Selling low and buying high? Understanding farm profitability

Marshall Burke

Evidence to Action: Building Markets for Small-Scale Farmers
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Center for Effective Global Action
University of California

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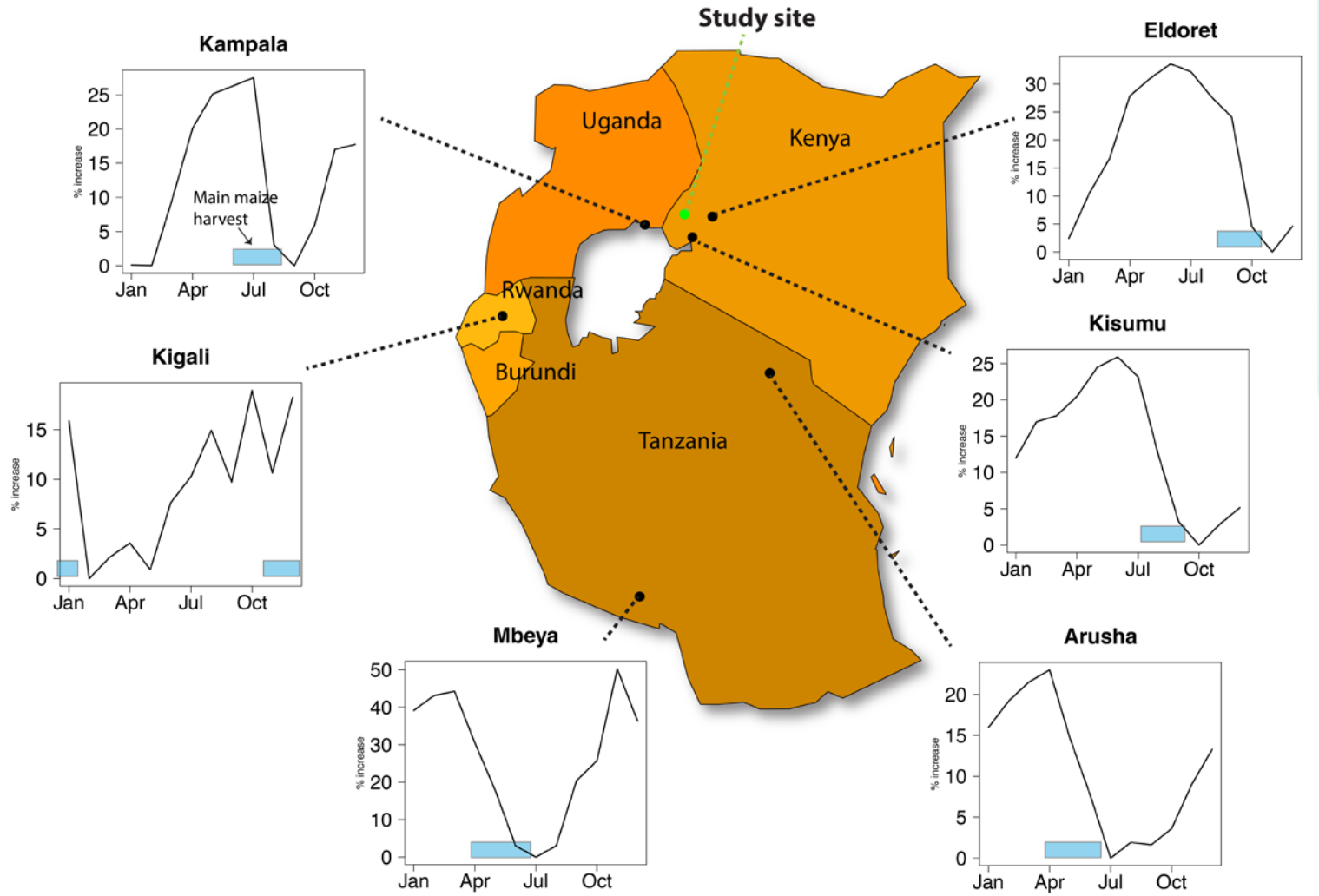
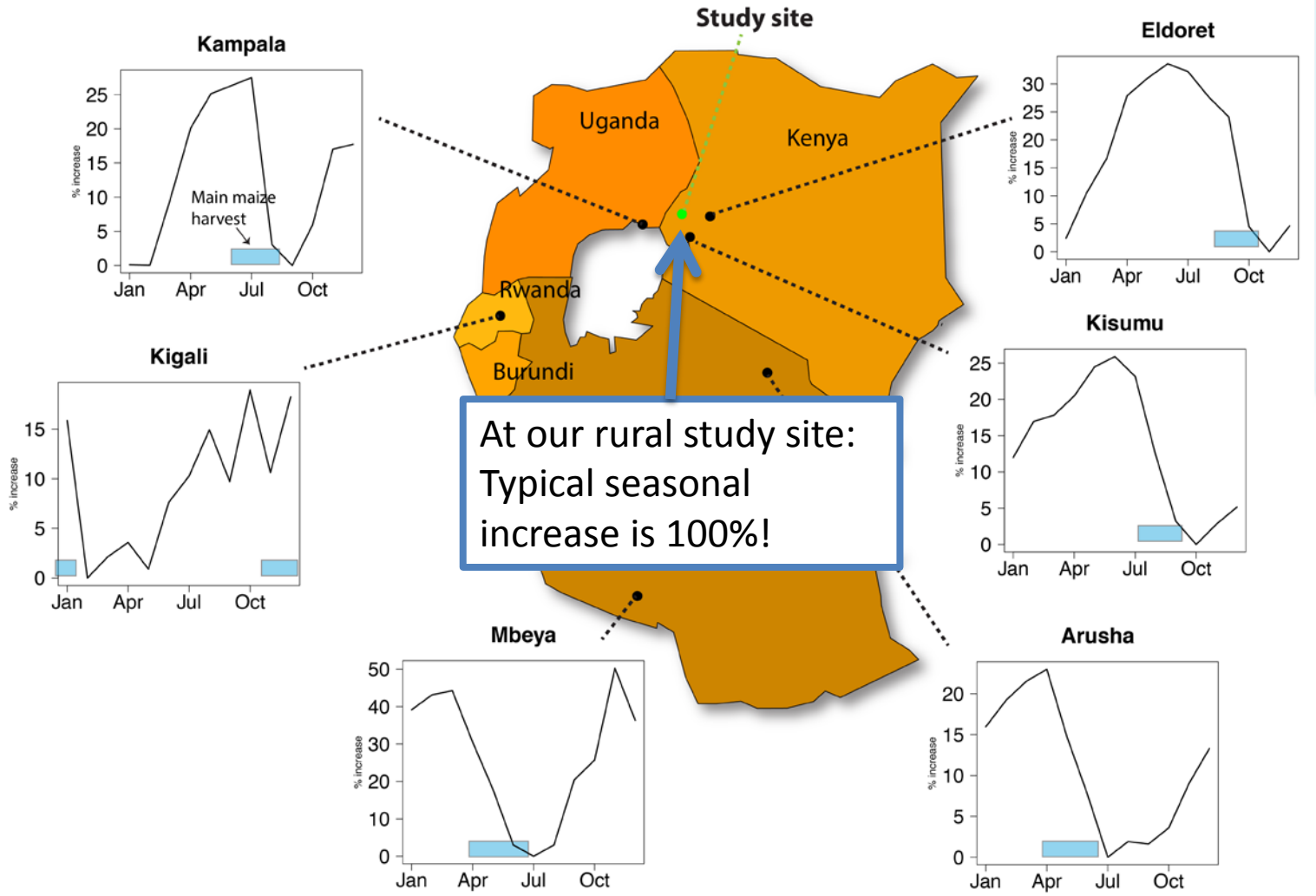
Food prices matter for the poor

- Poor households spend a lot of money on food
- Many poor households earn most of their income from selling food

Typical assumption: farmers have little control over the prices they face


Study site
Uganda
Kenya
Rwanda
Burundi
Tanzania
Kampala
Main maize harvest
% increase
Jan
Apr
Jul
Oct
Eldoret
Kisumu
Kigali
Mbeya
Arusha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Main maize harvest
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At our rural study site:
Typical seasonal
increase is 100%!

So: buy low, sell high?

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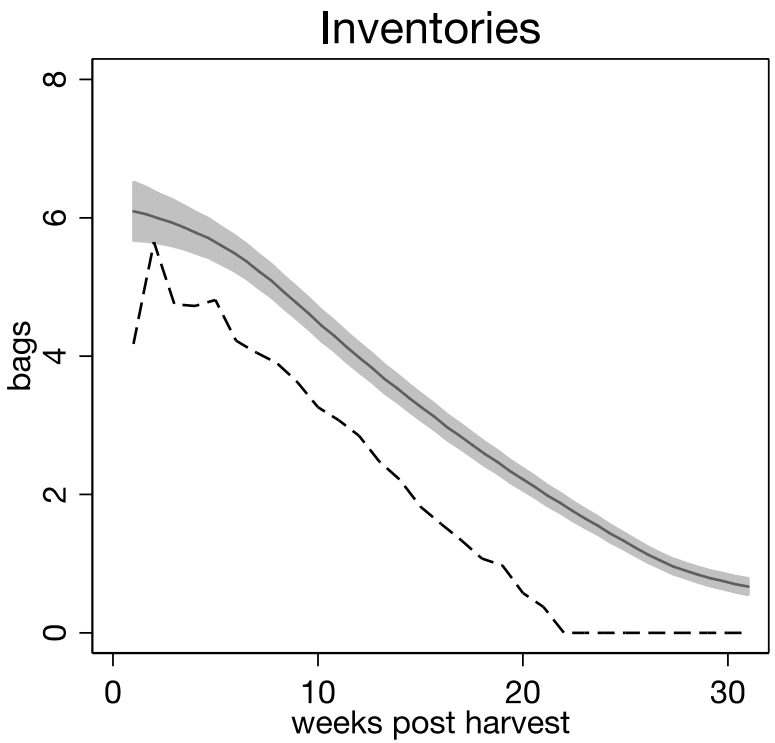
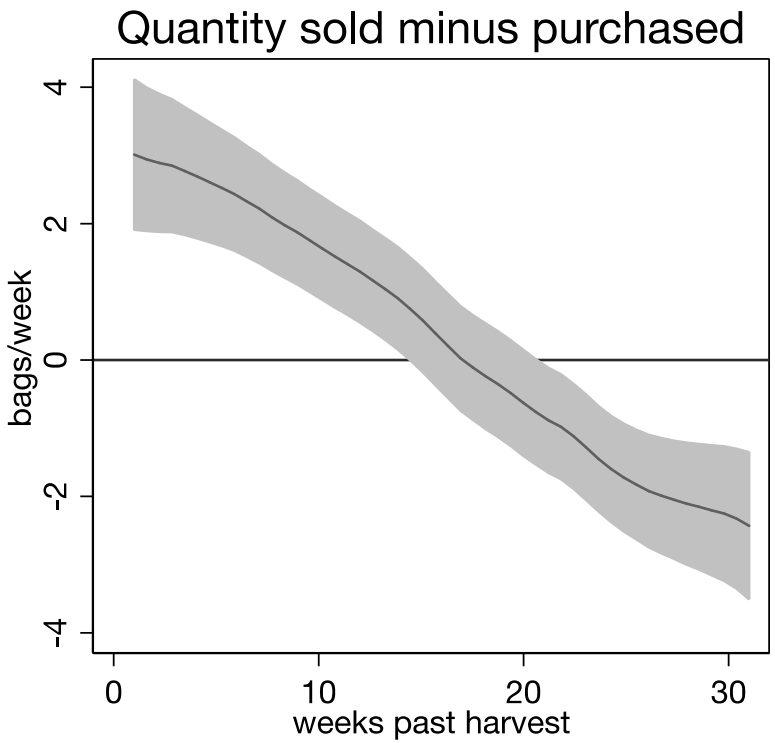
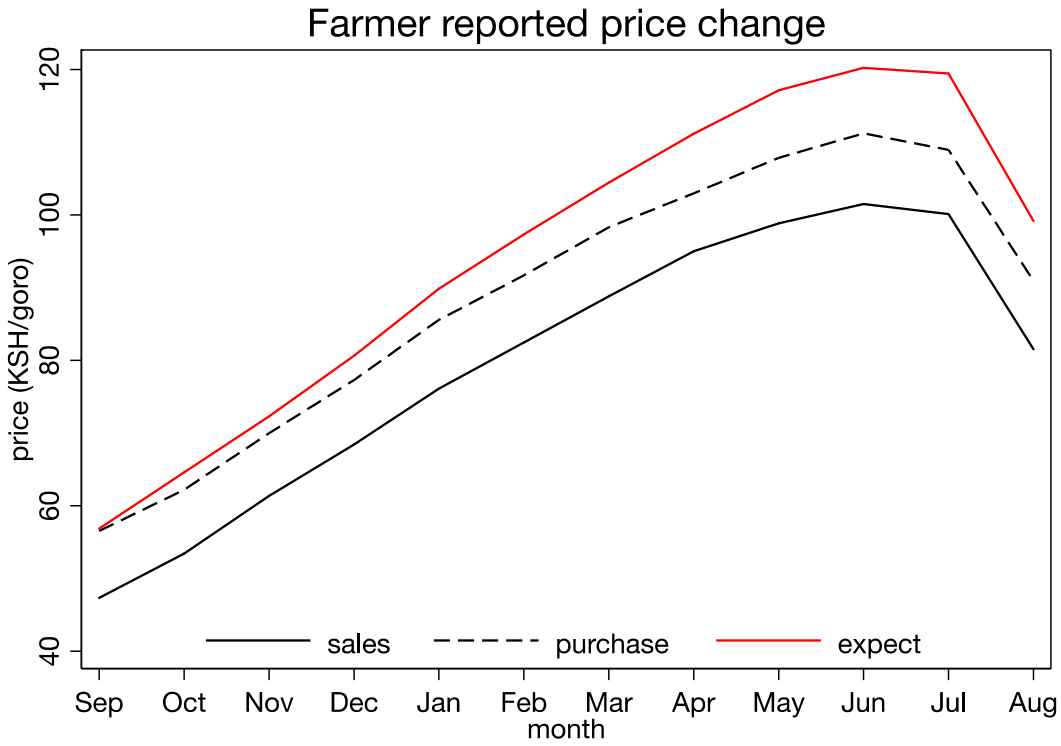
Sell low, buy high!





What's going on?



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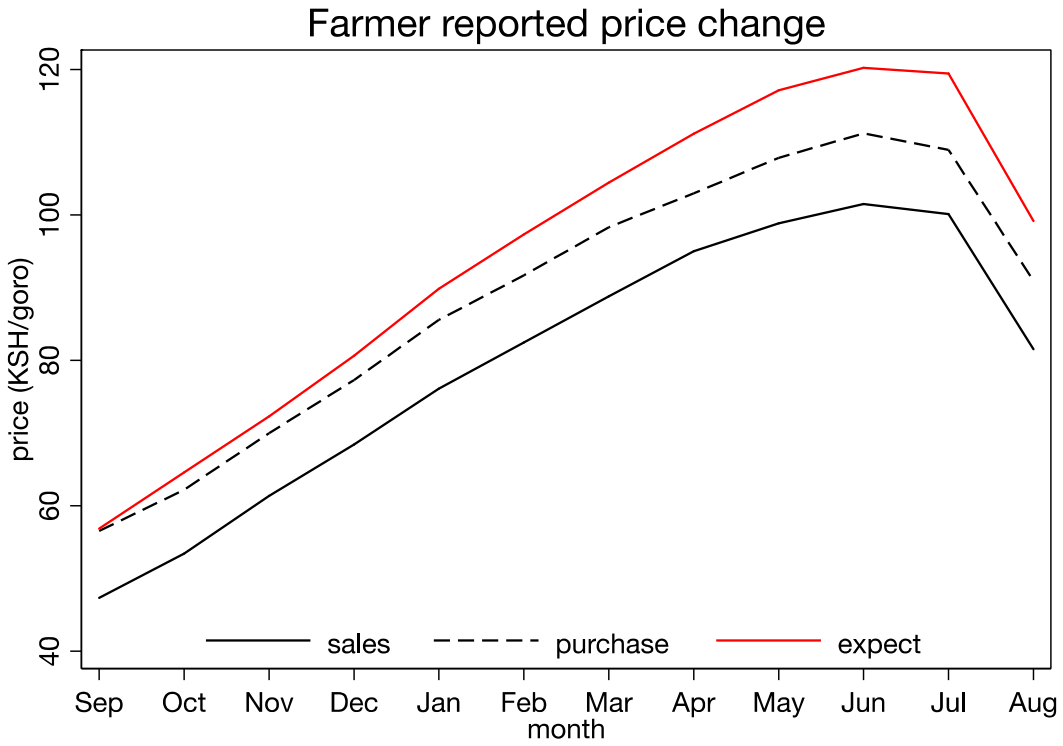


Q: *Why do you sell at harvest instead of later, when prices are higher?*

A: *I need the cash.*

With OAF, we offered a storage loan

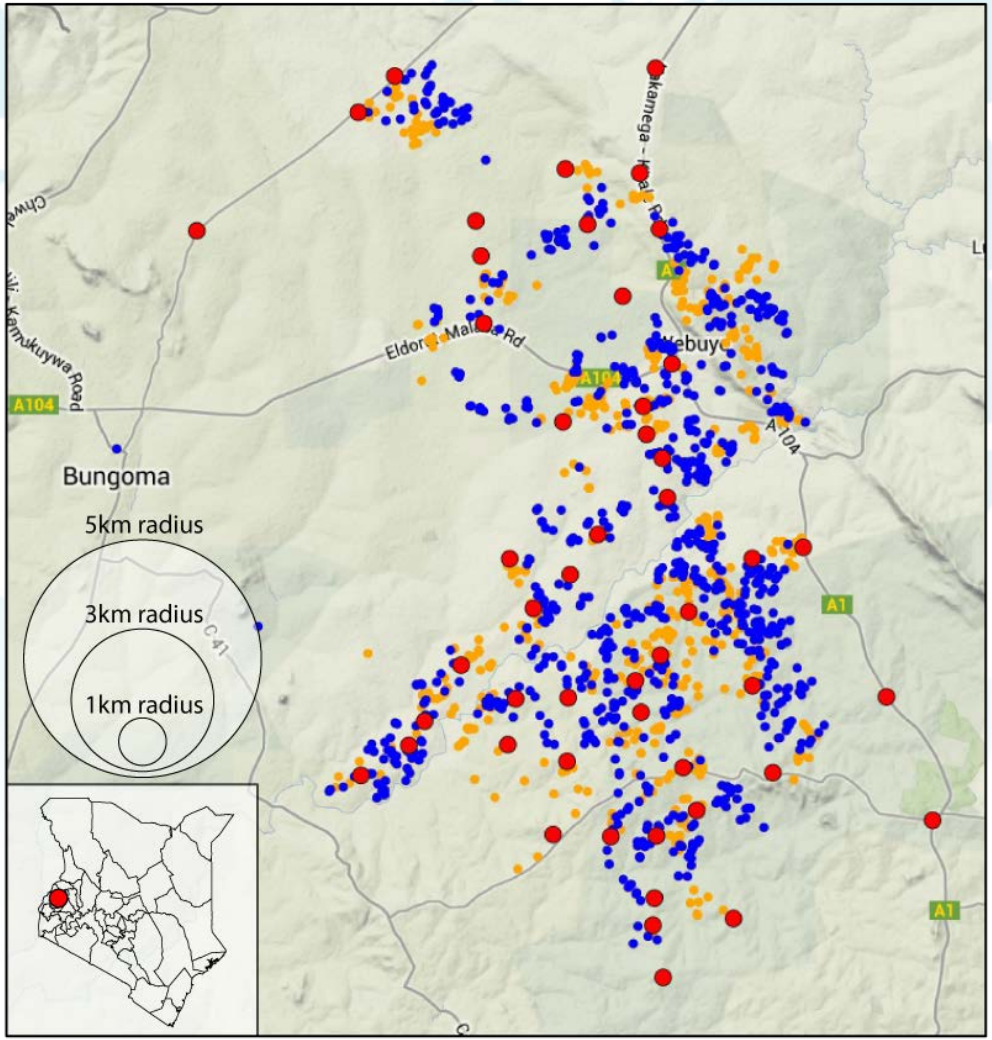
- Offer cash (~$100) at harvest (T1) or three months after harvest (T2) to randomly selected OAF farmers
- Stored maize as collateral
- 10% interest, repay flexibly
- Re-visited treated and control farmers many times throughout the year to track inventories, sales, purchases, etc.

Take-up was very high: >70%

But what if the loan "works"?

- Farmers might sell less at harvest, sell more later on:
  - This could reduce the price dispersion!
  - This could reduce the profitability of the loan!

To understand these price effects, we also randomized the number of loan offers across markets.



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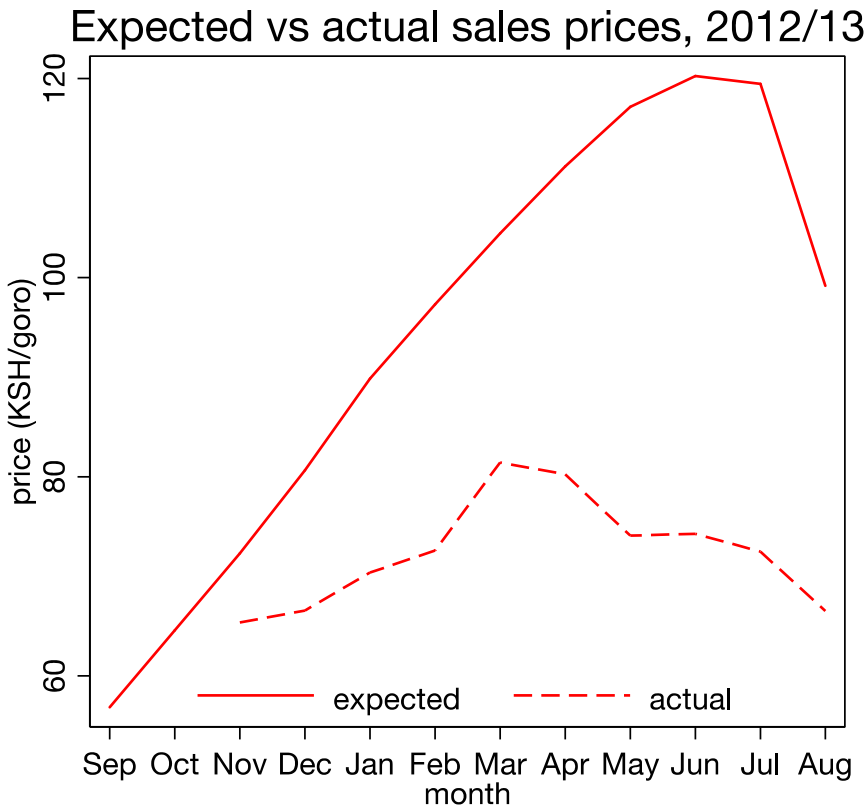
Sadly, overall price rise was small last year



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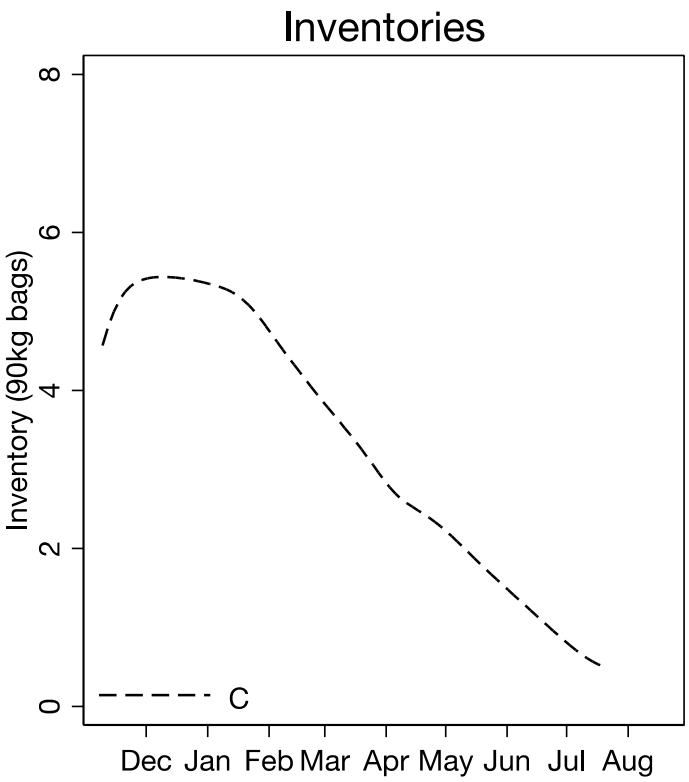
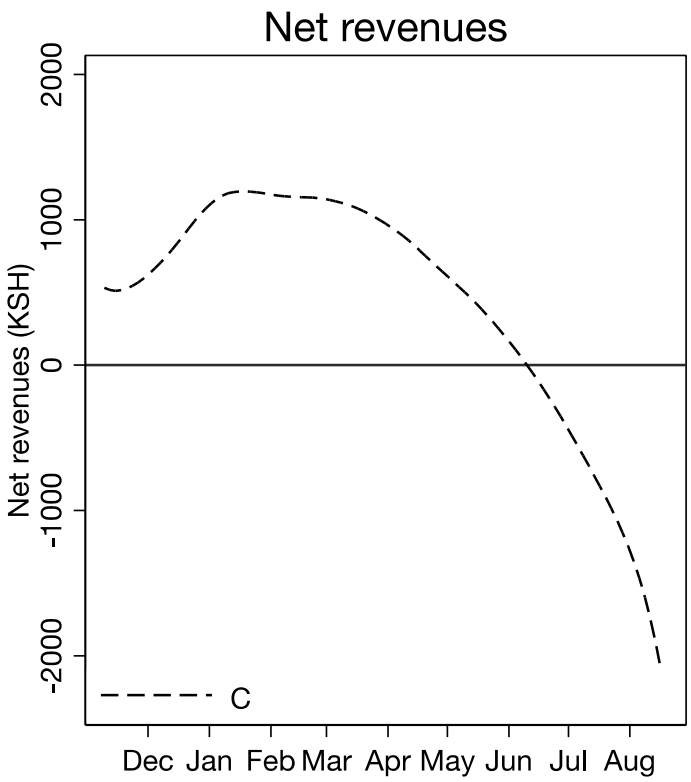
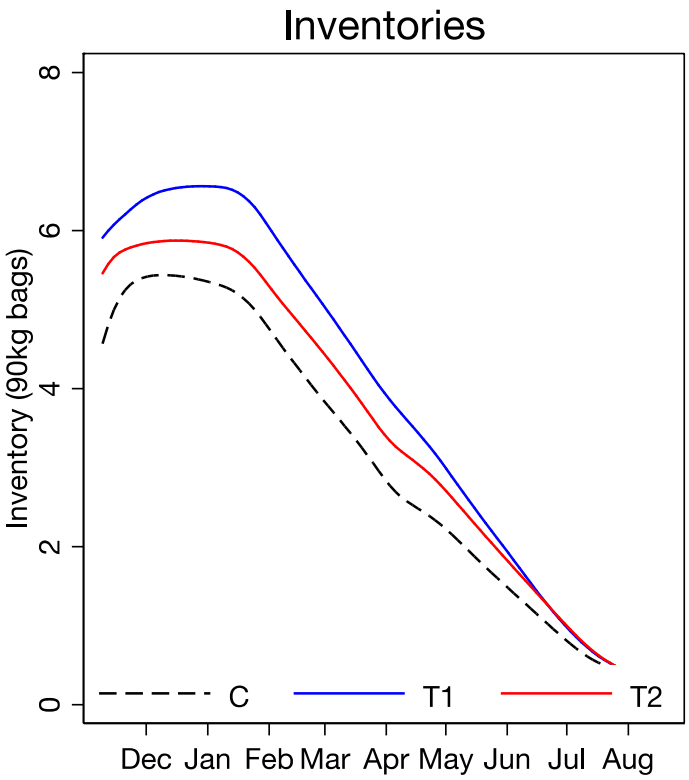
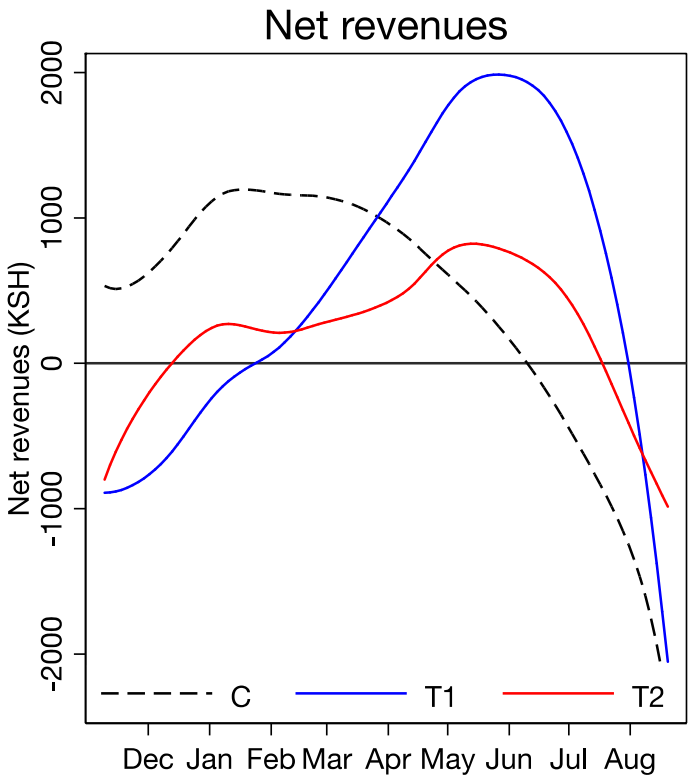
Results at the farmer level





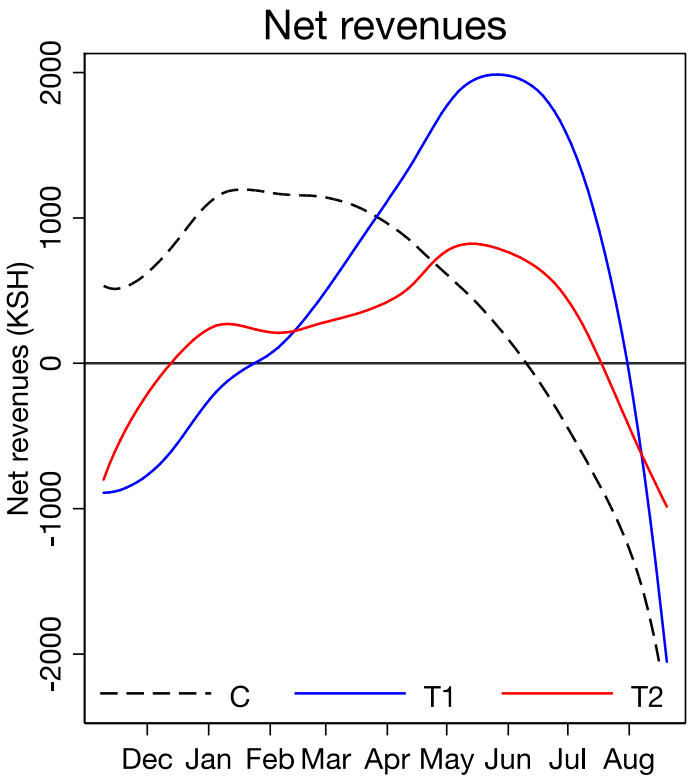
Results at the farmer level





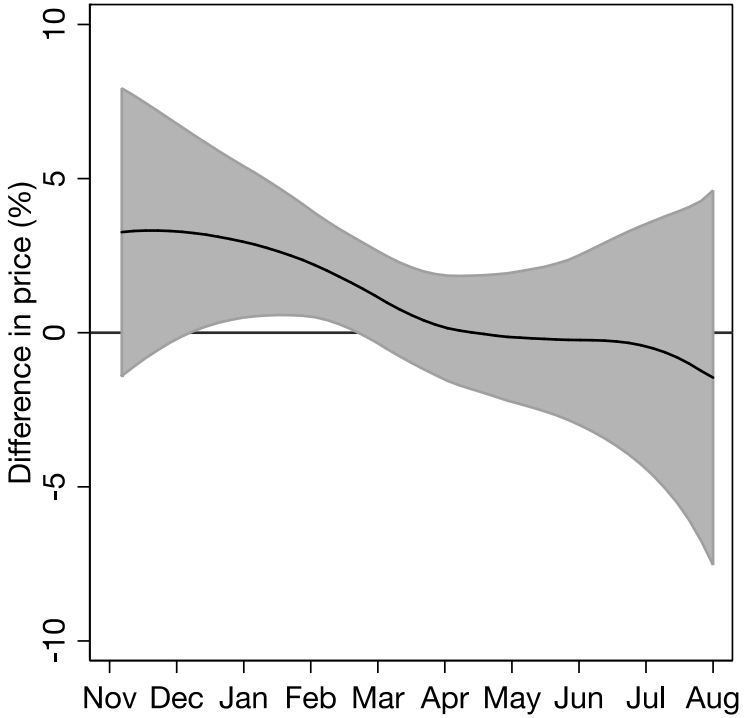
Results at the farmer level

Even with low price rise:
20% ROI after repayment for farmers who got the loan at harvest



What happened to prices?

Difference in prices, high versus low treatment density



Post-harvest prices ~5% higher in areas with lots of loans

What did these price effects mean for farmers?

- It reduced the effectiveness of the loan in “high density” areas
  - Arbitrage opportunity was smaller
- It helped revenues of control farmers!
  - (although not quite significantly so)
  - But probably also had positive spillovers outside our experiment

Conclusions

1. Access to well-timed credit can help improve the profitability of small farms

2. Absence of credit markets spills over into other markets that matter for the poor
   - Missing credit market exacerbates seasonal price swings