



Farmers' Utilization of Auto-guidance Technology and Training Needs

THOMAS BLEAZARD, MICHAEL L. PATE, REBECCA G. LAWVER,
CLARK ISRAELSEN, AND ROYCE HATCH

Utah State University
School of Applied Sciences, Technology, and Education

Introduction

- ▶ Global Positioning Systems and Equipment Guidance
Technology assist in managing operator variability and improve field management decisions.



Purpose

The study was conducted to examine the variables associated with adoption of auto-guidance technologies and determine training preferences.



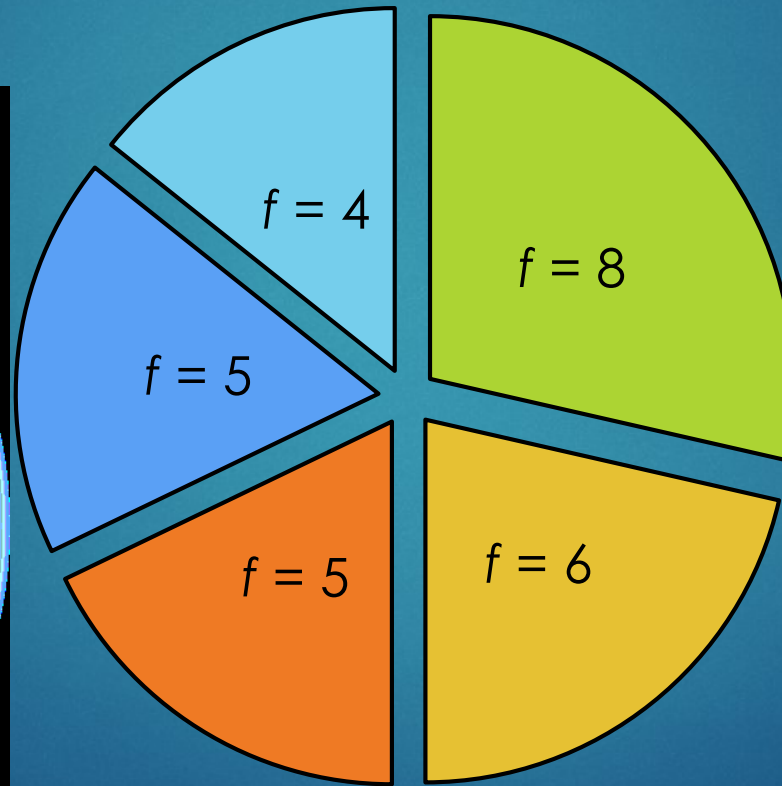
Methods



- ▶ Training Program Conducted with USU Extension
 - 25 minute presentation
 - Overview of GPS technology, system types and uses
 - Demonstration and application session
 - Post-seminar Survey (16 questions)
 - ❖ Test—Retest Reliability
 - (intra-class correlation coefficient of .91)
- ▶ Data analysis
 - IBM SPSS 20
 - Frequencies percentages, means and standard deviations were reported
 - Chi-square test of independence for association of selected variables

Results/Findings

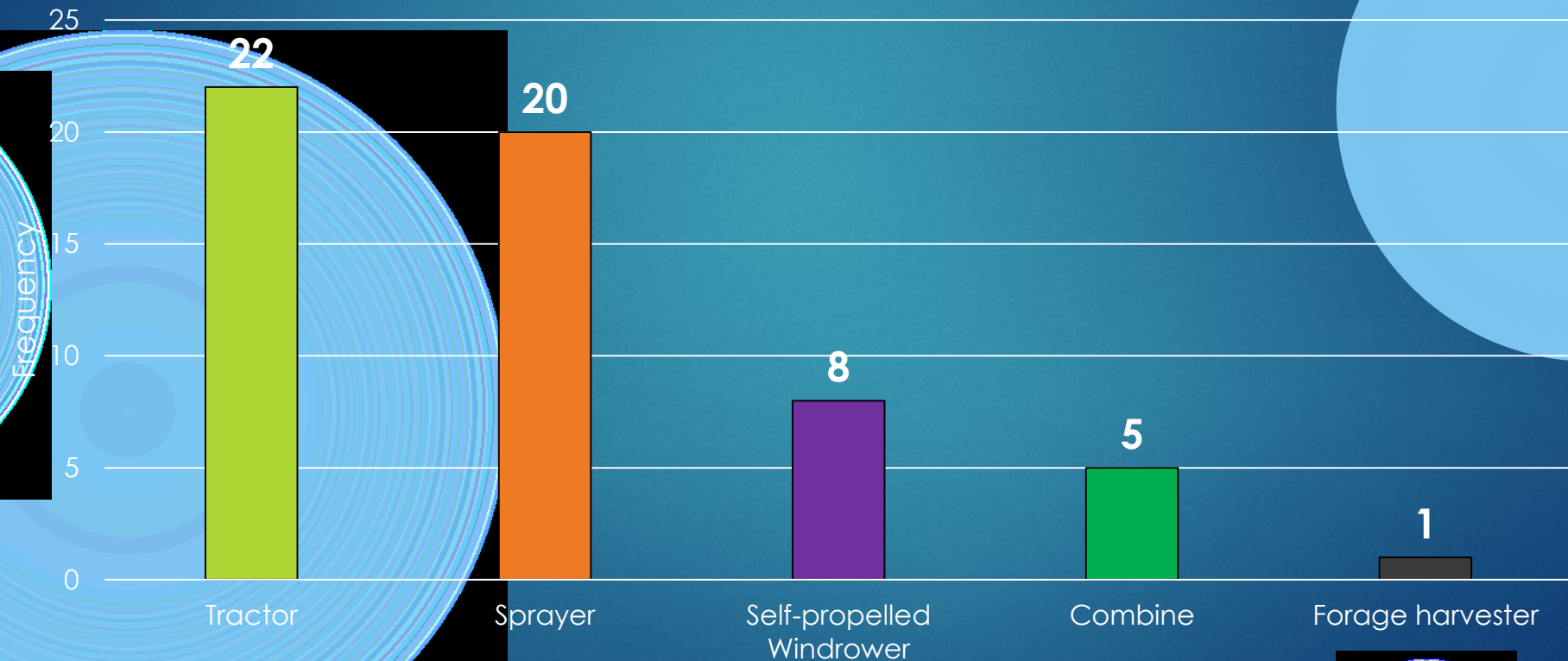
Top Five Auto-guidance Systems Used by Respondents ($n = 31$)



- Trimble EZ-Steer
- AFS Accuguide
- Trimble Autopilot
- ONTRAC3
- Trimble EZ-Pilot

Results/Findings

Equipment Used with Auto-guidance (n = 31)



Results/Findings

- ▶ Ranked sessions of training seminar
 1. Hands-on “Tinker” Session
 2. Demonstration Session
 3. Lecture/Slides/Pictures



Results/Findings

- ▶ Respondents' agreed to strongly agreed future training was needed for using auto-guidance with
 1. Tractors ($f = 49$)
 2. Self-propelled windrowers ($f = 41$)
 3. Forage harvesters ($f = 37$)



Conclusions

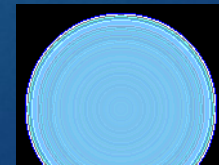
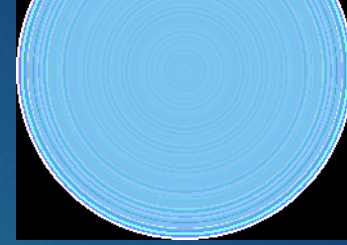
- ▶ Farm size was significantly associated with use of auto-guidance.

$$\chi^2(1) = 4.726, p = .030, \phi = .307$$

- ▶ Focus future training on auto-guidance systems used with tractors.
- ▶ Increase development of Hands-on “Tinkering” (experiential learning) with auto-guidance systems

Recommendations

- ▶ Consider learning preferences
- ▶ Utilize innovative collaborations with industry partners to host “hands-on” training programs



Future Considerations

- ▶ Increase sample size
- ▶ Investigate alternative training options
- ▶ Determine reduction in operator errors when using auto-guidance.



Questions?



Thank You