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## Introduction

- Auxin herbicide tolerant crops and labelled products were introduced and available to growers in the 2017 growing season
- Both Xtend and Enlist crops are grown in North Carolina
  - Xtend crops are tolerant to dicamba
  - Enlist crops are tolerant to 2,4-D
- High adoption rates in North Carolina were anticipated due to widespread herbicide-resistant weeds
- NC 24(c) labels require growers who use auxin herbicides over the top of traited crops to complete annual in-person training offered by NC State University
- The goal of this training is to reduce off-target movement to sensitive crops, particularly tobacco, which is the highest value crop in North Carolina

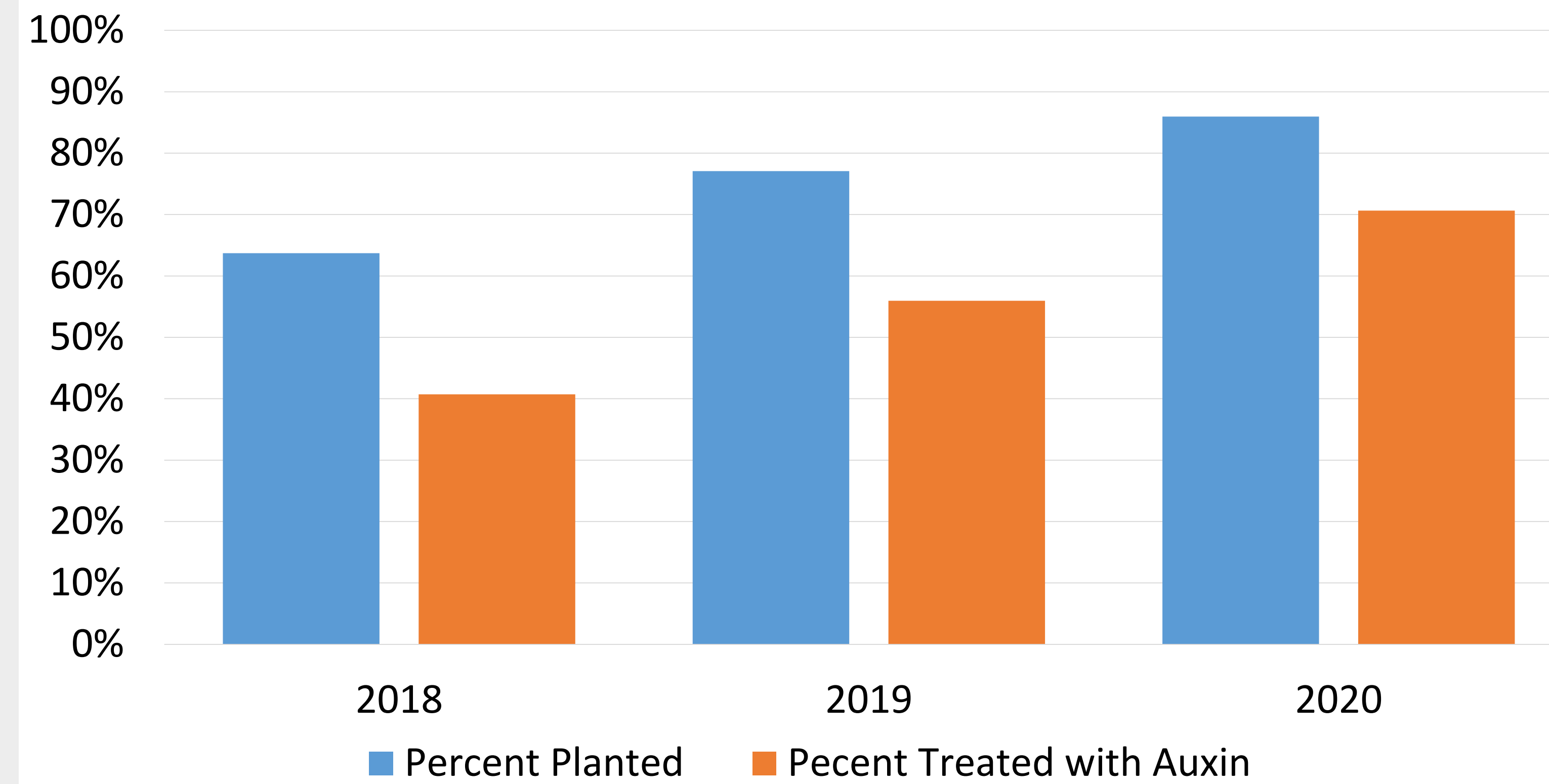
## Objective

- Track the adoption and attitude of growers in NC to this technology
- Track off-target movement associated with the technology

## Materials and Methods

- Surveys have been given to all attendees at auxin trainings since 2018 and are completely anonymous
- Trainings are offered in January through March of each year, so data represents the previous growing season
- Attendees who identified as "growers" were asked to complete the entire survey, consisting of questions such as:
  - How many acres of soybeans or cotton do you grow?
  - How many acres of Xtend or Enlist cotton or soybean varieties do you grow, and how many of those acres do you treat with dicamba or 2,4-D products?
  - Do you grow any crops which were injured by off-target movement? If so how many acres and at what financial loss, if any?
  - Next year, do you plan to plant any auxin tolerant varieties? If so, do you plan to treat none of those acres, some of those acres, or all of those acres.
  - Is this training worth your time in order to be able to use this technology?
- Growers were also provided with a list of the label specific guidelines on these products and asked to check how many they follow (data not shown)

Figure 1. Percent of Total Cotton Acres Planted in Xtend or Enlist Varieties



Cotton Grower Intentions

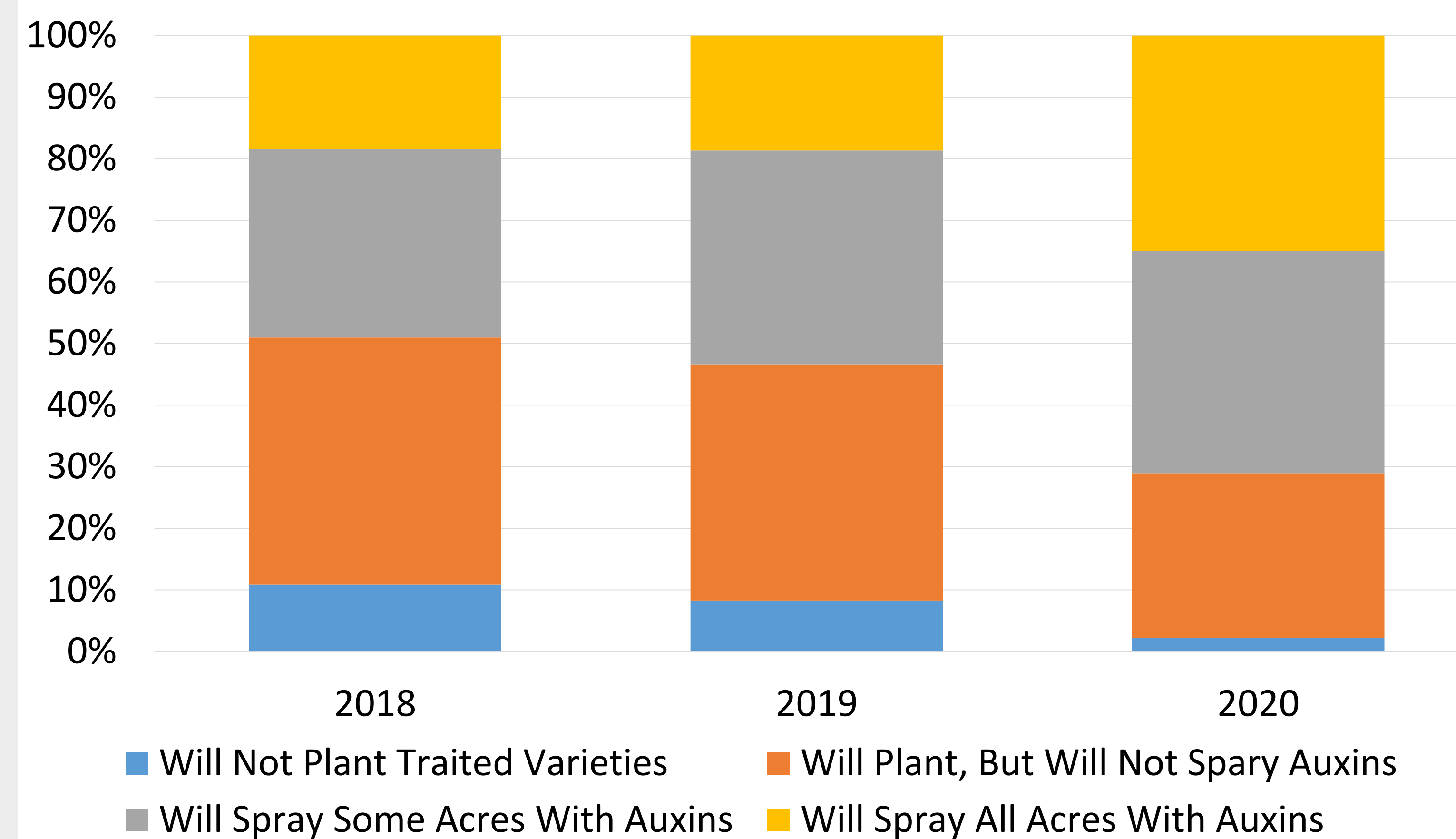
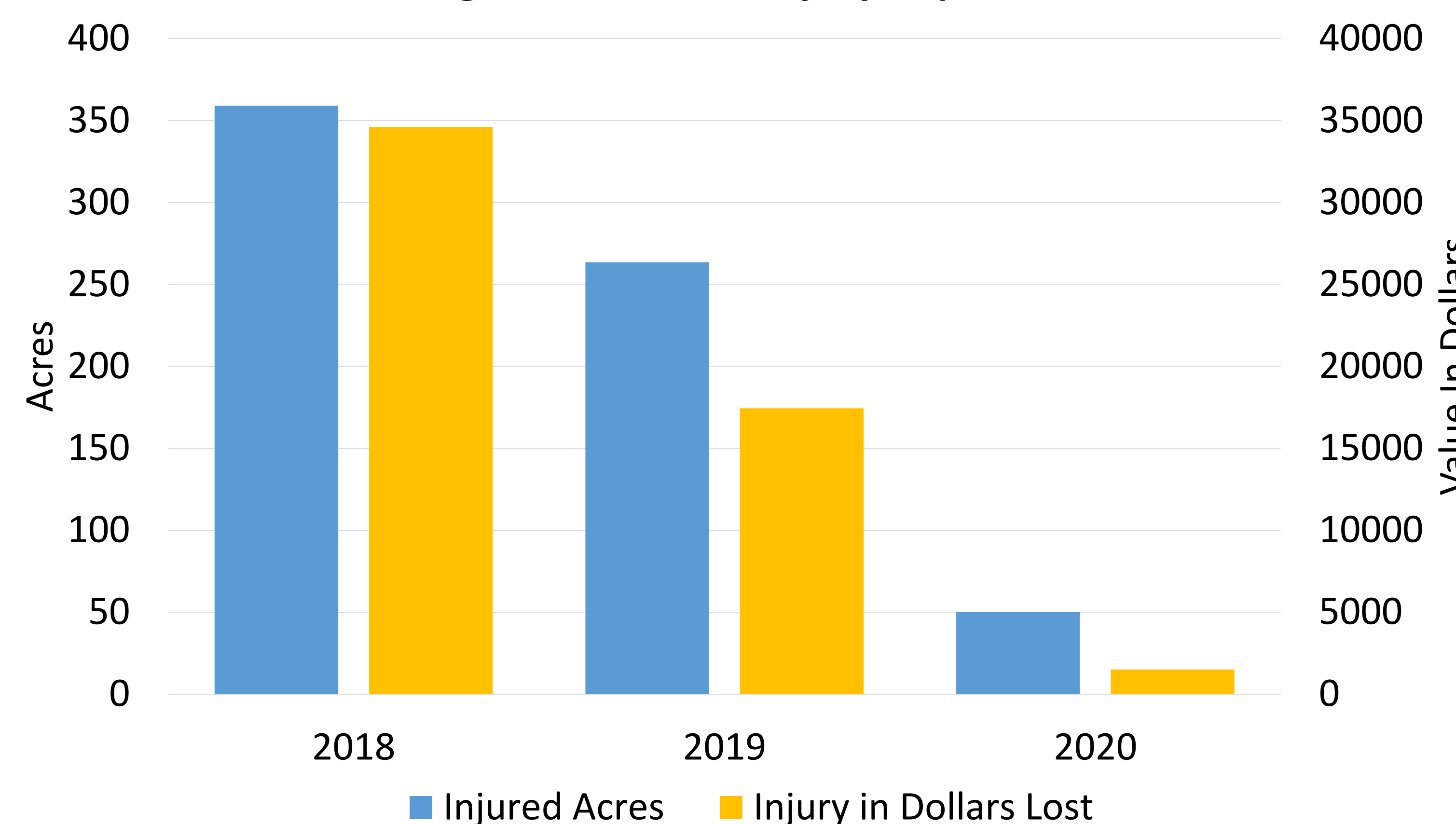


Figure 3. Tobacco Injury Reported



## Results and Conclusions

- Over 3000 attendees have been surveyed since 2018, with over 70% being growers
- Percent of cotton acres planted to auxin tolerant varieties has steadily increased, currently making up over 85% of total acres planted by growers (Figure 1)
- Adoption in soybeans has followed a similar trend, from 34% of acres planted to auxin tolerant varieties in 2018 to 64% in 2020 (data not shown)
- It is important to note that not all trainees are planting auxin tolerant varieties nor growers applying auxin herbicides to all acres
- Growers intentions have shown similar trends, with more growers planning to plant auxin tolerant varieties and planning to treat more of their crop each year (Figure 2)
- Reported off-target injury to tobacco has declined each year in terms of both total acreage and total crop value lost (Figure 3)
- Off-target movement to other crops has been variable, however due to the survey being targeted to individuals who plan to use auxin herbicides, this survey is limited in it's ability to capture all injury complaints
- Attendees have overwhelmingly found value in these trainings, with 83, 88, and 91 percent of attendees reporting the training is worth their time in 2018, 2019, and 2020 respectively (Figure 4)
- Low off-target complaints along with overwhelming positive feedback from participants points to the auxin training program in North Carolina being a great success

## Moving Forward

- Training has been moved online in 2021 due to COVID-19 restrictions
- The survey is being distributed to all online participants via google forms

Figure 4. Is This Training Worth It?

