Engenia Herbicide:

2018 DT Cotton and DT Soybean Use Season

Summary of:

Off Target Injury Claims
Herbicide Performance Claims

Jeff Birk, Dicamba Regulatory Manager; BASF

Engenia Off Target Injury Claims Through August 2018

Plant Injury

Leaf cupping (P-B)
Node stacking (P-B)
Stunting (P-A/P-B)
Growing point inhibition (P-A)

Plant Injury Severity Category

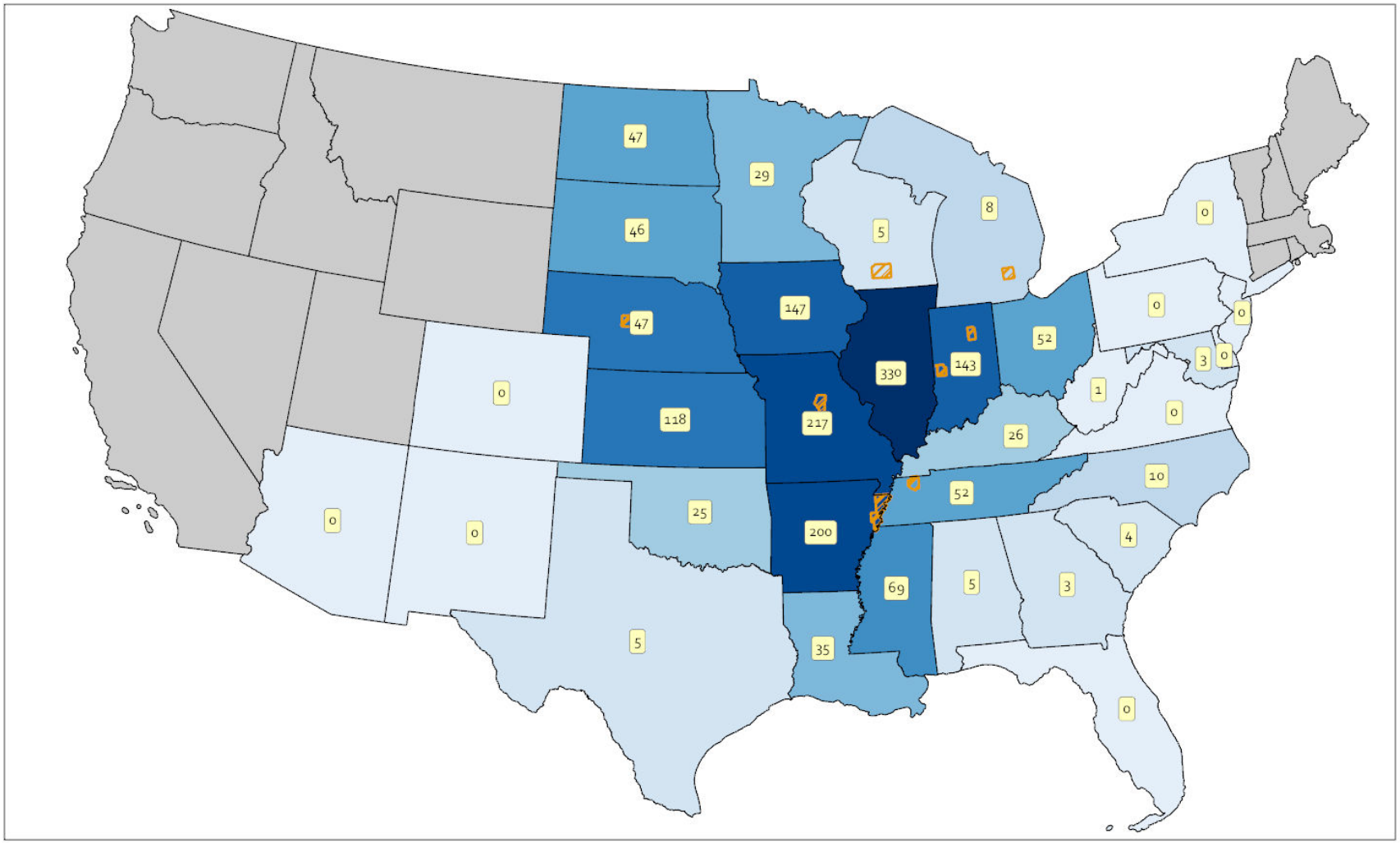
P-A The effect is alleged to have occurred on more than 45 percent of the acreage exposed to the pesticide.

P-B <45%

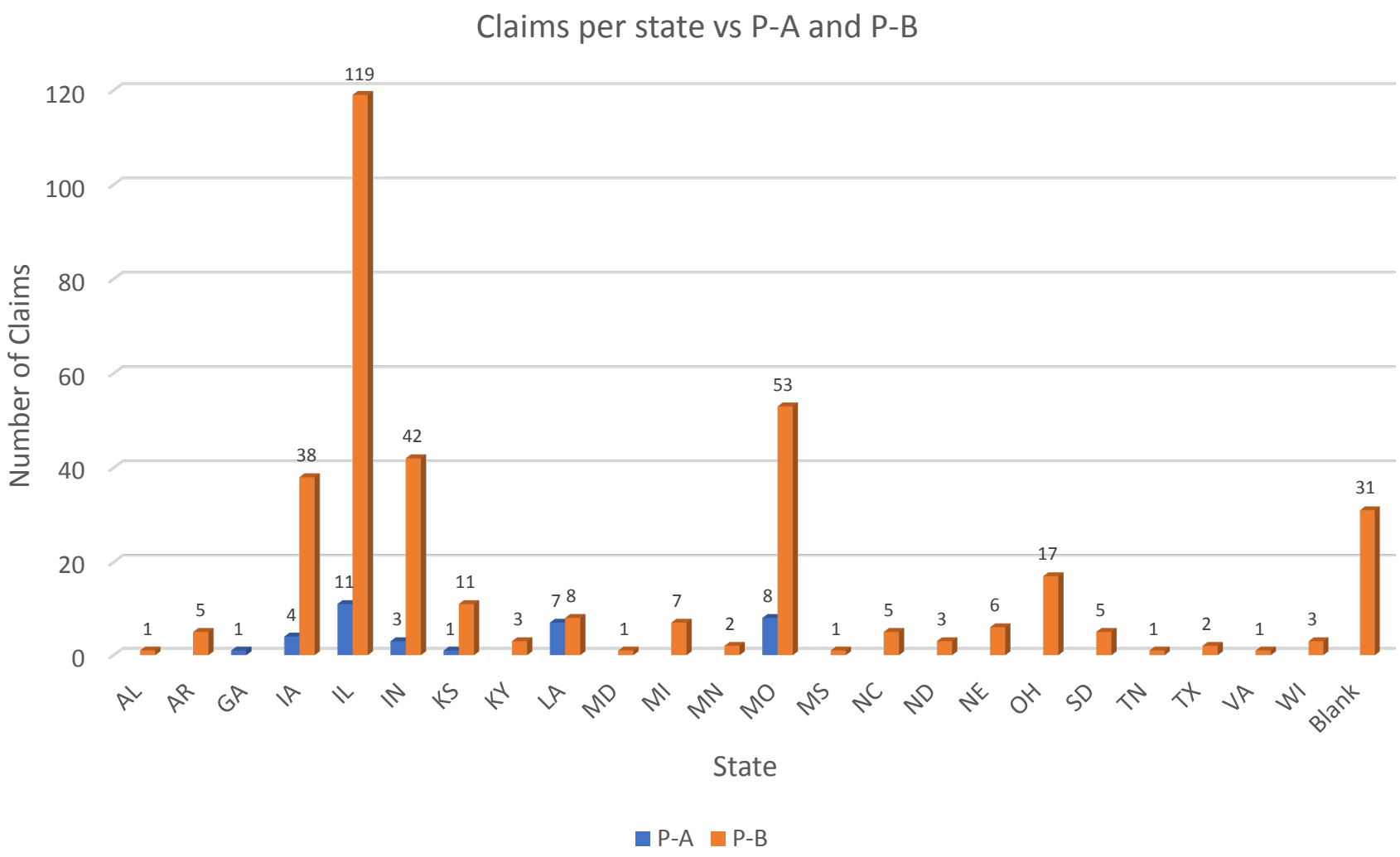
July 1 Consideration

2018 Plant Injury Claims (1627)

(EPA summary of new information and ESA effects 9-1-19)

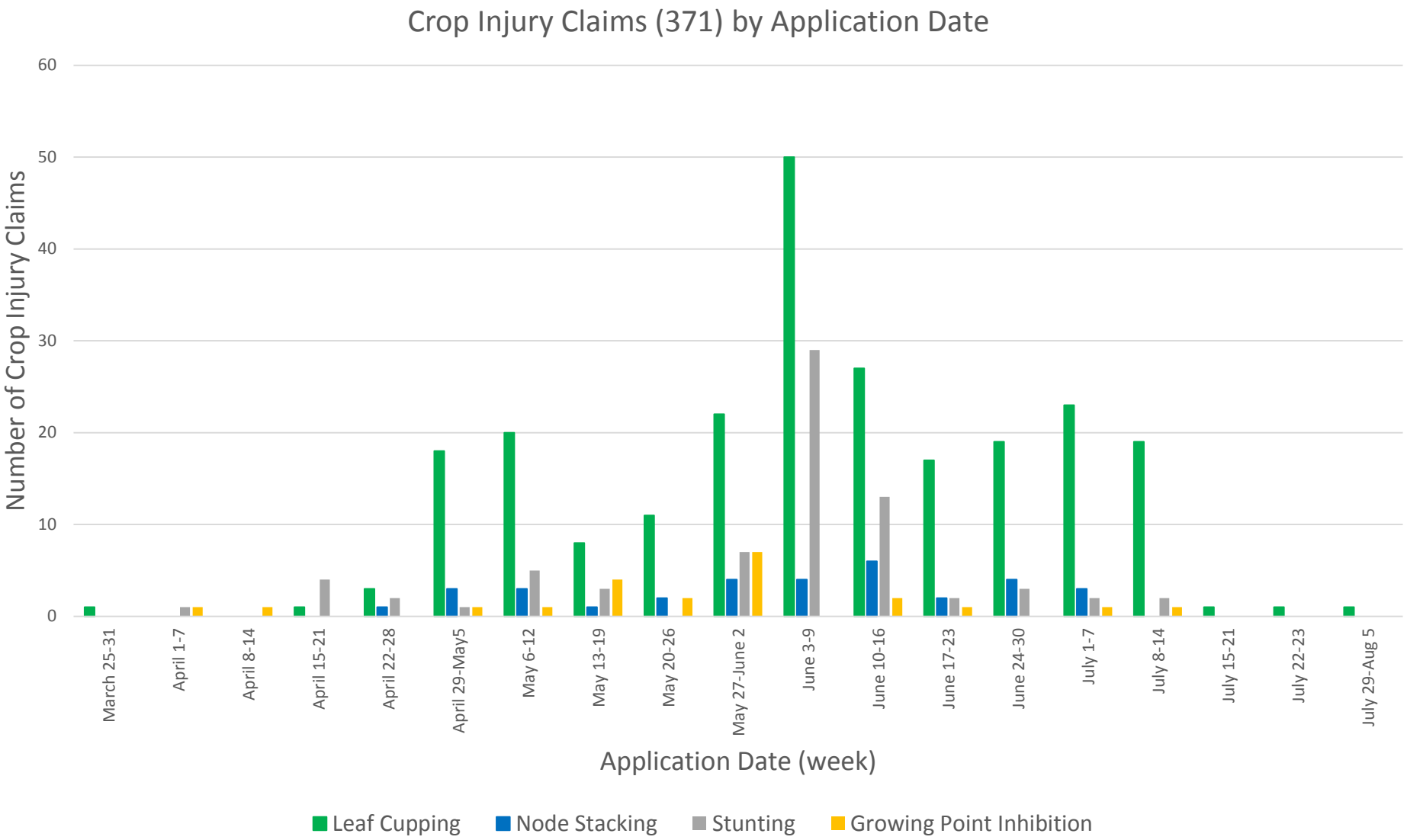


400 Injury Claims by State



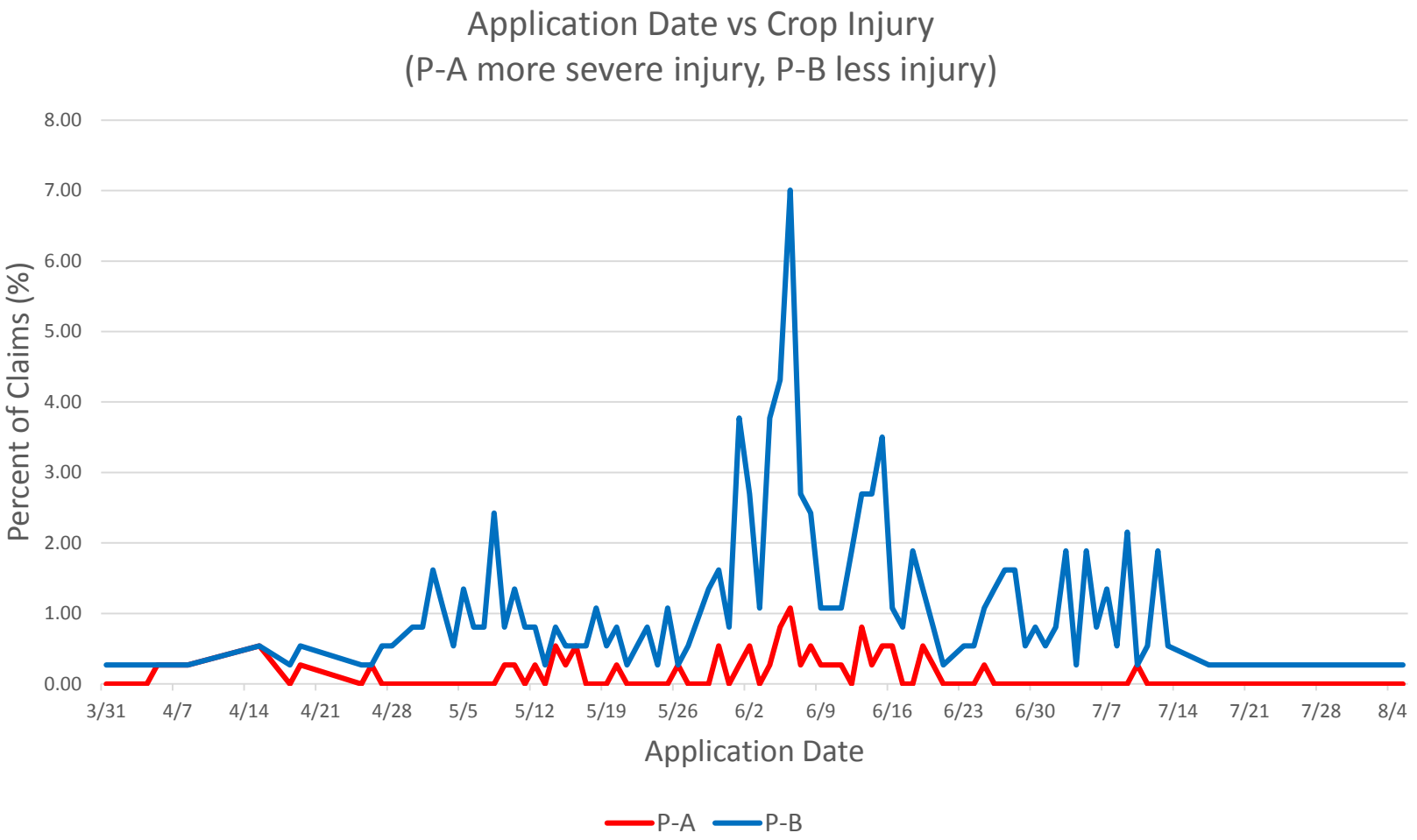
Crop Injury: P-A more severe with potential for yield loss, P-B minor and plant could grow out of injury

Application Date and Crop Injury



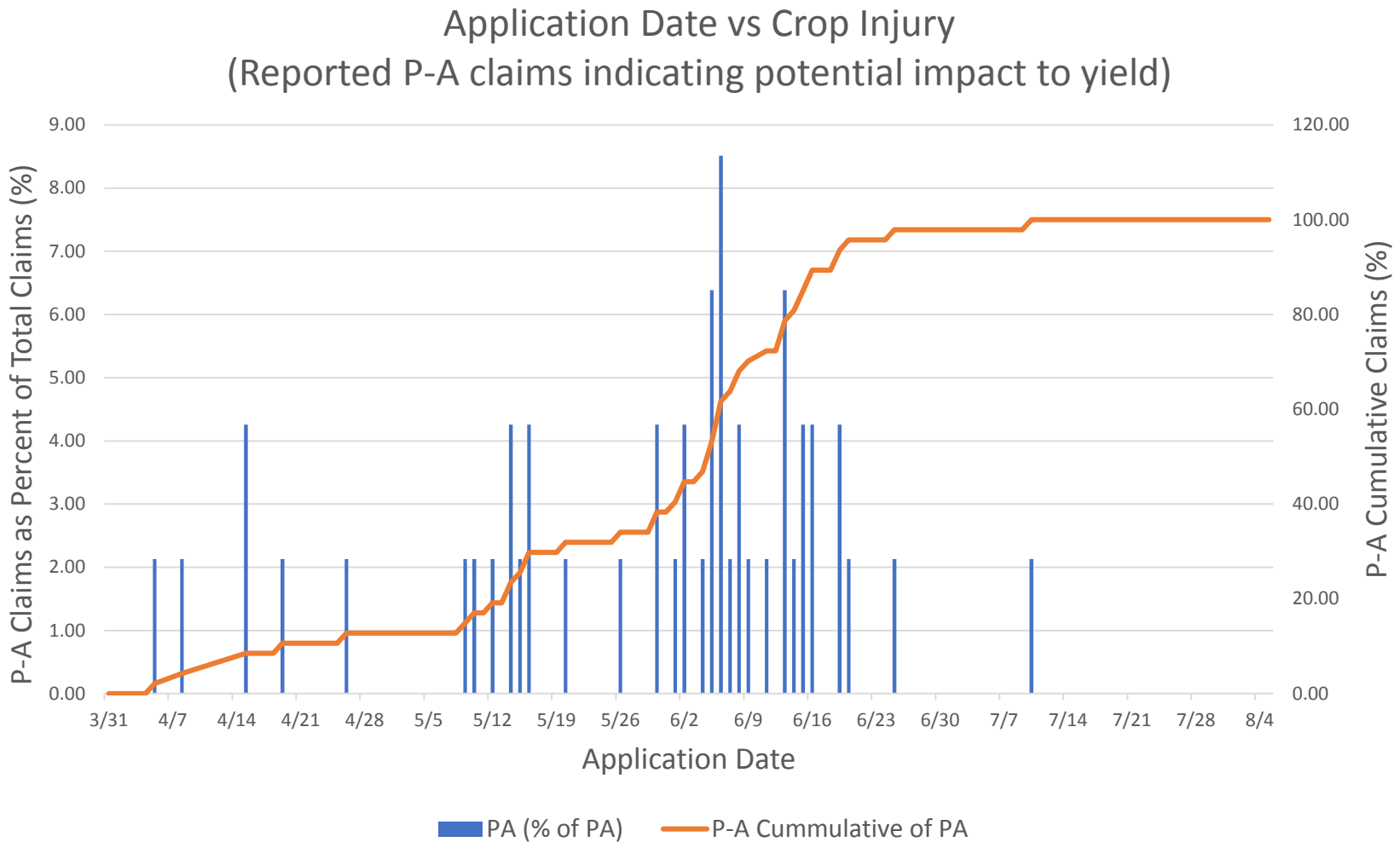
Data through August 23, 2018 Weekly Report

Application Date and Crop Injury



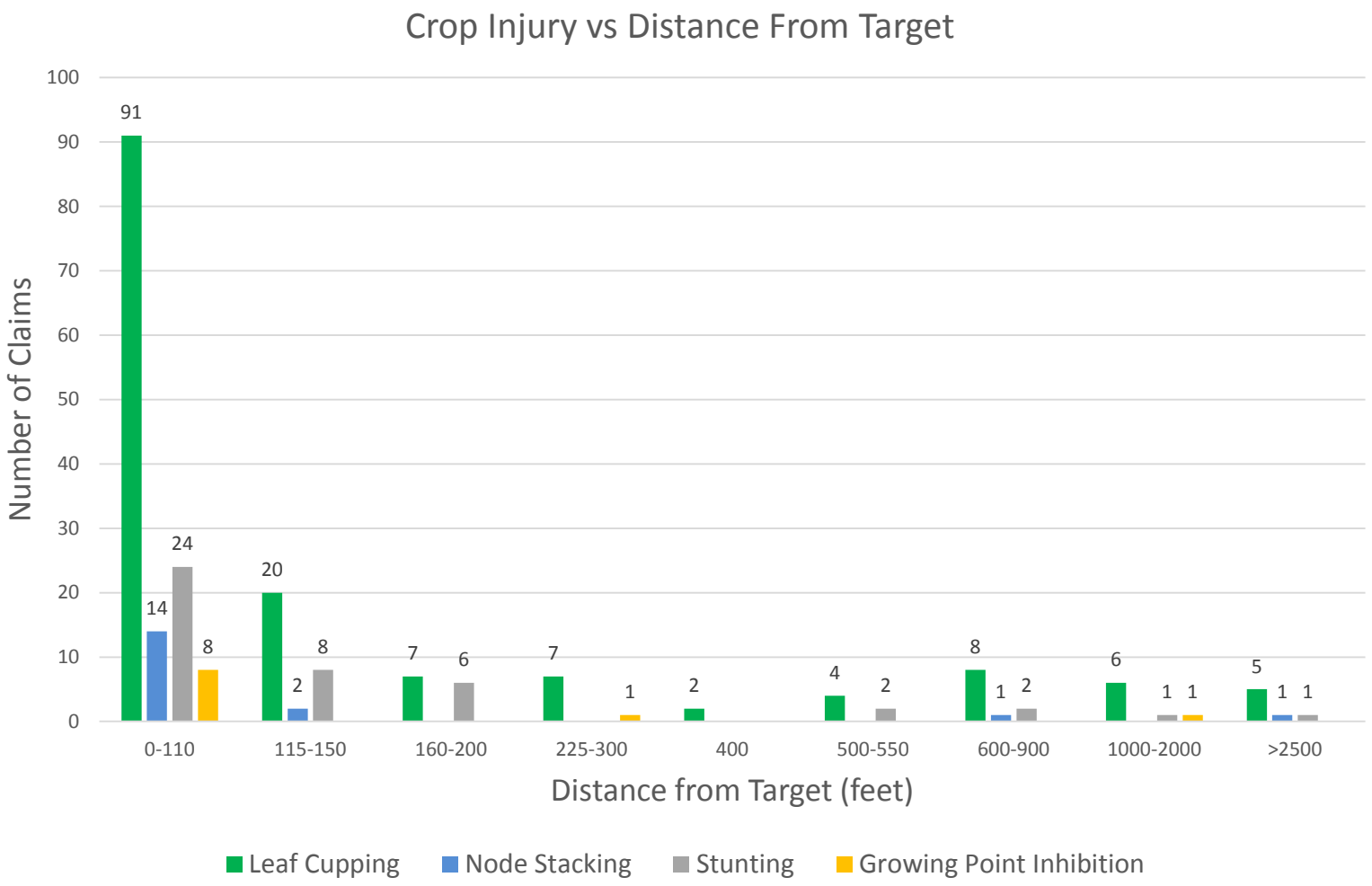
% of P-A and P-B claims for each application date

Application Date and Crop Injury



97% of severe crop injury claims occurred by June 30th

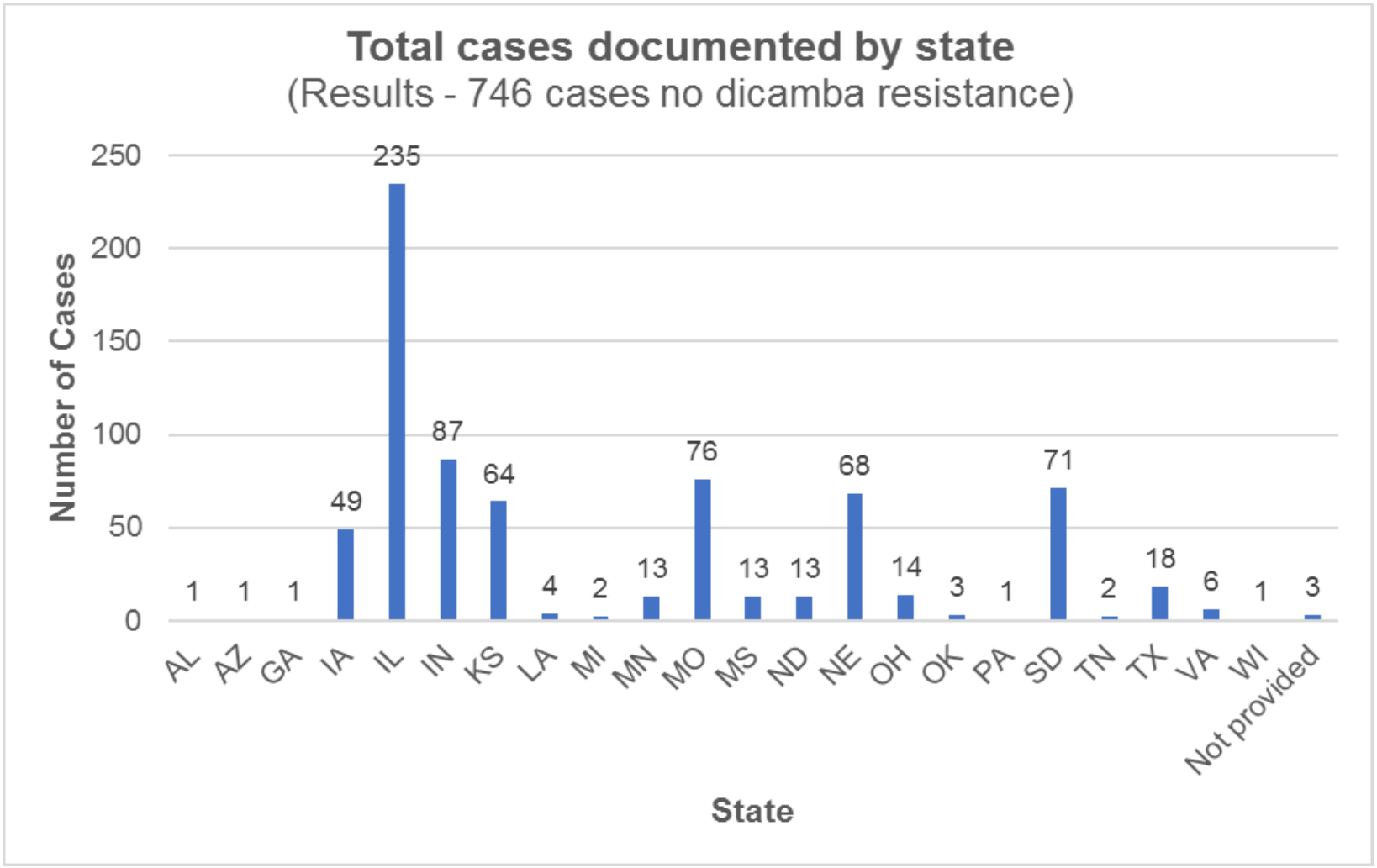
Crop Injury and Distance from Target

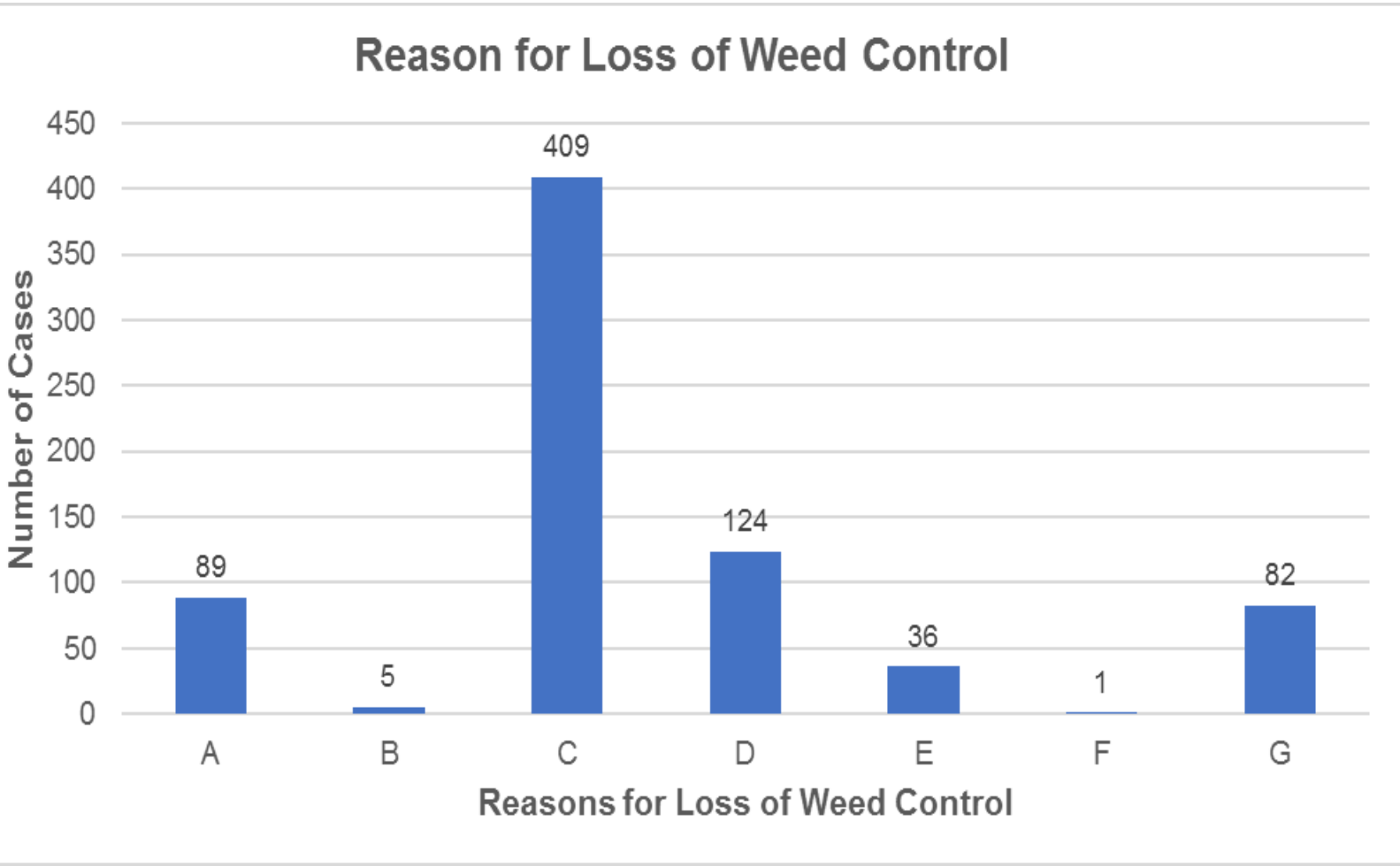


62 % of the claims occurred within 110 feet of the target

Engenia 2018 Performance Claims

Total reported cases of initial insufficient weed control by state in 2018 following an application of Engenia® Herbicide





A = Inadequate Coverage
B = Mis-Spray / Mechanical Failure
C = Weather / Environmental Stress
D = Weeds Emerged After Application
E = Weeds Too Big
F = Tank Contamination
G = Unable To Determine Cause Based On Evidence In Field And Spray Records

2018 Weed Resistance Evaluations

- Three cases of suspected dicamba resistant weed populations were evaluated in 2018.
- All populations were AMAPA
- Upon greenhouse evaluation all three cases were found to be **NOT RESISTANT** to dicamba.
- One continuing case from 2017 was also confirmed **NOT RESISTANT** to dicamba.
- To date there have not been any confirmed cases of **NEW** dicamba resistance.

Next- Label Mitigation

Review of dicamba product label changes for 2019