

Project Update:
Complementarities of Training, Technology,
and Credit in Smallholder Agriculture: Impact,
Sustainability, and Policy for Scaling-up in
Senegal and Uganda

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Senegal, Drip Irrigated Horticulture

- Slow implementation by trilateral governments.
- Randomization done:
 - 144 sites that satisfied all objective program criteria and had existing female or mixed-gender agricultural groups were identified in the target program regions (Thies, Diourbel and Fatick)
 - Half of eligible sites were randomly chosen for treatment
 - Stratification at department-gender combination level
- Eagerly awaiting implementation

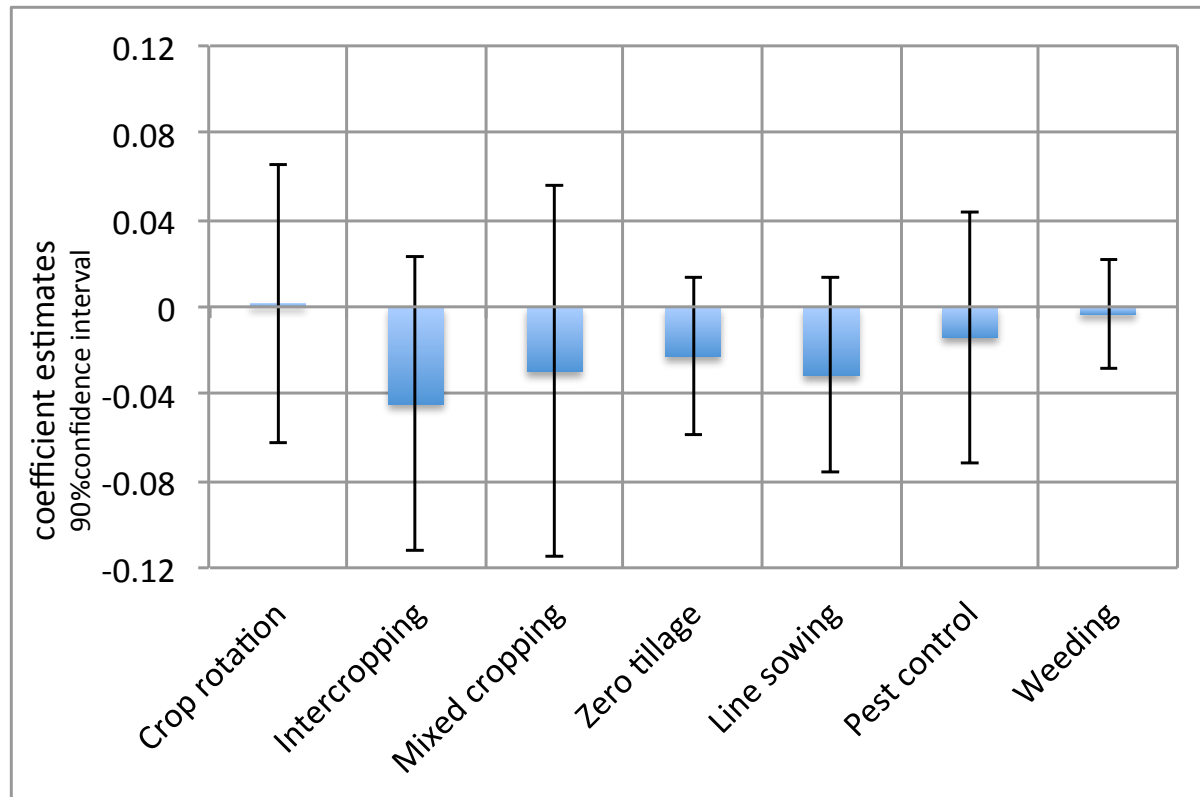
Uganda - Phaseout

- BRAC Program components:
 - Community Agriculture Promoter (CAP) = supply chain for improved seeds
 - Model Farmer (ModF) = demonstration + training
- 3 treatment arms:
 1. Continuation – both CAP and ModF are continued
 2. CAP Phaseout – CAP is discontinued, ModF not
 3. ModF Phaseout – ModF is discontinued, CAP not
- Preliminary tests of phaseout impact

$$Y = \alpha + \beta_0 \times \textit{phaseout} + X$$

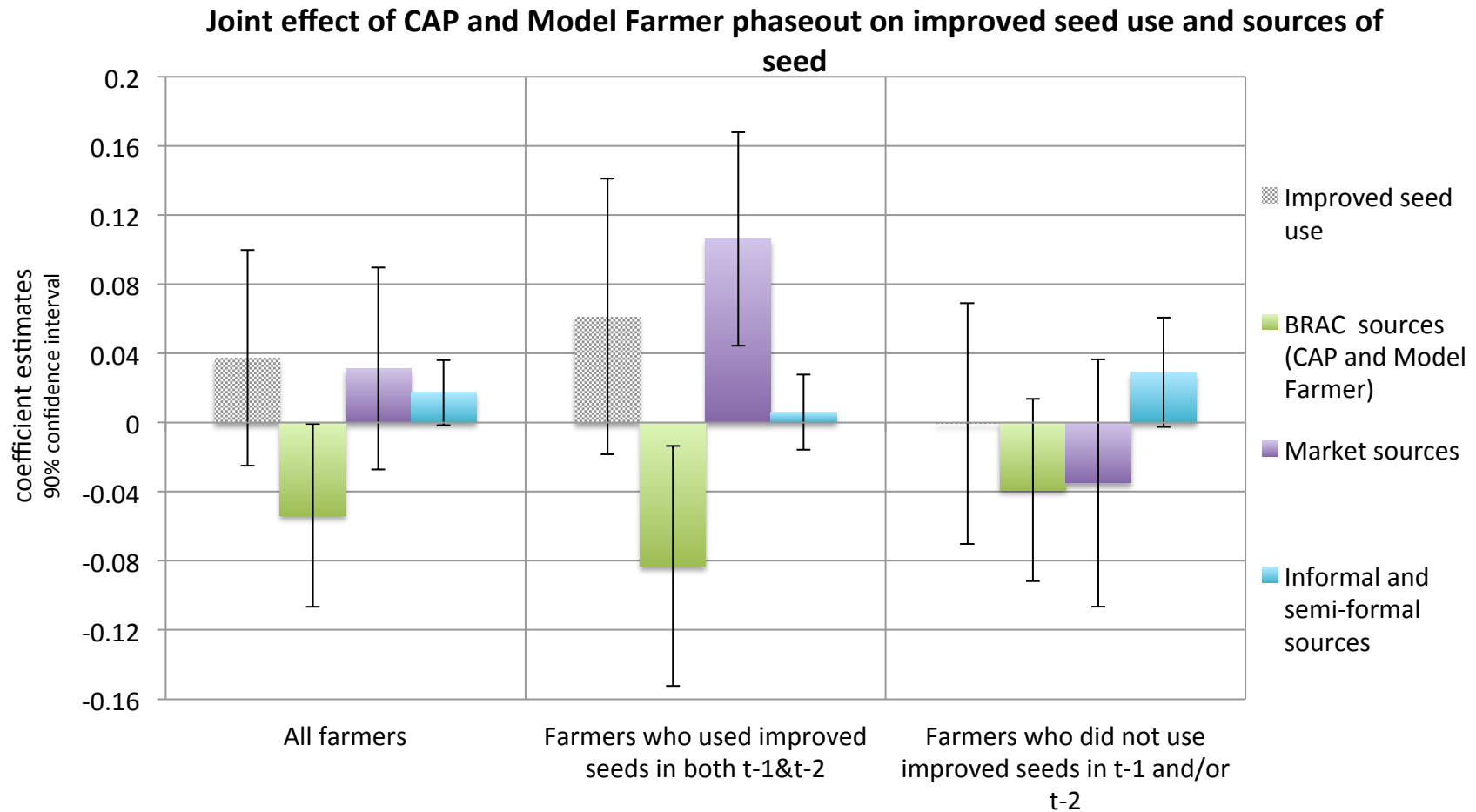
$$Y = \alpha + \beta_1 \times \textit{CAPphaseout} + \beta_2 \textit{ModFphaseout} + X$$

No significant effect of phase-out on agricultural practices

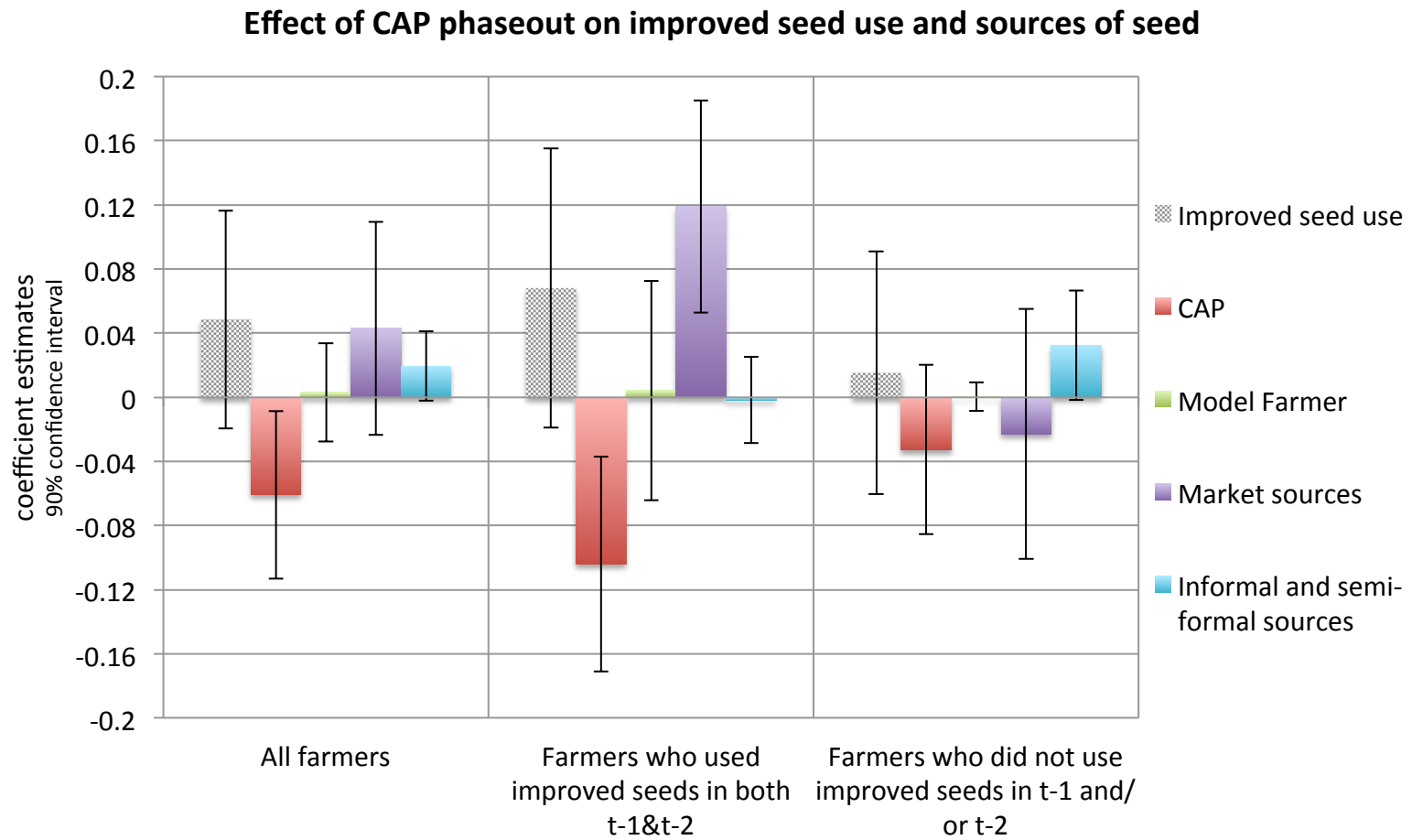


- Estimate of overall phaseout effect (β_0); coefficient result remains similar when disaggregating to phase-out type
- Coefficient result remains similar even when the sample is restricted to those farmers who were trained in the last (or last two) seasons

Impact on Use of Improved Seeds: Substitution from BRAC to Market

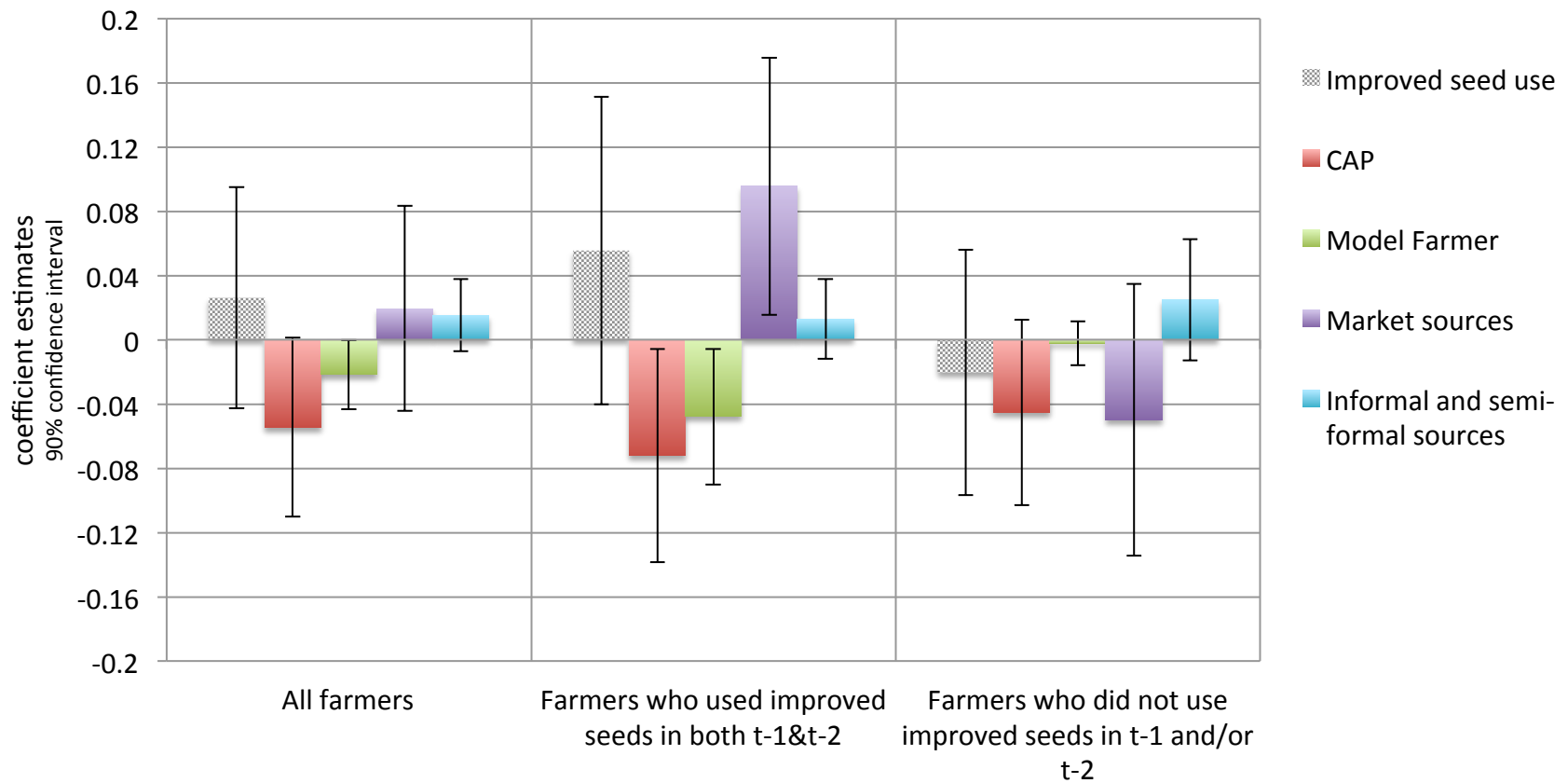


Impact of CAP Phase-out



Impact of Model Farmer Phase-out

Effect of Model Farmer phaseout on improved seed use and sources of seed



Initial takeaways

- Improved seed use remains high (er?) in phase-out groups
- The phasing out of both program components strongly reduces purchases from the CAP, motivating farmers to purchase improved seeds from market sources
- The effect appears to be stronger the longer the farmers have been using improved seeds; for those who haven't used improved seeds in recent seasons, no effect
- Agricultural practices taught by model farmers appear unaffected by the phaseout
- Context: Relationship of the phase-out impact results to initial program impacts – New RD results

RD Estimates of Initial Program Impact

- RD estimates at BRAC's program cutoff at 6km from centers
- Program significantly increased farmers' usage of improved cultivation methods that are relatively low-cost
- But minimal impact found on adoption of relatively expensive inputs including HYV seeds.
- The adoption rates of manure, inter-cropping, crop rotation and irrigation increased by 9.8 pp, 13 pp, 11.6 pp and 6 pp, respectively.
- The program also significantly increases farmer's production value on major crops by 47.2%, raises savings by 79%,
- Improved farmer food security measured by food consumption quantity and variety, meal frequency, and self-reported anxiety related to food availability
- From the results, increased agricultural output and improved food security are attributed to the adoption of inexpensive farming methods.