

HUCKLEBERRY HARVEST EXPERIMENT

Kootenai Tribe of Idaho
Wildlife Department



Overview

- Berry harvest is an important treaty resource for the Tribe
- The Tribe is concerned for the future of this culturally significant resource with increasing commercial harvest and different harvest techniques
 - Over-harvesting berries reduces the amount available for wildlife and non-commercial berry pickers
 - Using harvesting techniques that are damaging to the bush and not as efficient harvesting method
 - Picking green berries diminishes the supply of berries available for wildlife later in the season

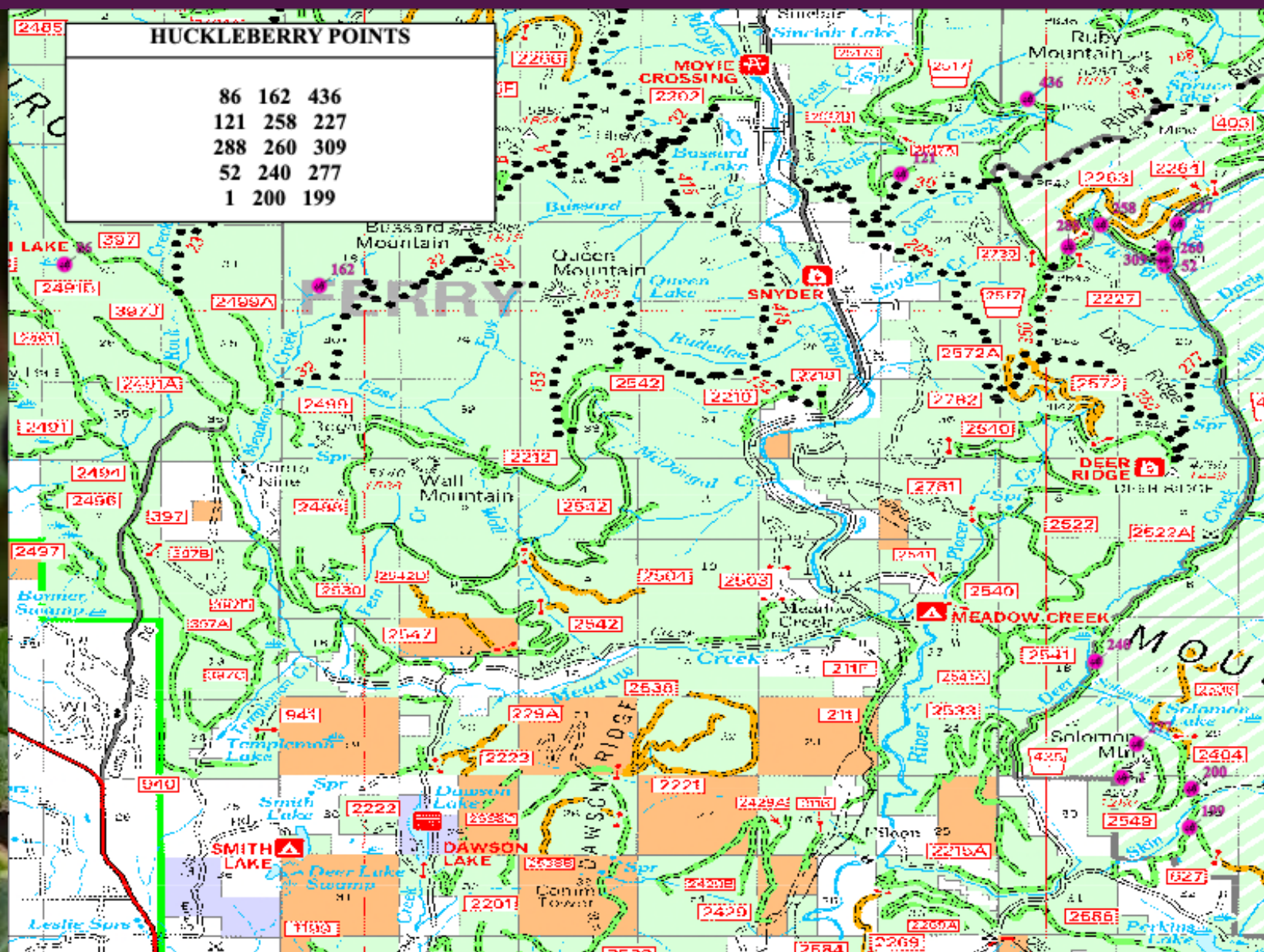
Current Harvesting Rules

- Huckleberries can be harvested for personal use in the IPNF unless prohibited
 - Check with your local ranger station for any closures or restrictions before you go
 - Recreational huckleberry gatherers are encouraged to pick only what they can consume so that others may also enjoy the fun of picking and tasting our delicious state fruit.
- Commercial gathering on the IPNF is not permitted. Picking huckleberries with the intent to sell them is considered commercial use
- It is illegal to damage or remove huckleberry bushes.
 - It is best to handpick the berries to ensure that the bushes are not damaged and that only the ripe berries are harvested.

Questions

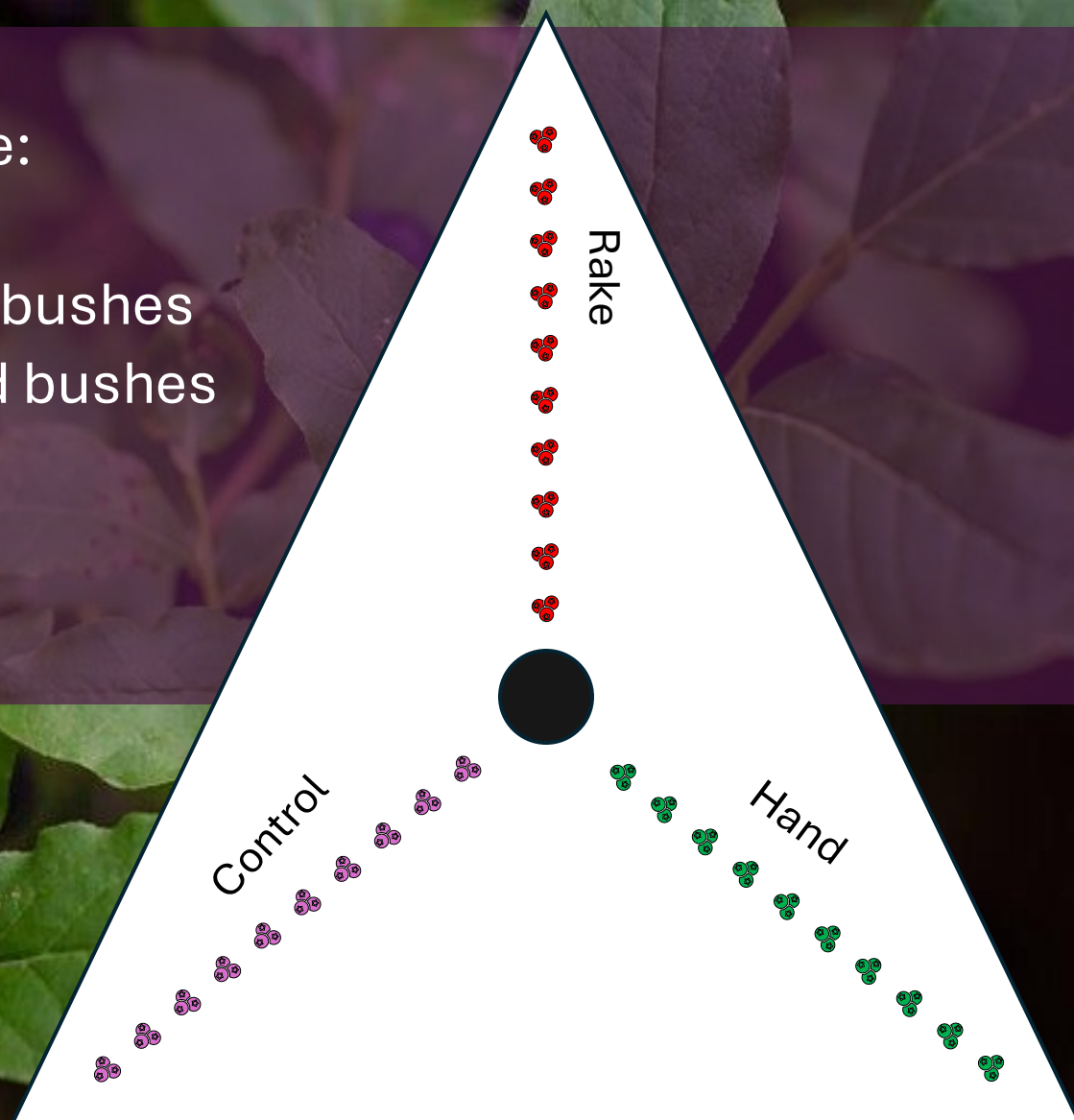
- What are the effects of different harvesting techniques (hand versus rake)
- Do those techniques affect availability through the season (green berries)
 - Reduce annual production by removing non-ripe berries. Less for others and wildlife
- Does the harvest technique affect long-term production
 - Does removal of leaves and twigs affect plants

Survey Locations



Methods

- 15 survey Sites
 - At each Site there were:
 - 10 Control bushes
 - 10 Harvest by rake bushes
 - 10 Harvest by hand bushes



Methods

Control Transect Procedure

- At each bush the # of green, ripe, & white berries were recorded “Pre-Harvest”

Rake Transect Procedure

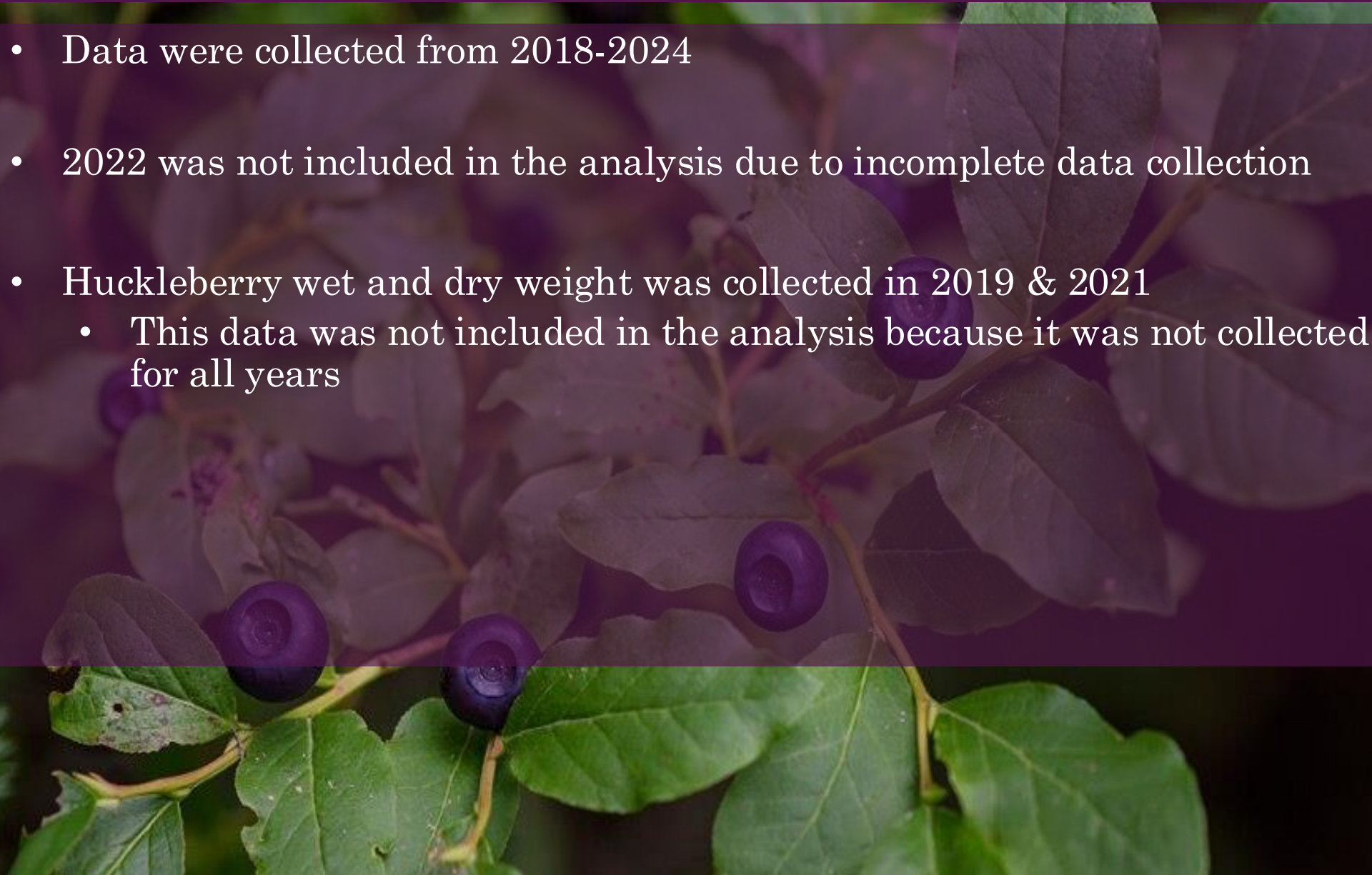
- At each bush the # of green, ripe, & white berries were recorded “Pre-Harvest”
- The Rake was used by starting at the base of the branch and working to the tips, (raking with a slow steady motion).
- The contents were then emptied into a container where we recorded the # of green, ripe, white berries, leaves, & twigs

Hand Transect Procedure

- At each bush the # of green, ripe, & white berries were recorded “Pre-Harvest”
- Hand picking was used by starting at the base of the branch and working to the tips
- The contents were then emptied into a container where we recorded the # of green, ripe, white berries, leaves, & twigs

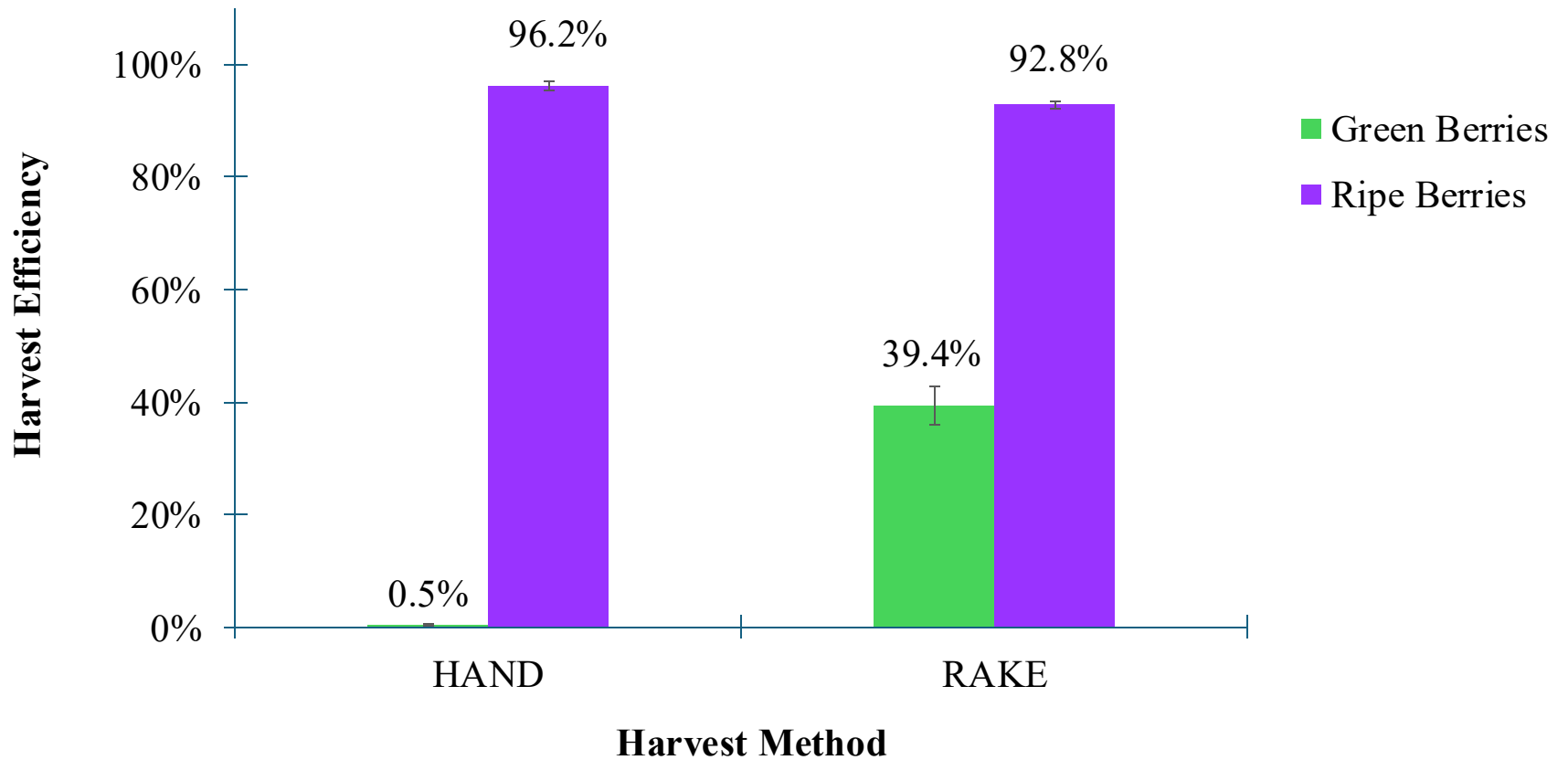
Methods

- Data were collected from 2018-2024
- 2022 was not included in the analysis due to incomplete data collection
- Huckleberry wet and dry weight was collected in 2019 & 2021
 - This data was not included in the analysis because it was not collected for all years



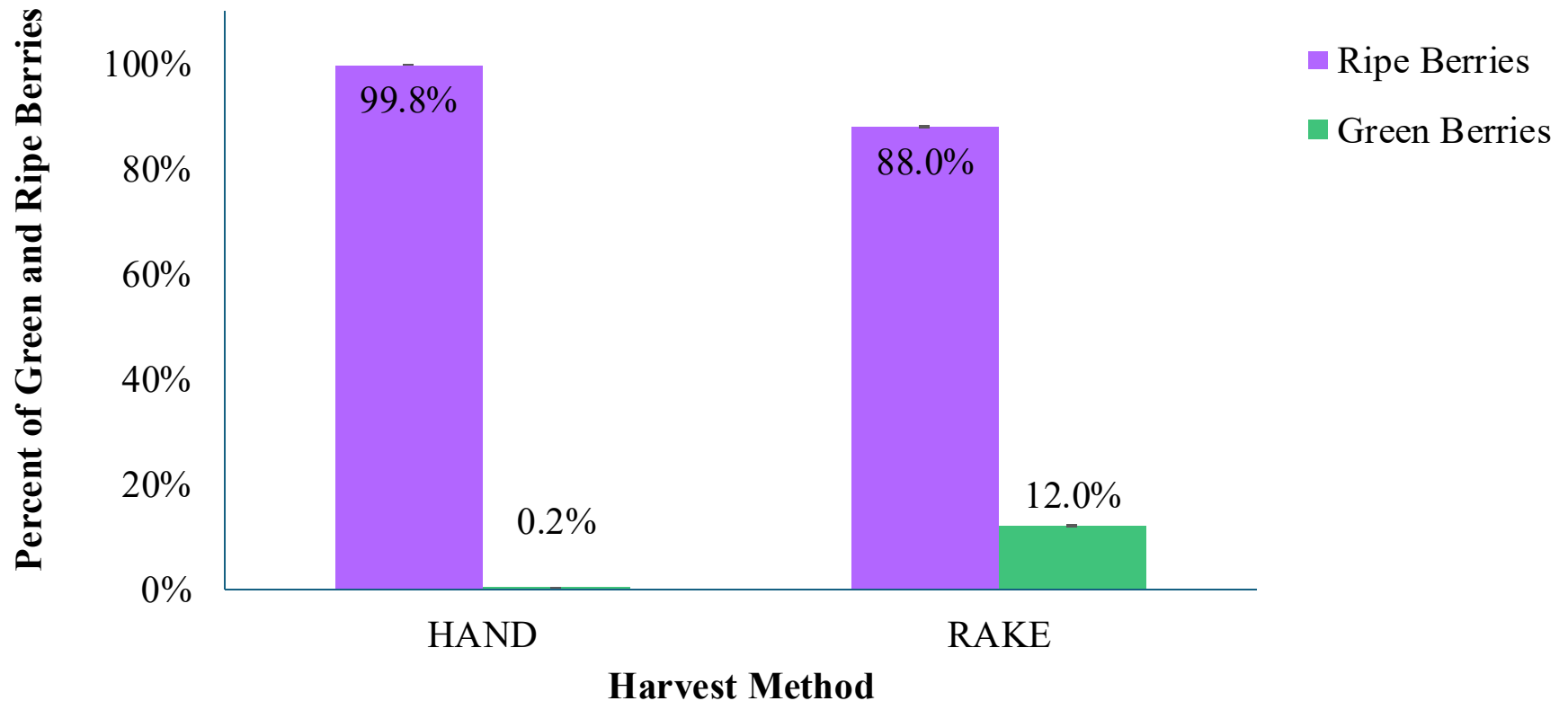
Results

Harvest Efficiency by Method



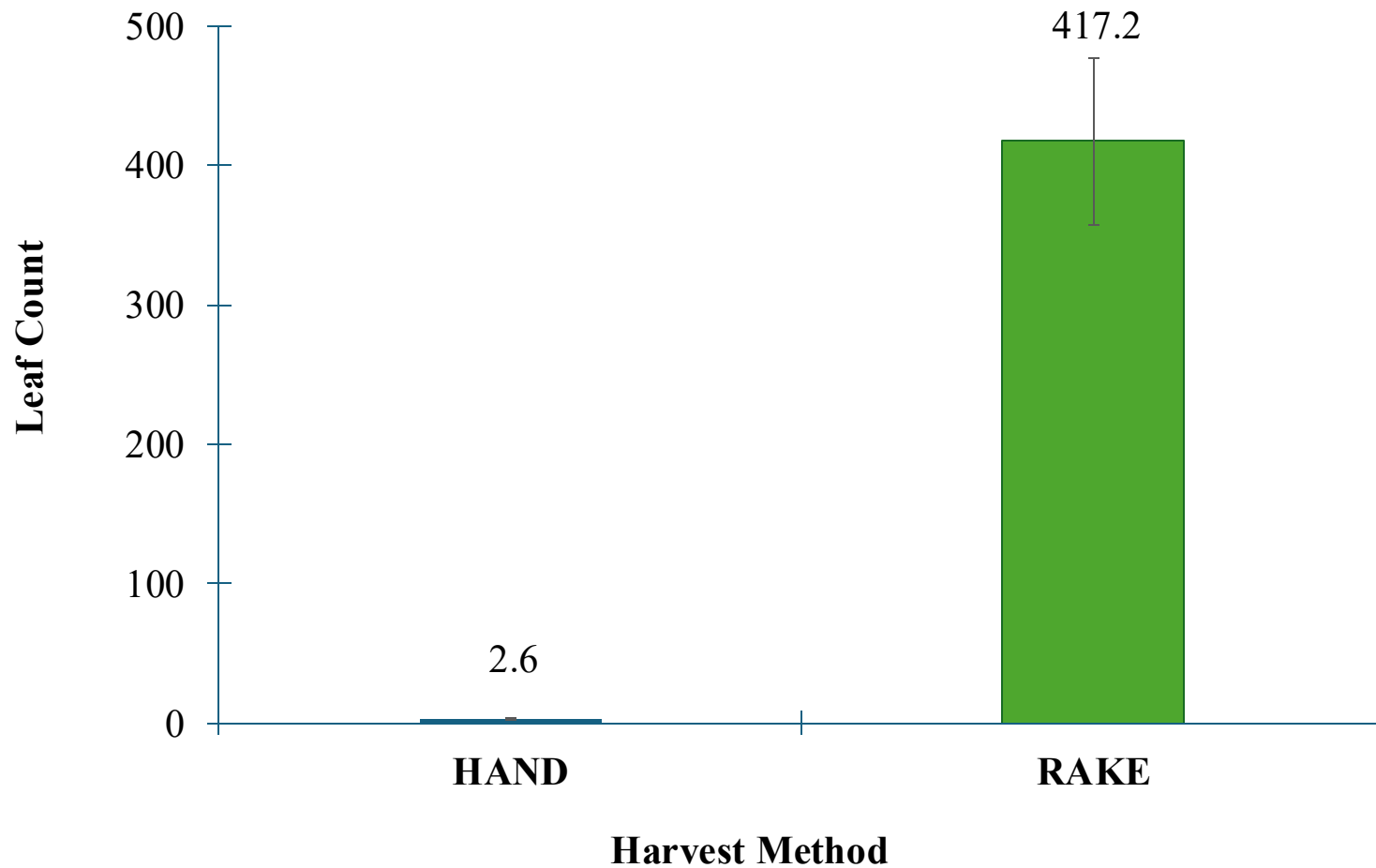
Results

**Percent Yield of Green and Ripe Berries
for each Harvest Method**



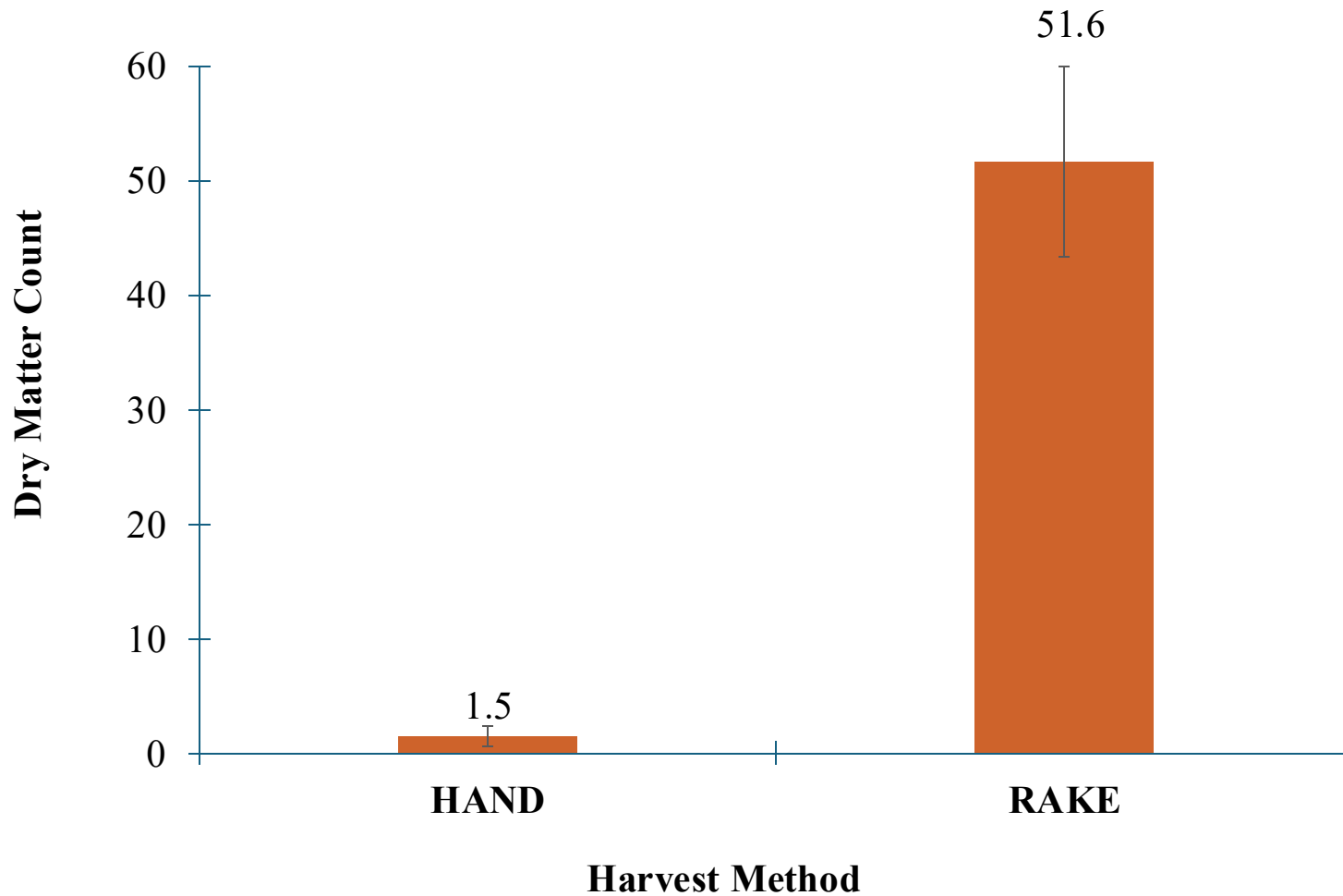
Results

Harvest of Leaves



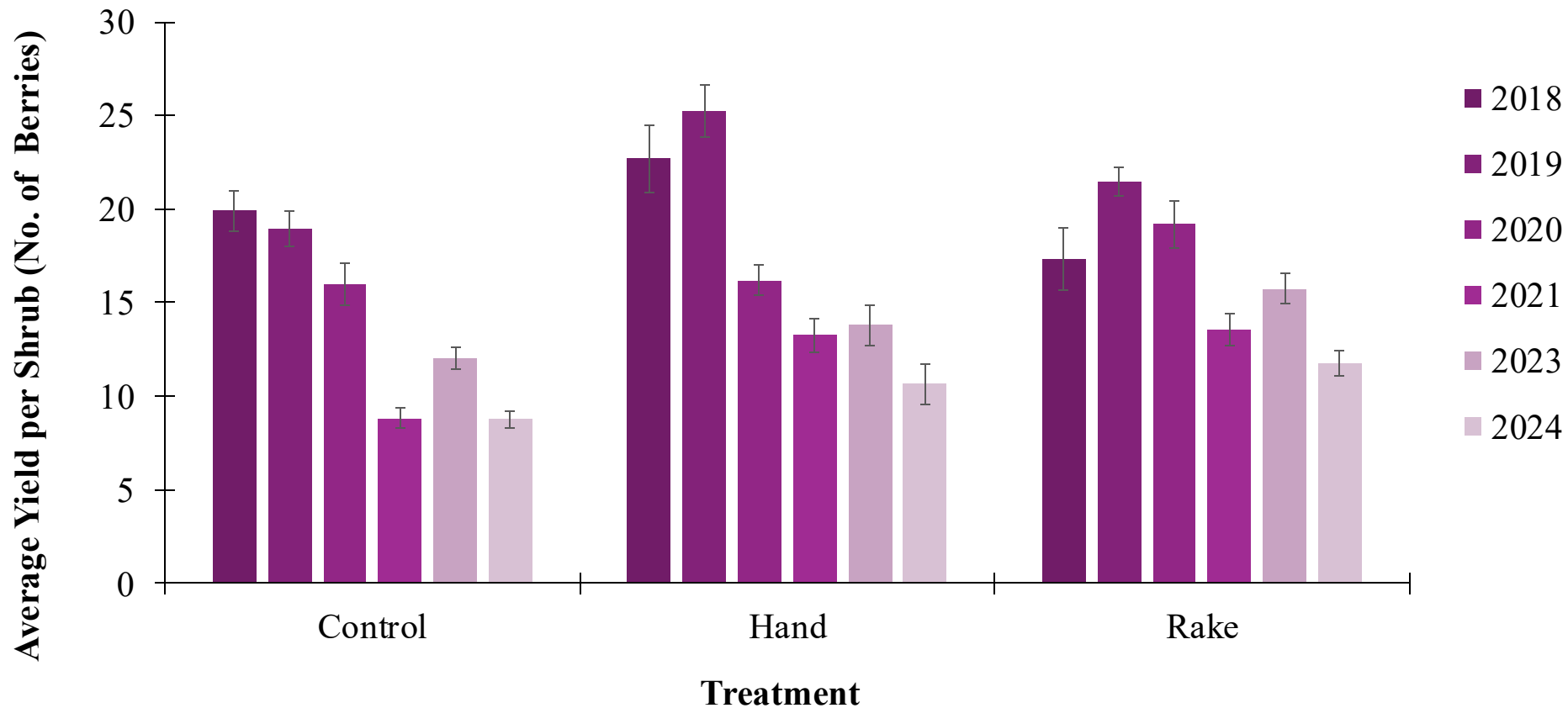
Results

Harvest of Dry Matter



Results

**Average Pre-Harvest Berry Yield per Shrub
by Treatment (2018-2024) Excluding White Berries**



Conclusions

- The use of rakes significantly ($p < 0.01$) harvests more green berries thereby reducing the number of ripe berries available later in the year
- Neither harvest method appeared to affect berry productivity from year to year
- The average of all Pre-Harvested berries (Rake, Control, Hand) appear to be decreasing over time
 - Suggesting environmental causes for decreased production?
 - Highlighting another reason to restrict commercial picking
- The use of rakes significantly removed more leaves and twigs

Future Goals & Discussion

- How can we use this data to help with the commercial picking problem in the IPNF & KNF?
- How can we use this data to help educate pickers
- Other ideas?
- Special Thanks to
 - Norm Merz, IDFG
 - Heather Fuller & Courtney Thomlinson, IPNF
 - Sam Martin, KNF