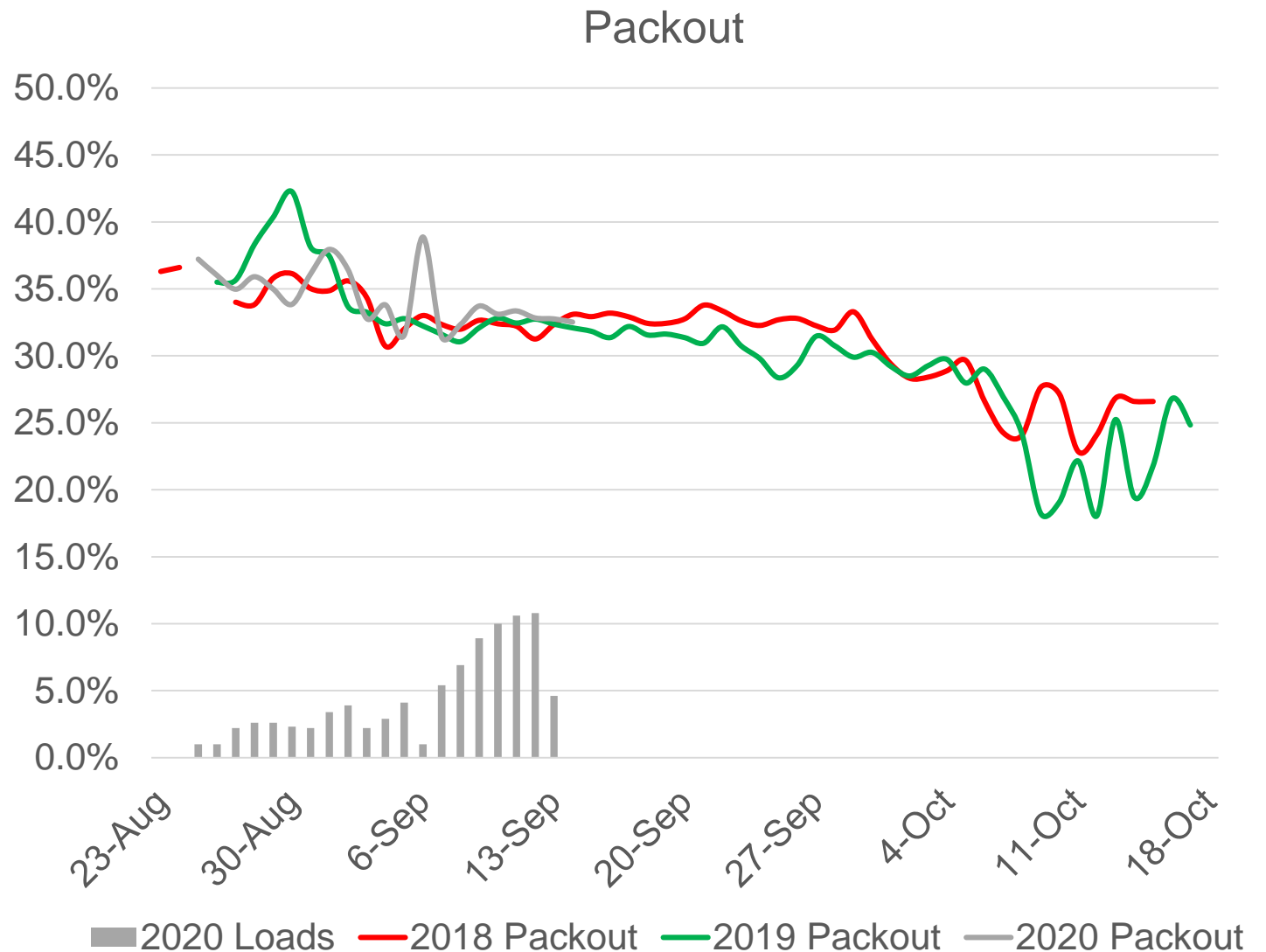


- As has been said, nut size in the 2020 crop is very big
- This slide shows the larger nut size is from both Golden Hills and Kerman
- Usual trend is larger size to start season (Golden Hills), and then smaller size (Kerman)

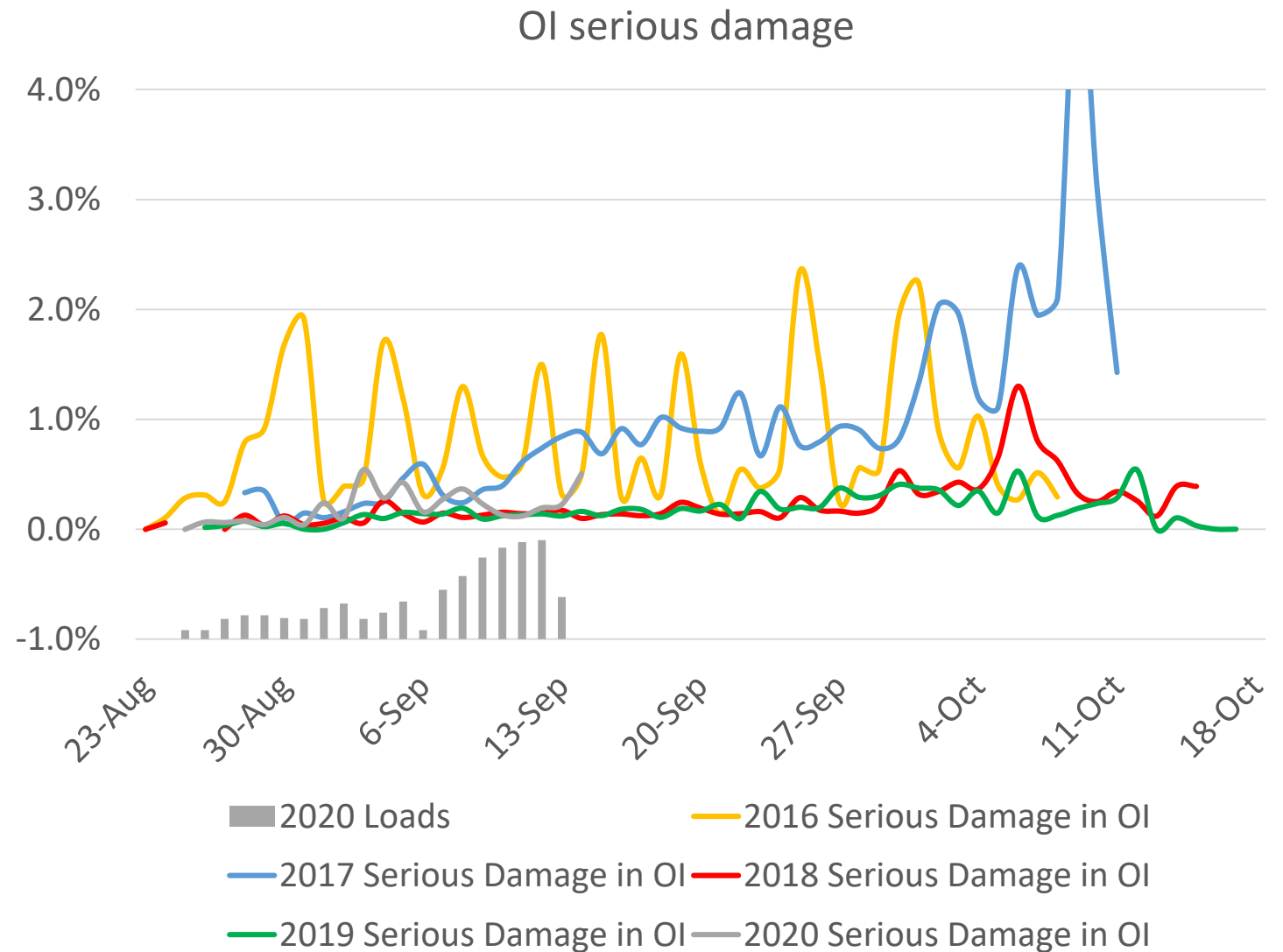




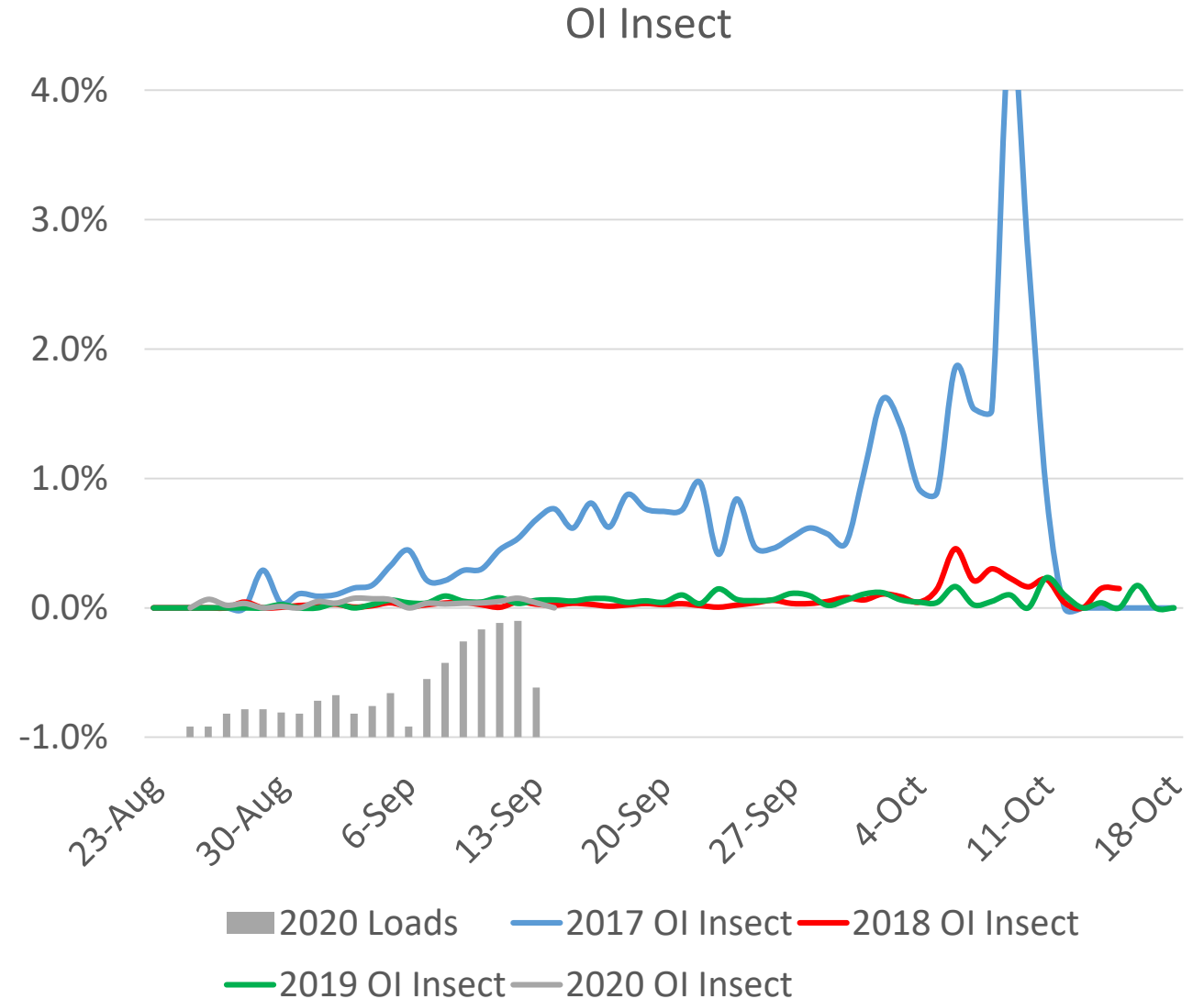
- Packout is the percentage of the green crop delivered that the grower is paid upon
- Golden Hills has significantly higher packouts than Kerman
- Accounts for early season higher packouts
- Packout decline at end of season due to low quality reshake loads



- Growers get a bonus for low levels of serious damage in open inshell
- Serious damage = insect damage + defects
- Insect damage is Navel Orangeworm
- Defects are result of a number of factors, both pests and growing conditions

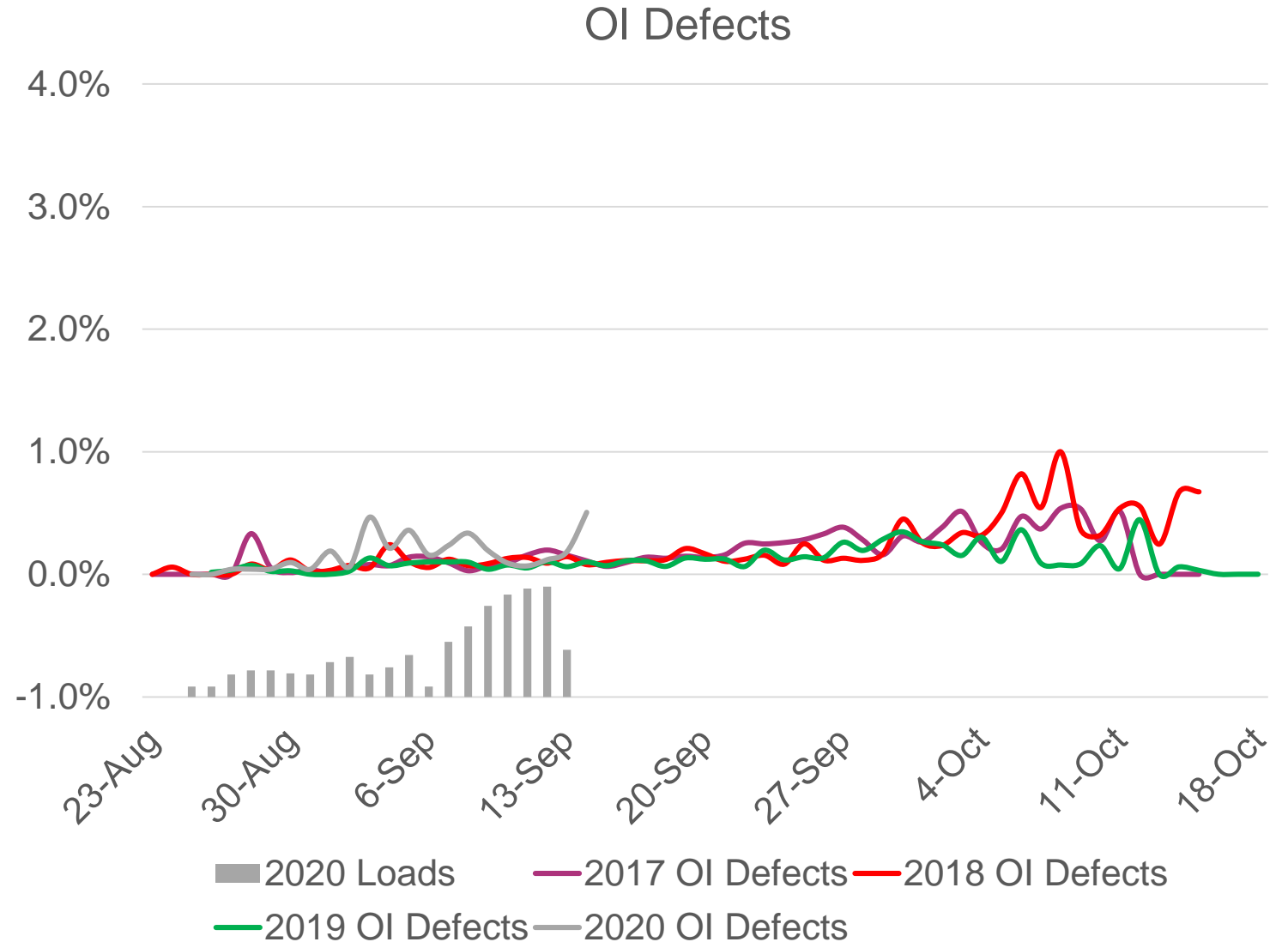


- Insect (navel orangeworm) is the greatest issue in processing and selling inshell pistachios
- Consumers don't like finding worms in their food
- Also cause aflatoxin problems
- 2020, so far, has low levels of navel orangeworm

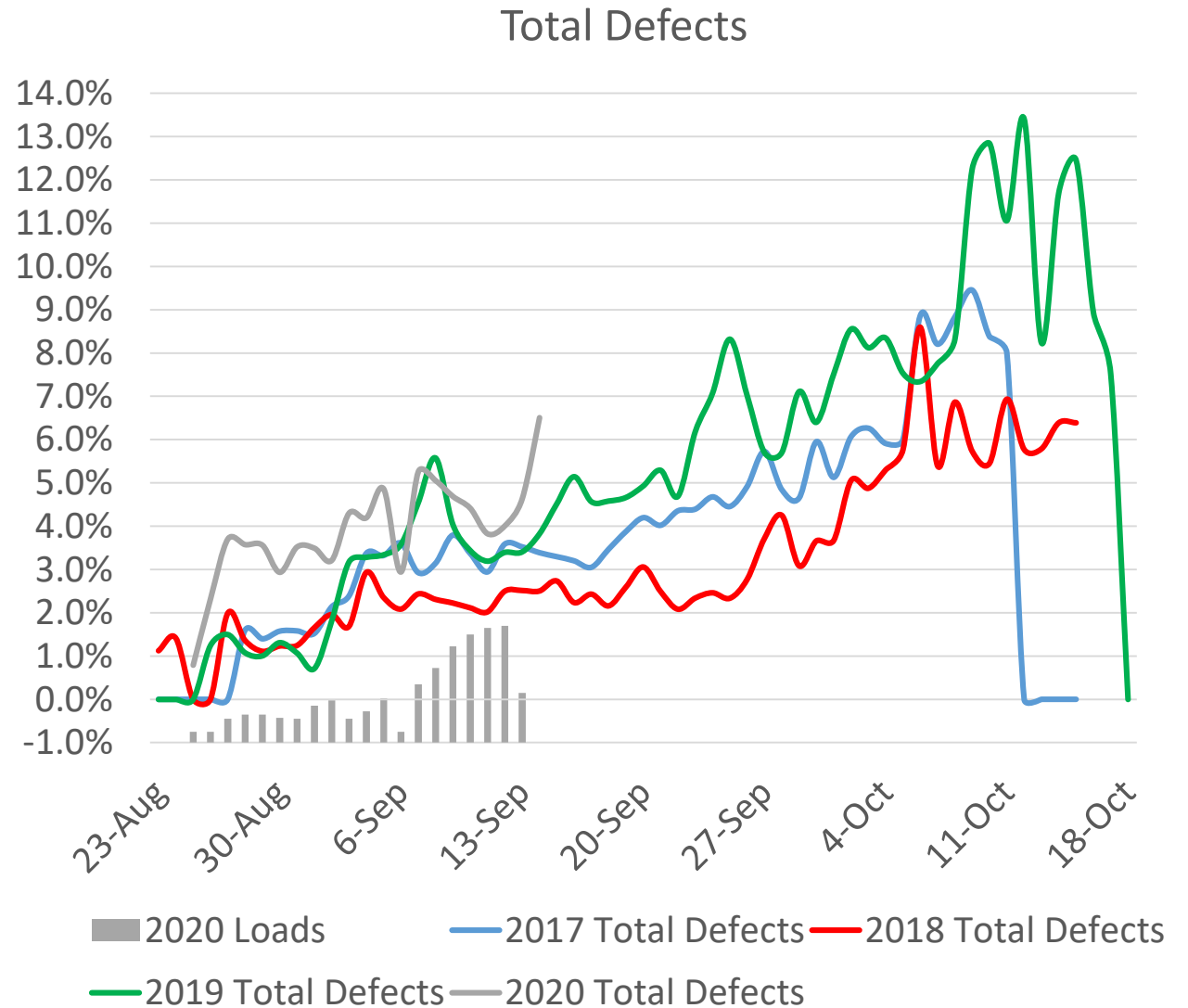




- Open inshell, and all defects are higher in 2020 than prior years
- Don't know the cause
- May or may not be an issue in processing
- Not an issue with consumers



- Total defects include those in open inshell, shelling stock, and closed shell
- Closed shell usually accounts for most of the defects
- 2020 has higher levels of defects in all categories
- May make kernel processing more difficult



- Trash is the leaf, stick, and hull debris removed prior to taking grower samples
- We receive and compost thousands of tons each season
- Loads with more than 2% trash slow down hulling
- The worst loads take hours instead of minutes to unload

