**INTRODUCTION**

**OBJECTIVE**

Study whether farmers’ perceived spatial yield variability, instead of their actual spatial yield variability, affects their decision to utilize precision farming technology.

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**DATA & METHODS**

Survey data (2009) from 750 farmers in 12 Southeastern States. They provided information about socio-economic factors, farm and production characteristics.

**Model:** Weighted 2-step Multinomial Logit Model (MNL) & Multinomial Probit Model (MNP), which incorporate 3 types of cotton farmers:

- non adopters (PF=1)
- adopters of SSIG but users of URT (PF=2)
- adopters of SSIG and users of VRT (PF=3)

**Econometric Problem:** Perceptions and PF adoption are affected by similar factors (Endogeneity).

**Solution:** Run an OLS regression of perceived SYCV on farm size and county average yield productivity index and, 2. use it predicted, instead of the reported, value as explanatory variable in the MNL estimation.

**RESULTS**

**DISCUSSION**

- Cotton farmers reported lower estimated average yields compared to the actual average yields of the last crop season.
- Higher Perceived SYCV increases the probability of SSIG technology adoption. Some farmers will then apply their inputs either at a uniform rate (URT) or at a variable rate (VRT). PF adopters will more likely:
  - be younger farmers (AGE)
  - have a college degree (COLLEGE)
  - use computer (COMPUTER)
- believe that PF will be profitable in the future (PROFIT), and important in 5 years from now (IMPORTANCE)
- have higher percentage of income coming only from farming (INCOME)
- use manure in their fields (MANURE)

On the other hand, actual yields (YIELDS) seem not to influence PF technology use.

**FUTURE WORK**

- Incorporate 2001 and 2005 data to see how producers perceptions and technology relationship evolved over time.
- Measure the intensity of yield variability, as well as the impact of higher moments on adoption.
- Test causality between perceptions and technology adoption.

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