

Improving the productivity of smallholder farmers through private sector collaboration

Lessons learned from 15 projects delivering innovative input, production and market-access solutions to small farmers

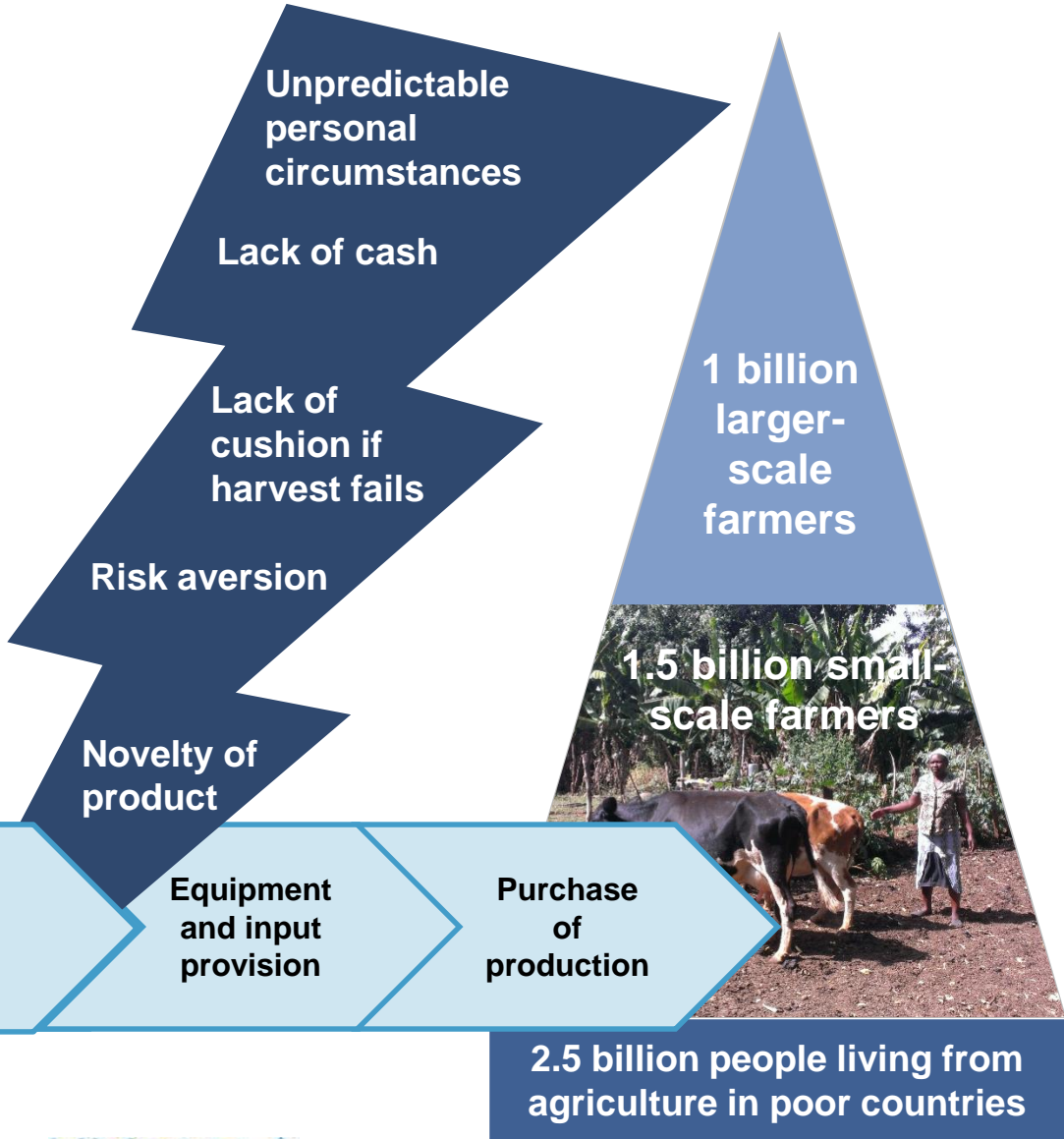
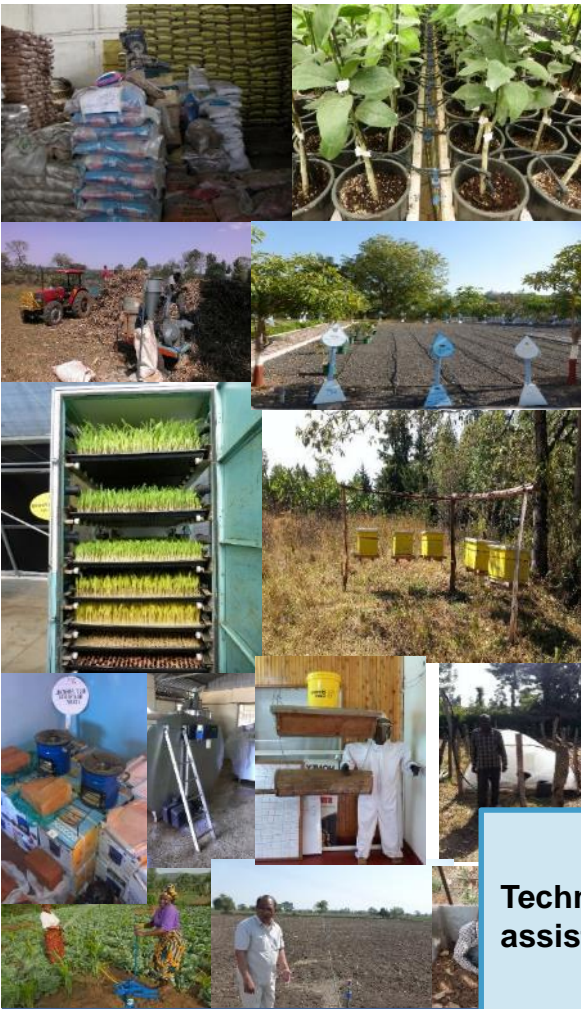
April 29th, Thun, Switzerland



Many productivity enhancing products and practices exist, that could change the life of small-scale farmers sustainably



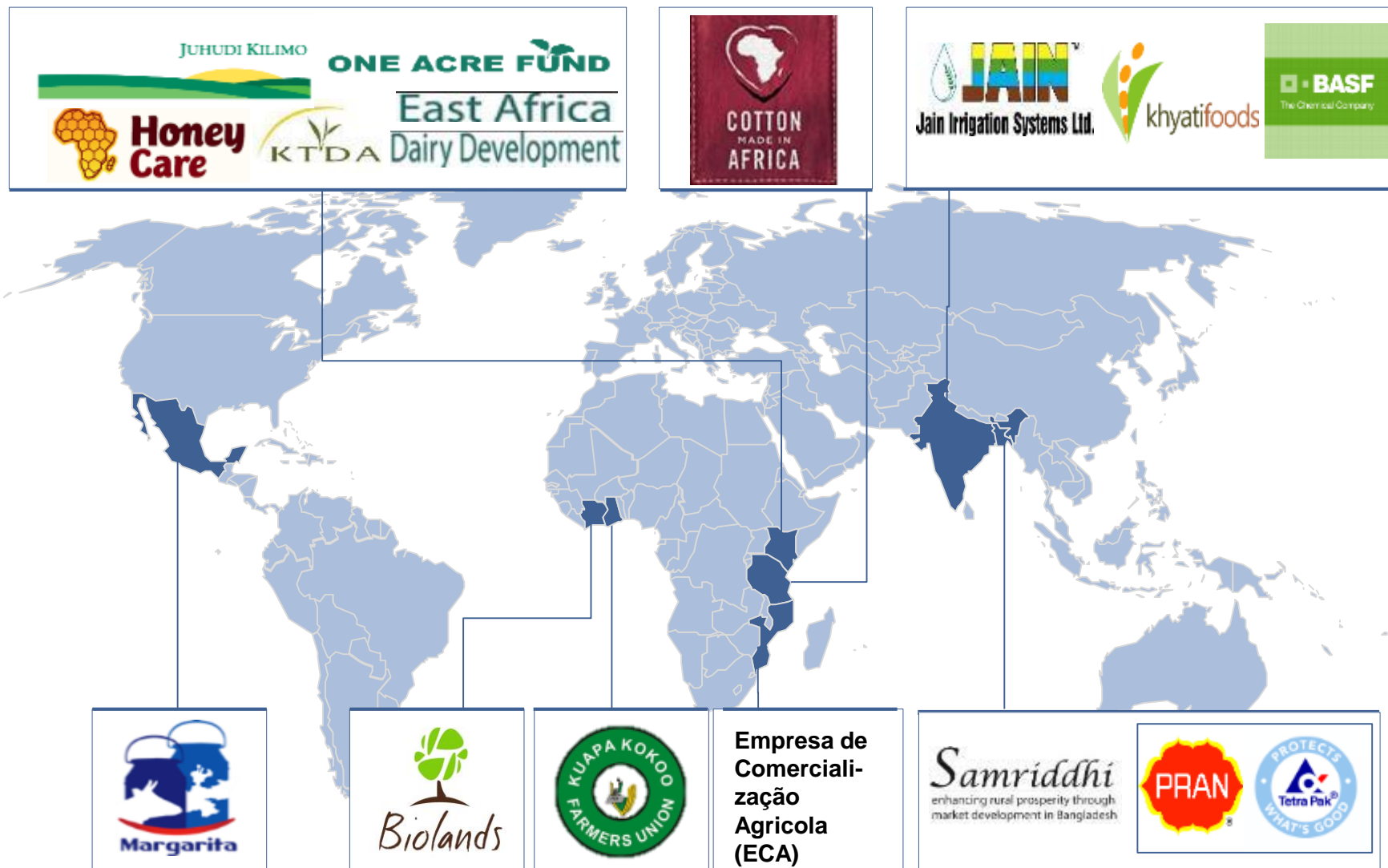
...but they struggle to reach widespread and consistent adoption



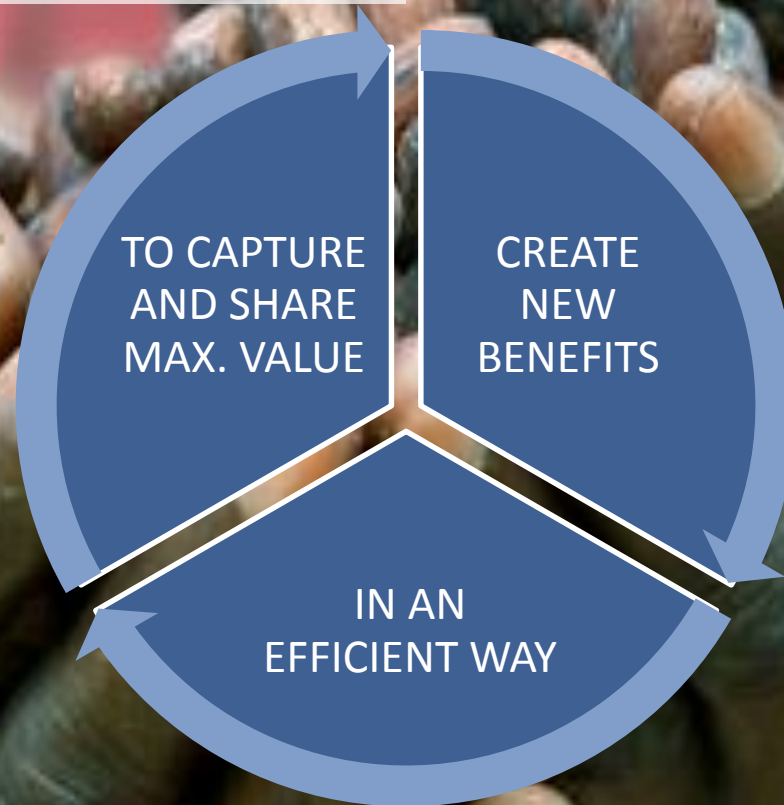
Productivity-enhancing products and practices

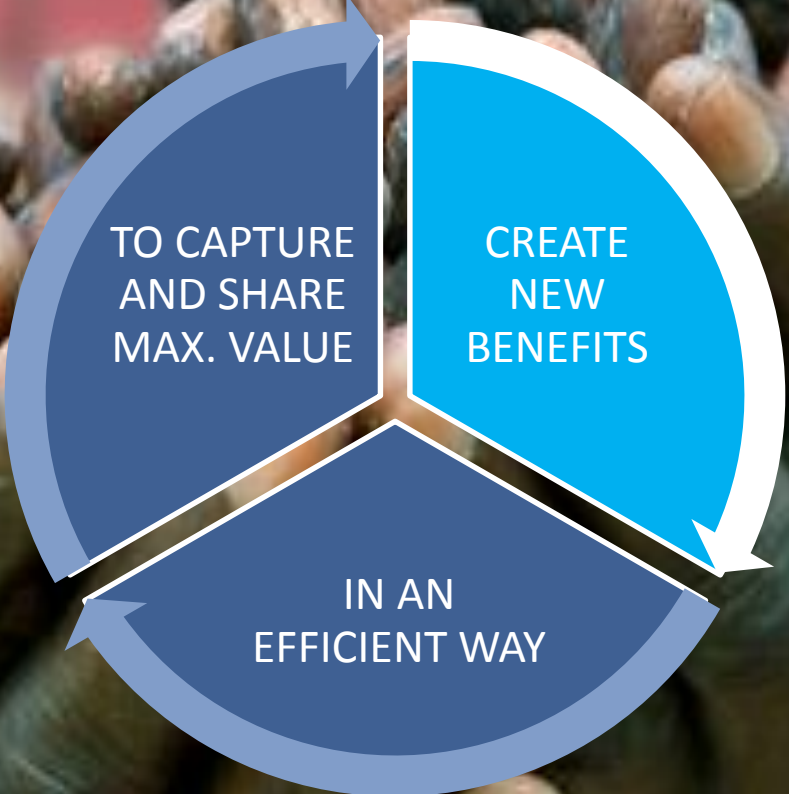
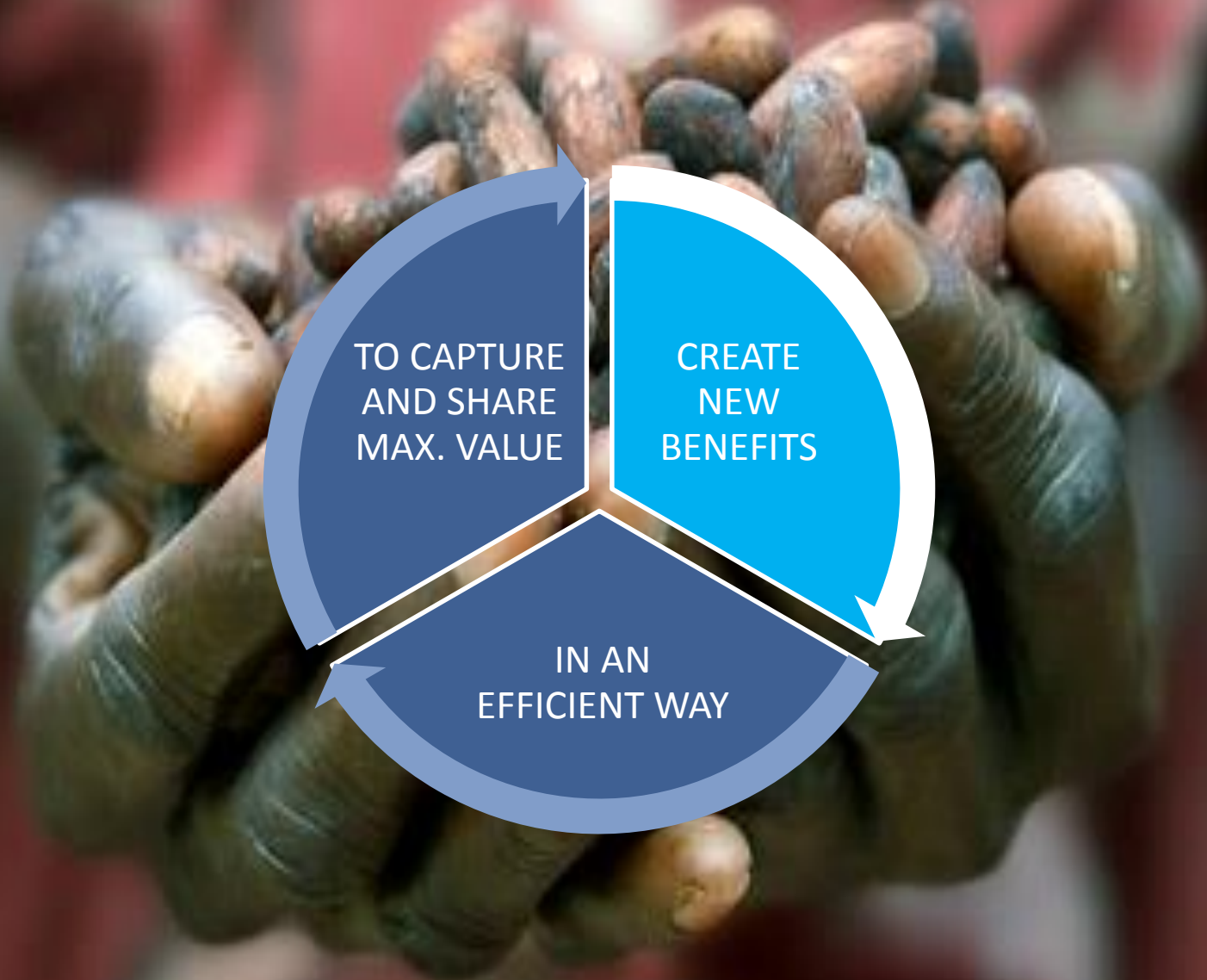
Source: FAO

We analysed 15 pioneer organizations working in over 15 commodities with 2 million small-scale farmers

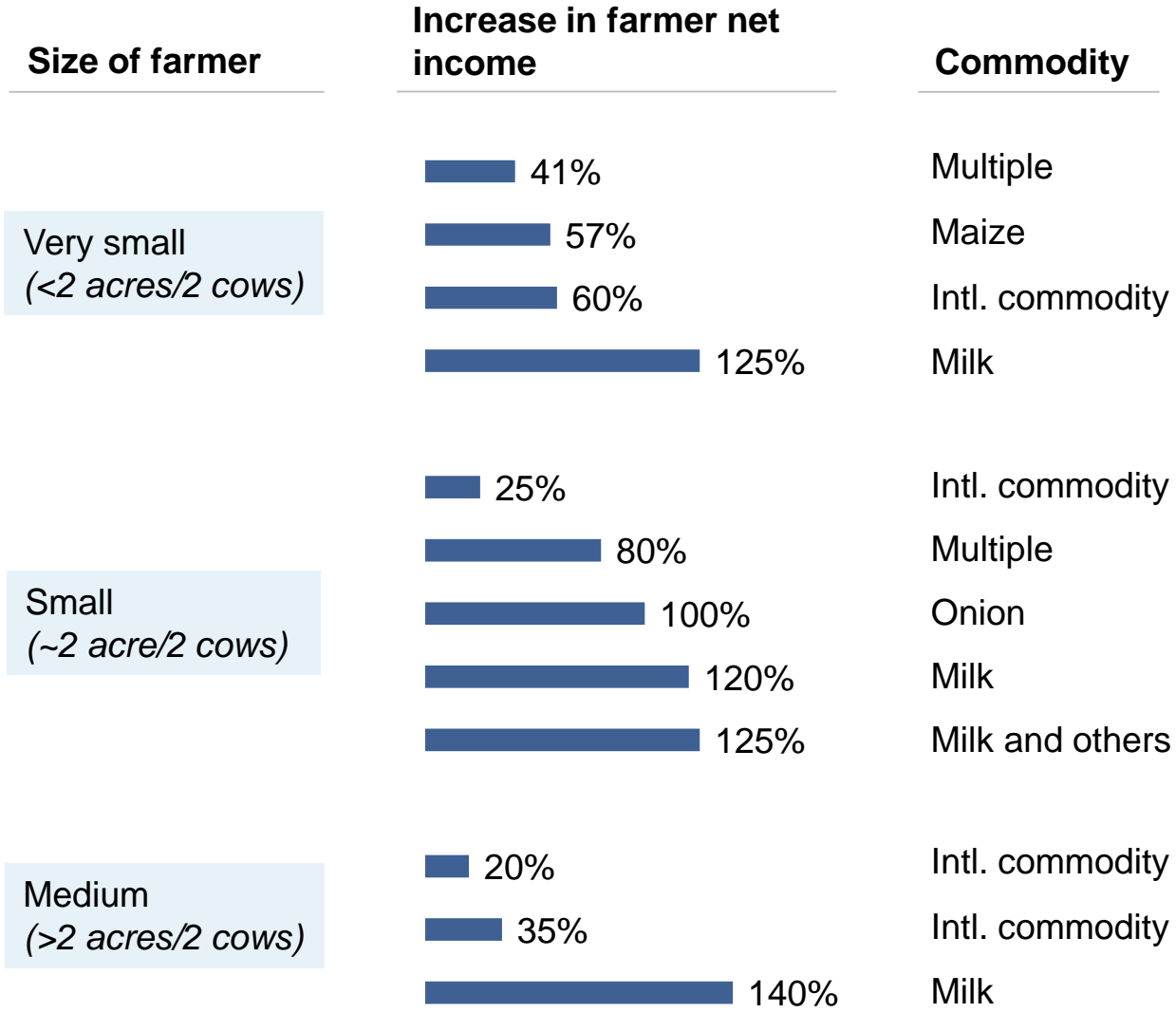


The virtuous cycle of value creation





Great potential to increase income for farmers of all sizes, across commodities...



...and to transform livelihoods, by freeing farmers from intermediaries and allowing them to become entrepreneurs



**“Not only am I making more money,
but I have become an entrepreneur.”**

Krishi Mitra, India

**“Now, we get paid five times more,
consistently on time.**

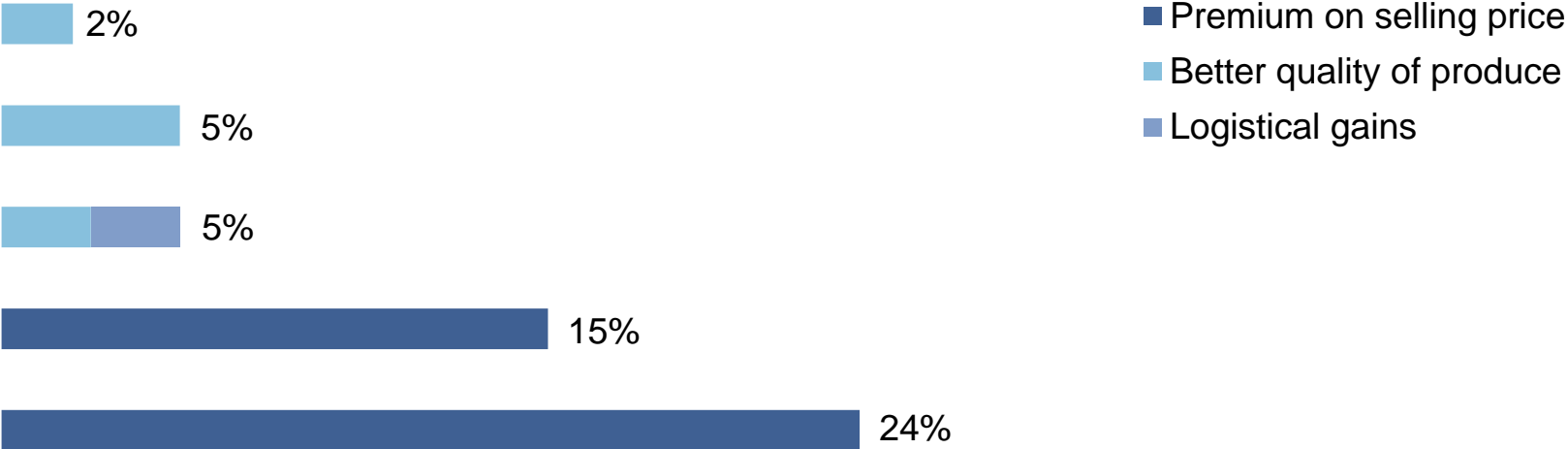
**We can now save, plan and educate
all of our 8 children.”**

Joseph and Paulina Bett, Kenya



The organizations working with small farmers also derive significant benefits

Additional net margins for buyers of produce* (as % of sales)














Increase in number of small-scale farmer clients for sellers of inputs/equipment

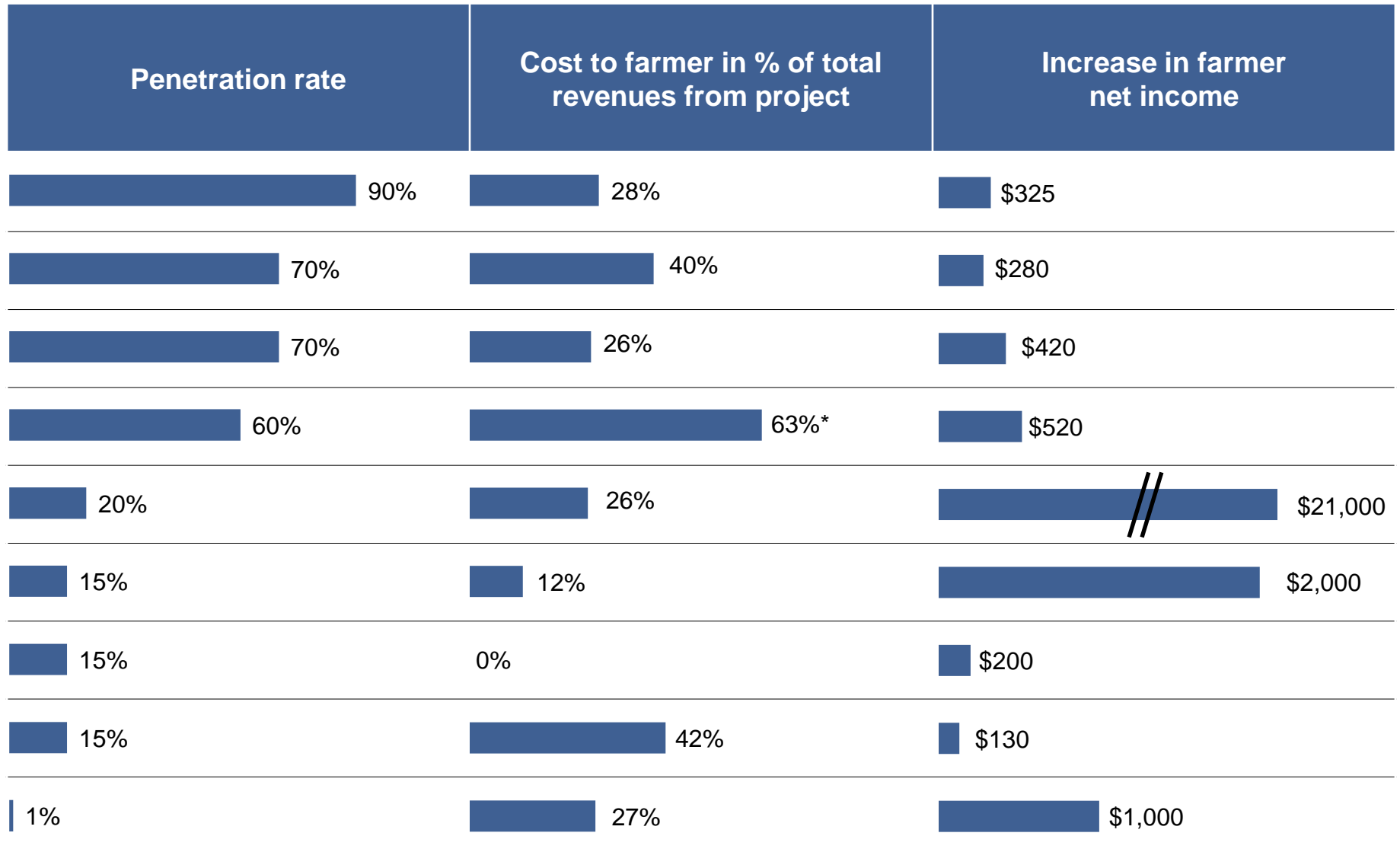


*On top of margins made at the processing plant or dairy hub level

Only projects that offer productivity-enhancing inputs or equipment manage to increase farmer income by more than 80%

| | Increase in farmer net income | Productivity-enhancing input and equipment | Market access / purchase | Technical assistance |
|---|---|--|--------------------------|----------------------|
| ■ Increase in production and productivity |  140% | ✓ | ✓ | ✓ |
| |  125% | ✓ | | ✓ |
| |  125% | ✓ | ✓ | ✓ |
| ■ Higher selling prices |  120% | ✓ | ✓ | ✓ |
| |  100% | ✓ | ✓ | ✓ |
| |  80% | ✓ | | ✓ |
| ■ Others (savings, dividends etc.) |  60% | | ✓ | ✓ |
| |  57% | (✓) | | ✓ |
| |  41% | | | ✓ |
| |  35% | | | ✓ |
| |  25% | | | ✓ |

Yet, it is neither the prospect of important gains nor the limited need for upfront investments that drive penetration



*Estimates

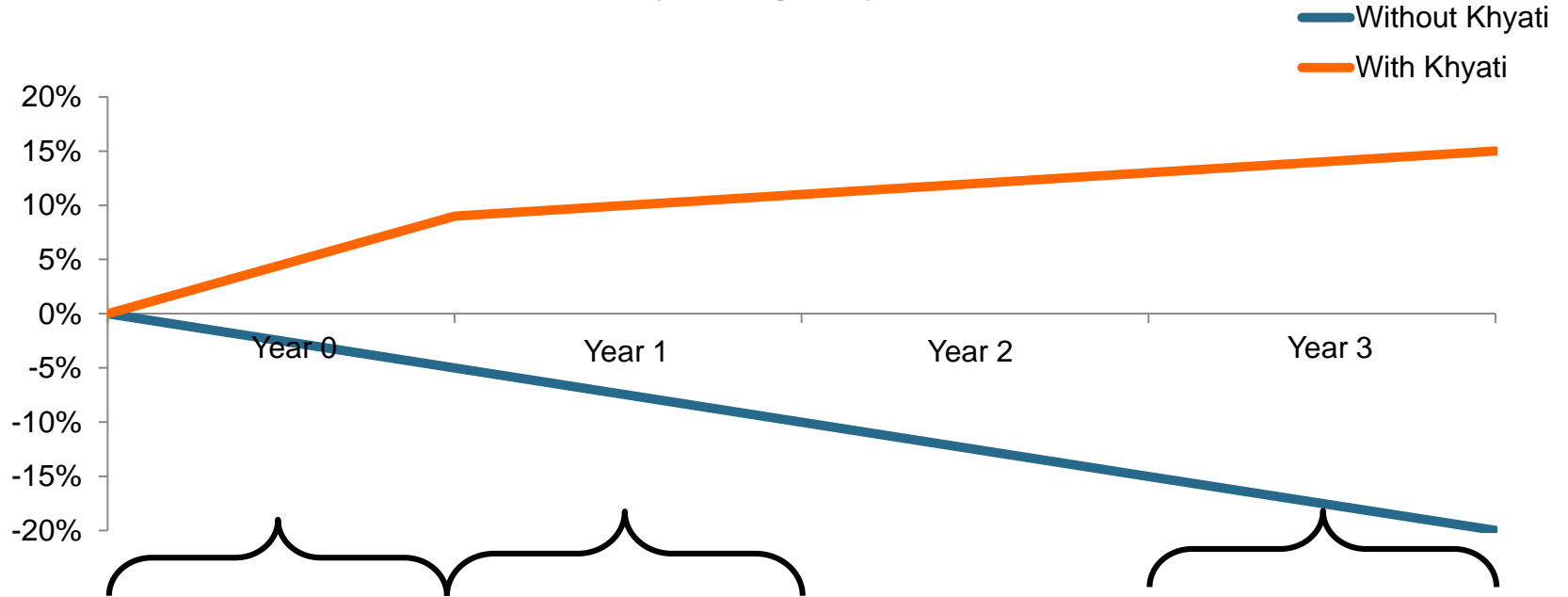
...but the farmers' *perception* of risk

| Penetration | Ability to quit project easily | Guarantee / insurance |
|-------------|--------------------------------|-----------------------|
| 90% | ✓ | ✓ |
| 70% | ✓ | |
| 70% | ✓ | |
| 60% | ✓ | ✓ |
| 20% | | |
| 15% | | |
| 15% | | ✓ |
| 15% | | |
| 1% | | ✓ |

For 1-way bio-conversion projects, it is essential to combine long-term incentives with short-term rewards



Yearly change in yield



Benefits to farmers

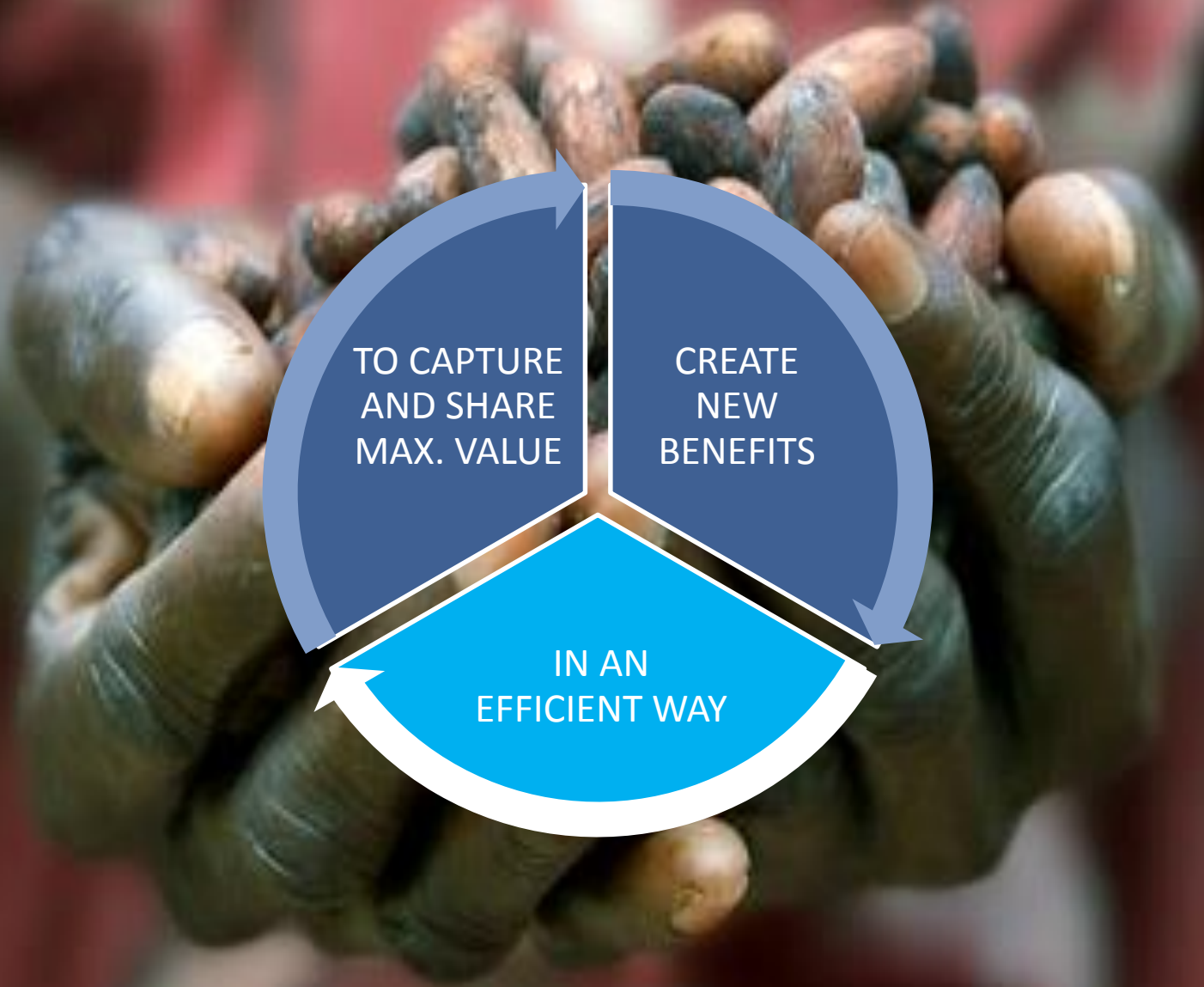
- +5-10% income increase through savings on chemical inputs
- Less dependency on money lenders for resource poor farmers

- +5-10% income increase thanks to higher soil productivity

- +10-15% income increase thanks to price premium and savings on transportation cost and market fees

Support by Khyati Foods

ON-GOING SUPPORT ON ORGANIC CONVERSION AND CERTIFICATION



TO CAPTURE
AND SHARE
MAX. VALUE

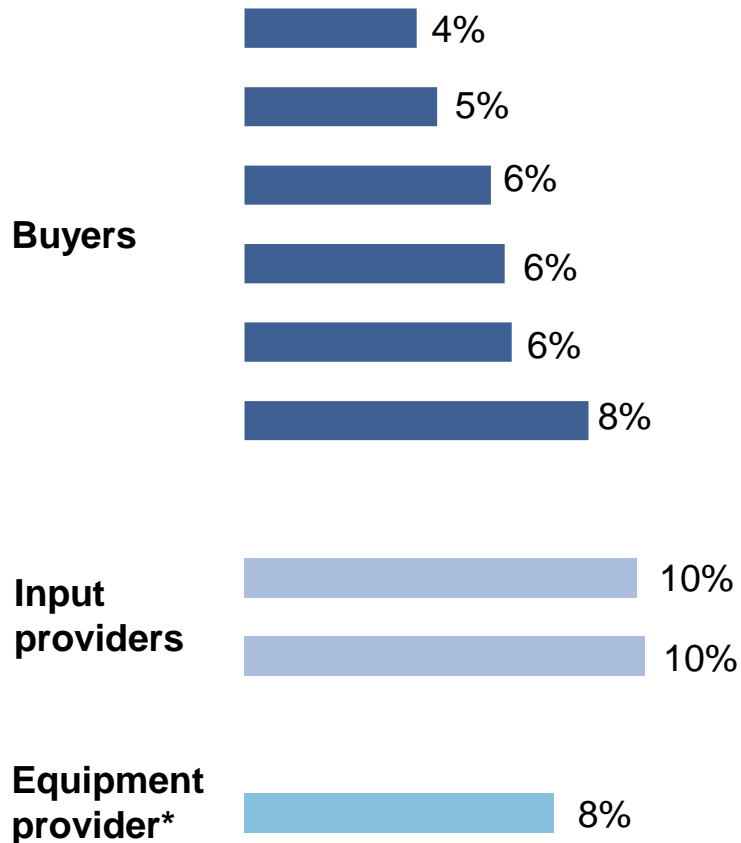
CREATE
NEW
BENEFITS

IN AN
EFFICIENT WAY

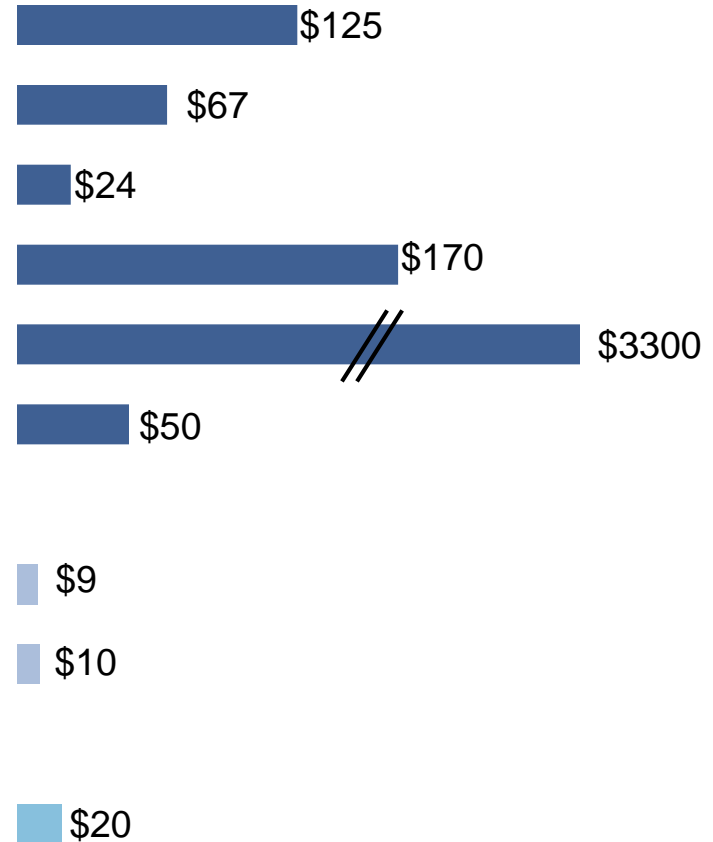
Relative levels of investment into farmers are surprisingly similar, despite wide differences in absolute amounts

Spending per farmer

(% of product bought from farmer or input provider's sales to farmer)

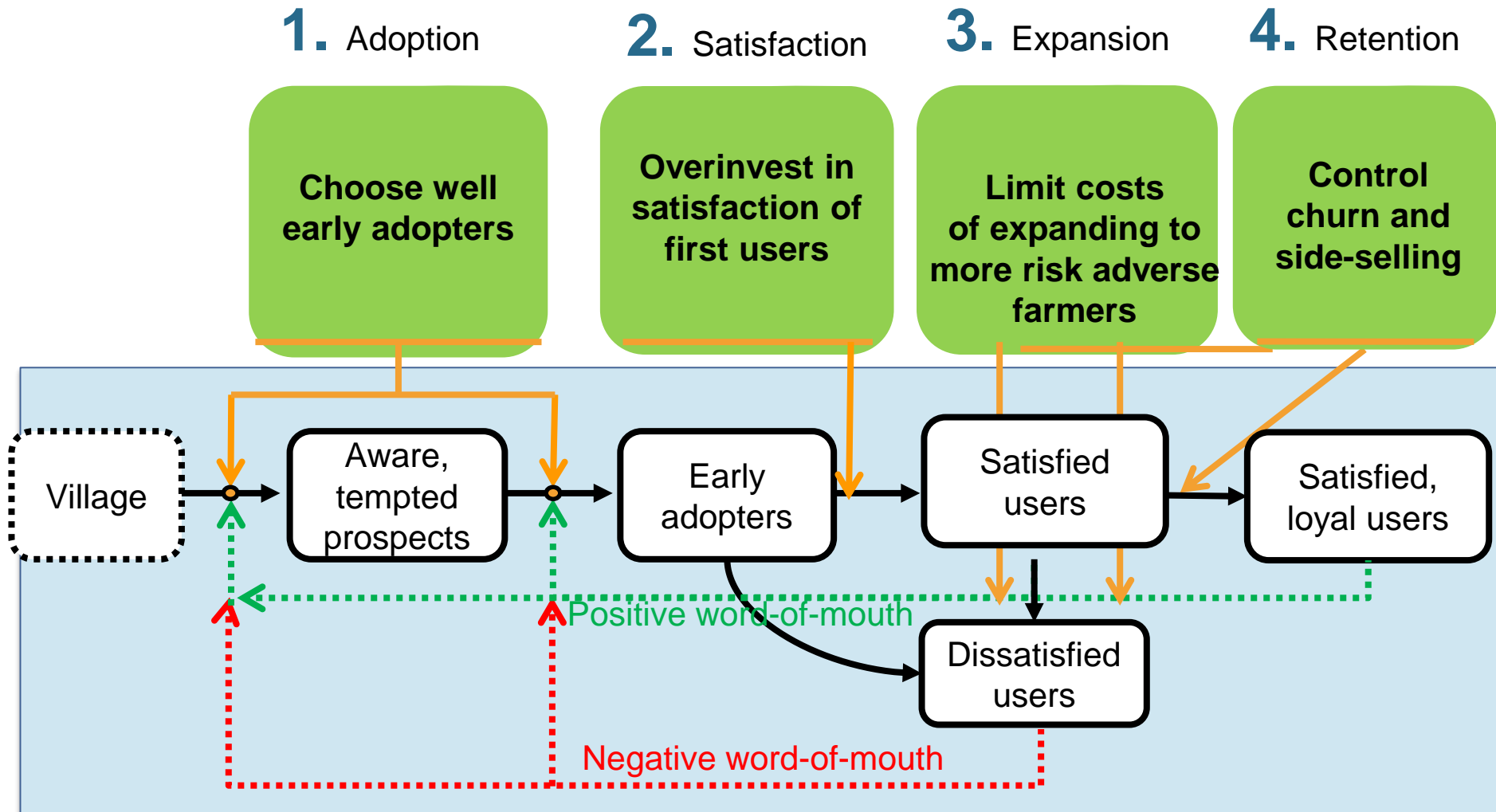


Total yearly investment of company into farmer



* Annualized over lifetime of equipment

Optimizing investment in farmer over the adoption, satisfaction, expansion and retention cycle



Choose farmers with high potential to become successful first adopters

Not the poorest



- Highly risk-averse
- Low level of trust in outsiders
- Agriculture as 'subsistence', not in a business mindset

Rajendra Hari Patil, JAIN early adopter



- Teacher with a BA, chose to go back to his land; had not too much to lose but enough to gain
- First adopter of JAIN banana seedlings, tripled his income in one year
- Spontaneously organized workshops to motivate others to follow his lead

Not the richest



- Less incentive to change behavior
- Keen to protect acquired wealth and avoid risks
- Not necessarily easy to identify with for

Offer upfront technical assistance to build trust and ensure farmers capture benefits of products and assets



Low productivity
2-3L / cow /day
Low fat content



STEP 1
➔

- **Capacity building** with modern milk prod. knowledge
- **Sales of inputs** e.g. concentrated feed at costs
- **Veterinary care** e.g. vaccination and insemination

Higher productivity
Up to +100% milk and higher fat content

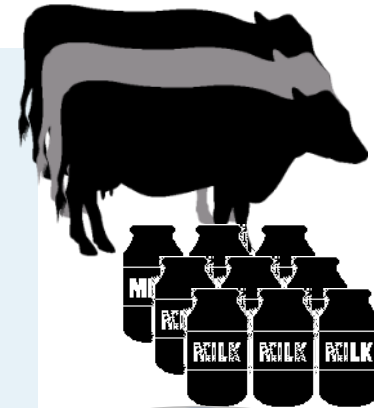


➔ **Income & trust**

STEP 2
➔

- **Push for cattle investments** e.g. cross breed
- **Sales of equipment** e.g. milking machines
- **Access to credit** (pilot)

Higher production and productivity
E.g. new cow, machine



Satisfied farmers

Leverage IT, a powerful lever to decrease delivery and outreach costs, and offer quality services

Making farmers play a role in operations



- Real time information (on market, weather, crop, etc.) on farmers' mobiles
- Mobile money payment

- ⇒ Empowers farmers
- ⇒ Reduces costs for farmers, organization
- ⇒ Reduces risk of fraud

Making extension agents more efficient



- Client files with history
- Support in clients interactions
- Salesforce support (route planning, etc.)

- ⇒ Targeted marketing
- ⇒ Sales performance tracking
- ⇒ Reduced costs

Offering new services



- New services (e.g., weather based crop insurance, with automated pay-outs)

- ⇒ New markets

Some projects experience significant 'leakage' in terms of side-selling, default rate and poor client loyalty

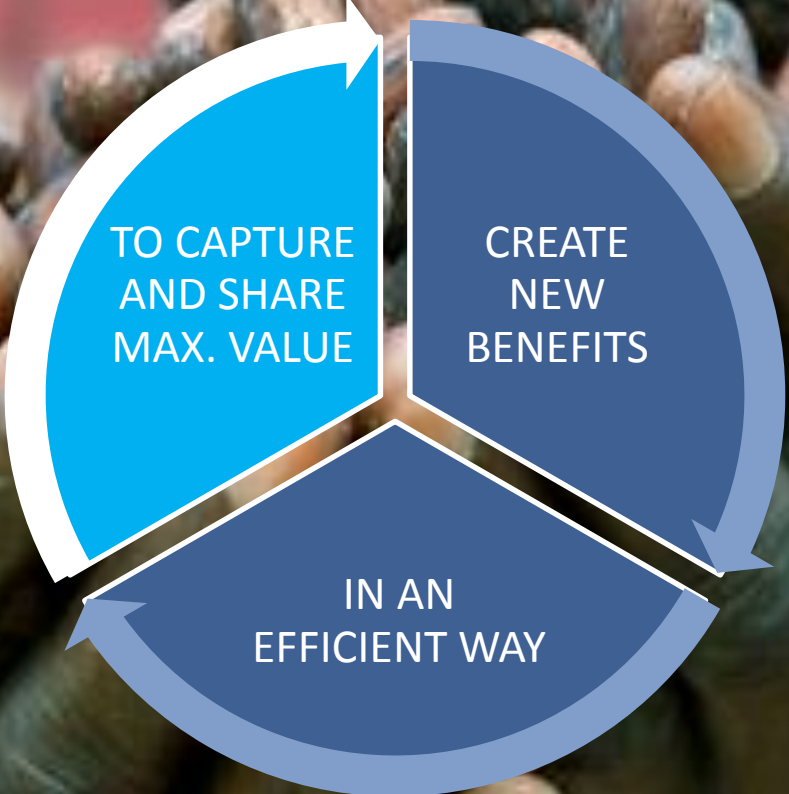
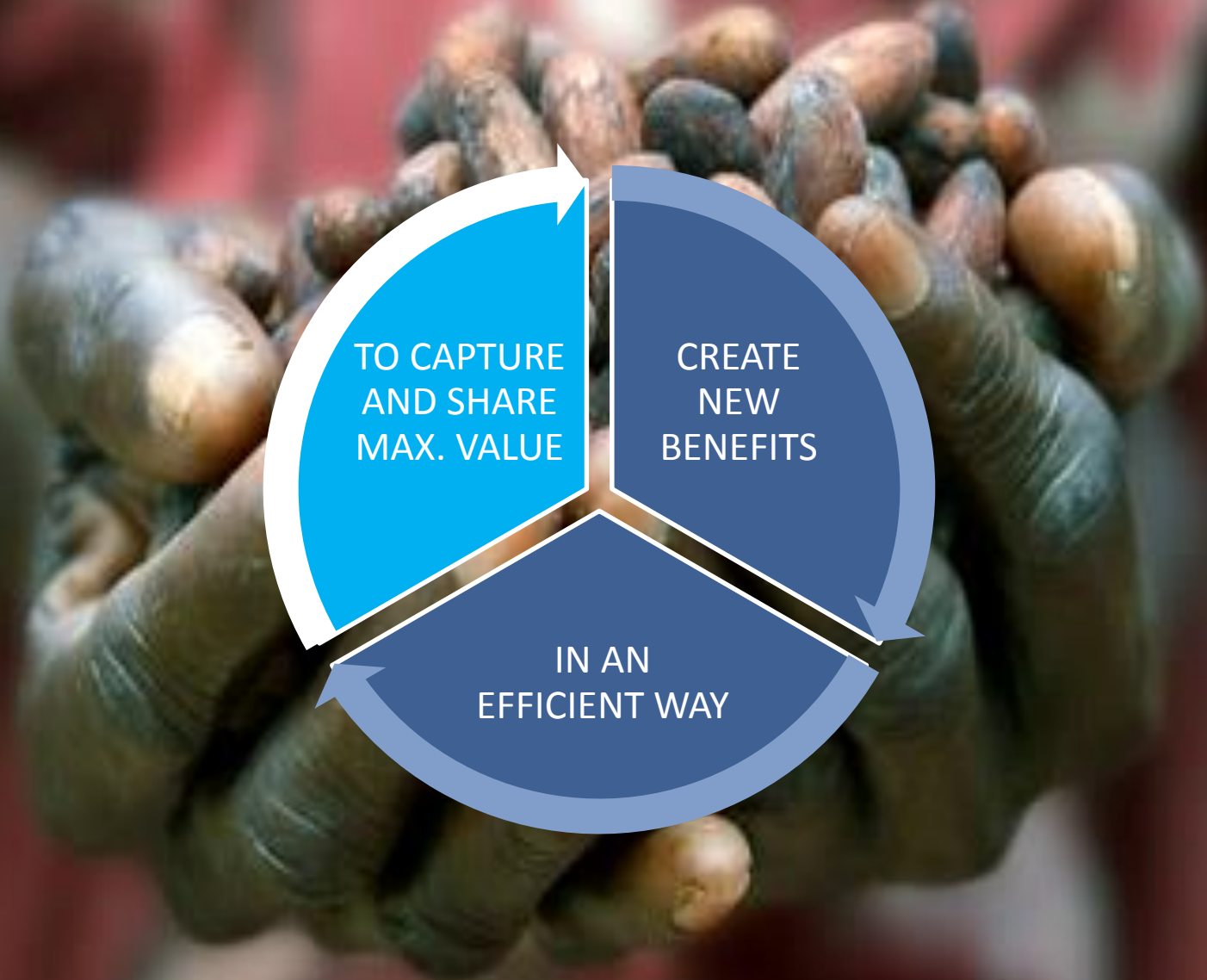
| Loyalty behavior of farmer | Respect of engagement (% of farmers completing loan payment or selling production in contract farming) | Client loyalty over time (repeat customers) |
|----------------------------|--|---|
| Loyal | 95% | 94% |
| | 95% | 95% |
| | 100% | NA |
| | 100% | 97% |
| | 100% | 95%* |
| Cheater | 70%* | 95%* |
| | 90% | 95% |
| Opportunist | 70% | 90% |
| | 70%* | 90%* |
| Leaver | 100% | 80% |

Farmers cheat regularly, but want to stay with program

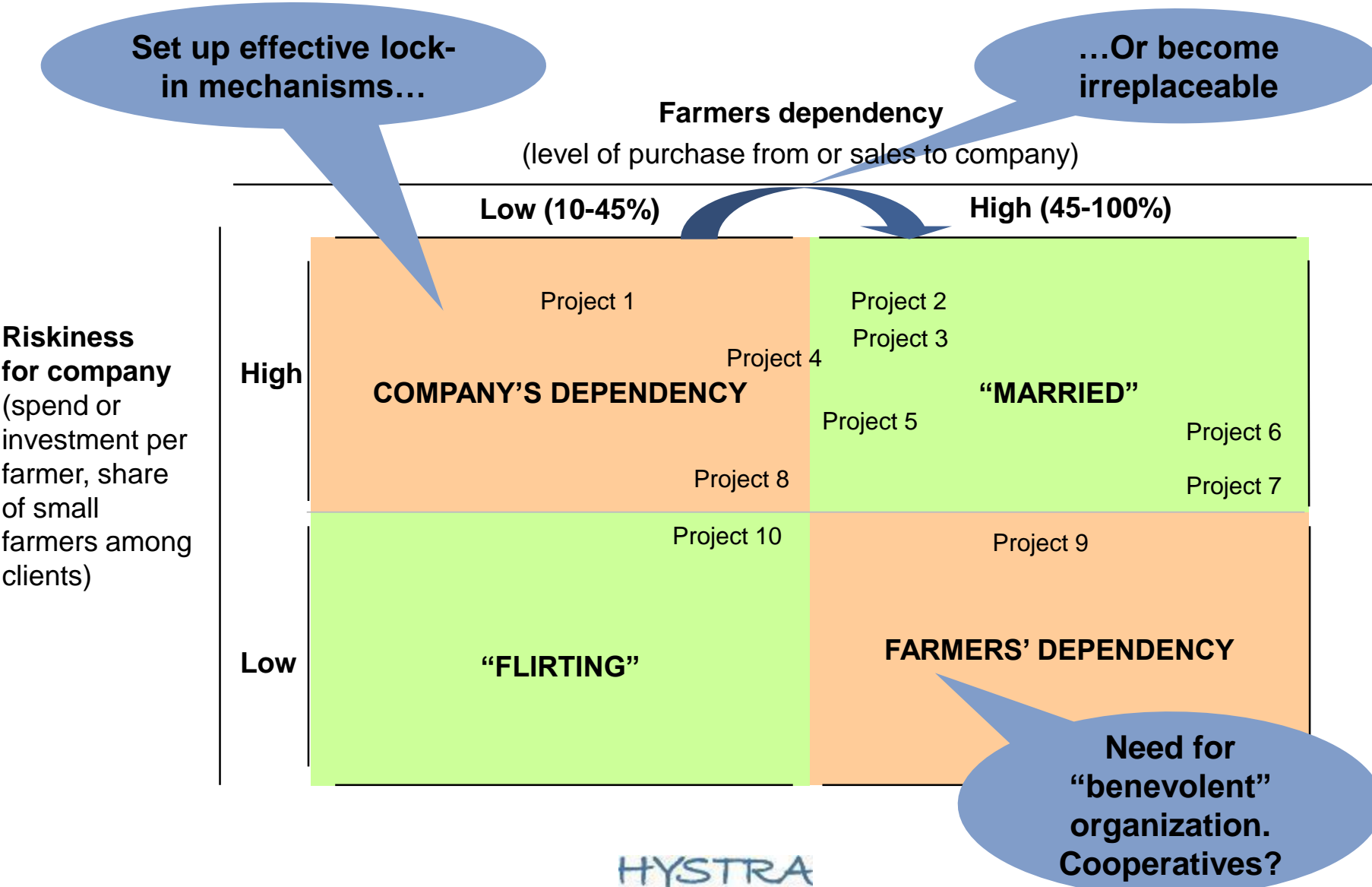
Farmers switch to other crops or other buyers

Project does not have product offering for farmers who succeed and grow

*Estimate



How to get to a win-win when one side is more dependent than the other?

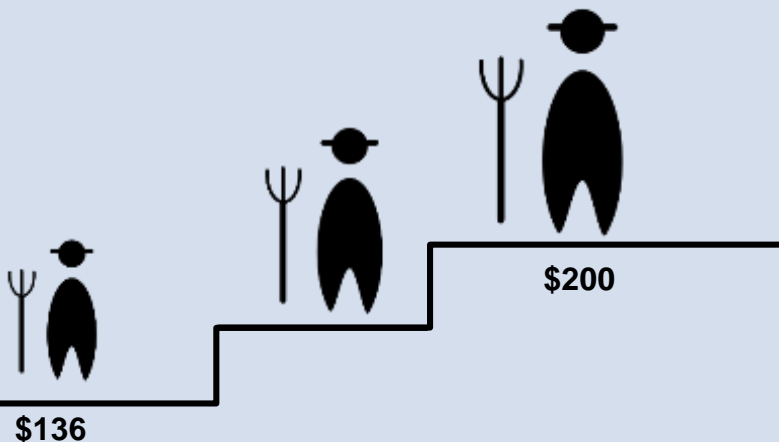


Upgrading product offering for successful farmers is as way to limit churn while improving overall project economics

ONE ACRE FUND

Current average indebtedness controlled by capping loans to \$200 (currently piloting higher debts)

Retention after one year: **80%**

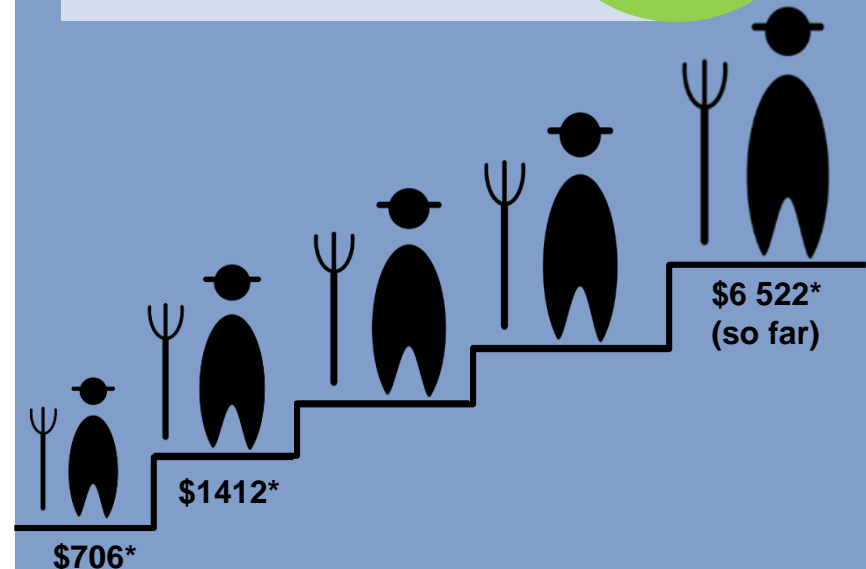


JUHUDI KILIMO



Potential loans increase as farmers grow, but their debt capacity is reassessed at each step

Retention after one year: **95%**



*Maximum *potential* size of loan, doubling with full repayment: every new loan goes through a new credit appraisal and acceptance is not automatic

Farmers value the fact that programs help them save and plan for rainy days

Smoothing income over price variations



- Transparent seasonal price bands give:
 - Extra margin to Margarita if price is high
 - Extra cushion to farmers if price is low
- Increased visibility allows farmers to invest for the long-term

Sustainability premium turned into a savings plan

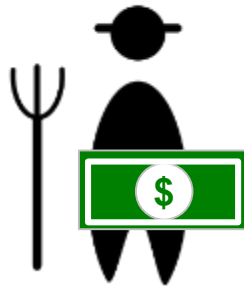


- Certification premium originally paid during planting season
- As season ends, income is low, but investments needs are high (inputs, labor, school fees)
- Farmers requested that the premium be paid in a lump sum at season's end
- Farmers value support in smoothing out their annual cash flow

But credible threats constitute a more effective lock-in mechanism, especially when supported by loyal farmers

Side-selling: 0%
Churn: 5%

Loyal farmer's wife



- Own end-of-year bonus (2% of annual sales)
- Share of bonus of disloyal farmers

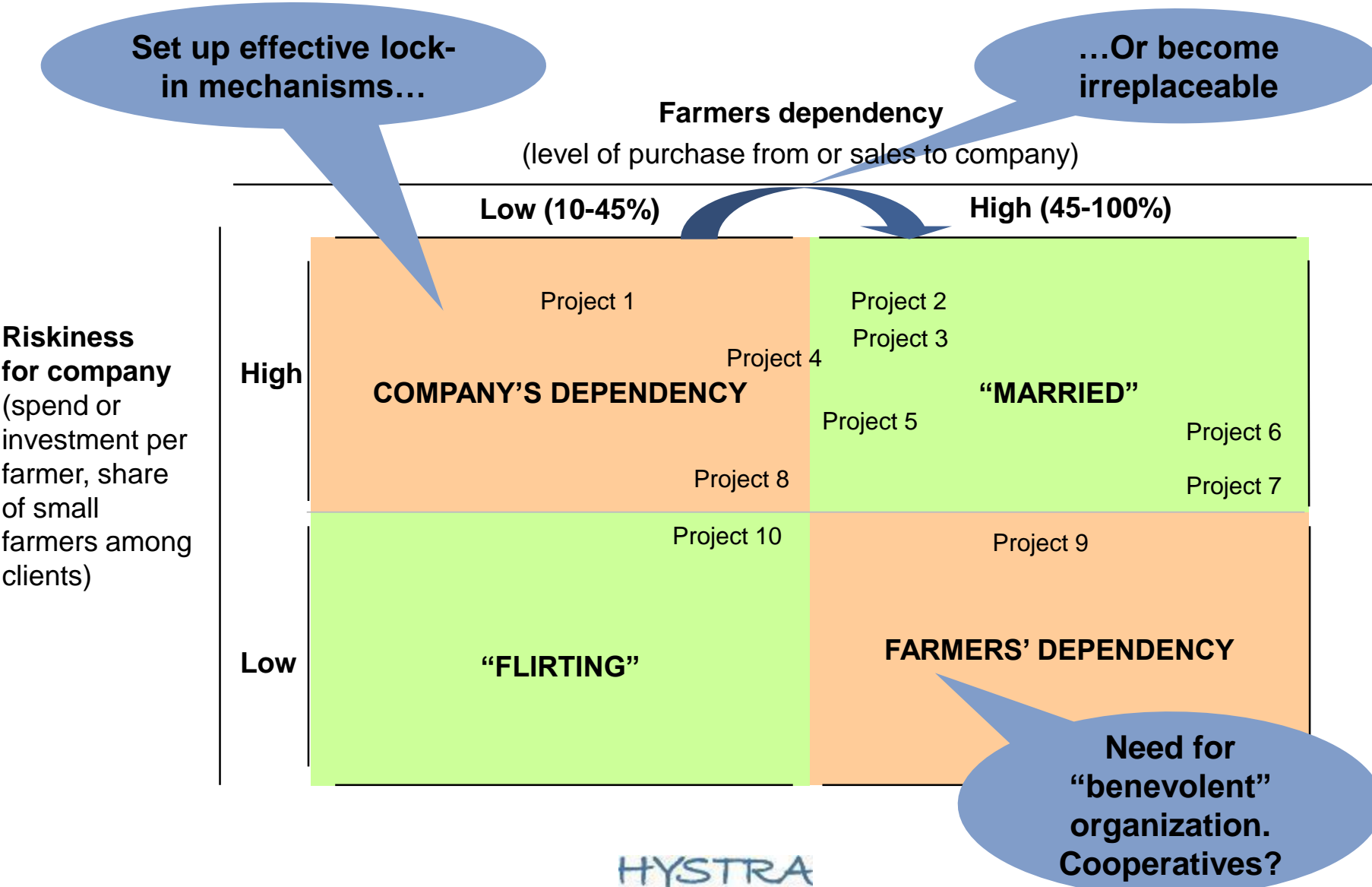
Farmer engaging in side-selling



- Exclusion from program for life
- Loss of bonus for entire period

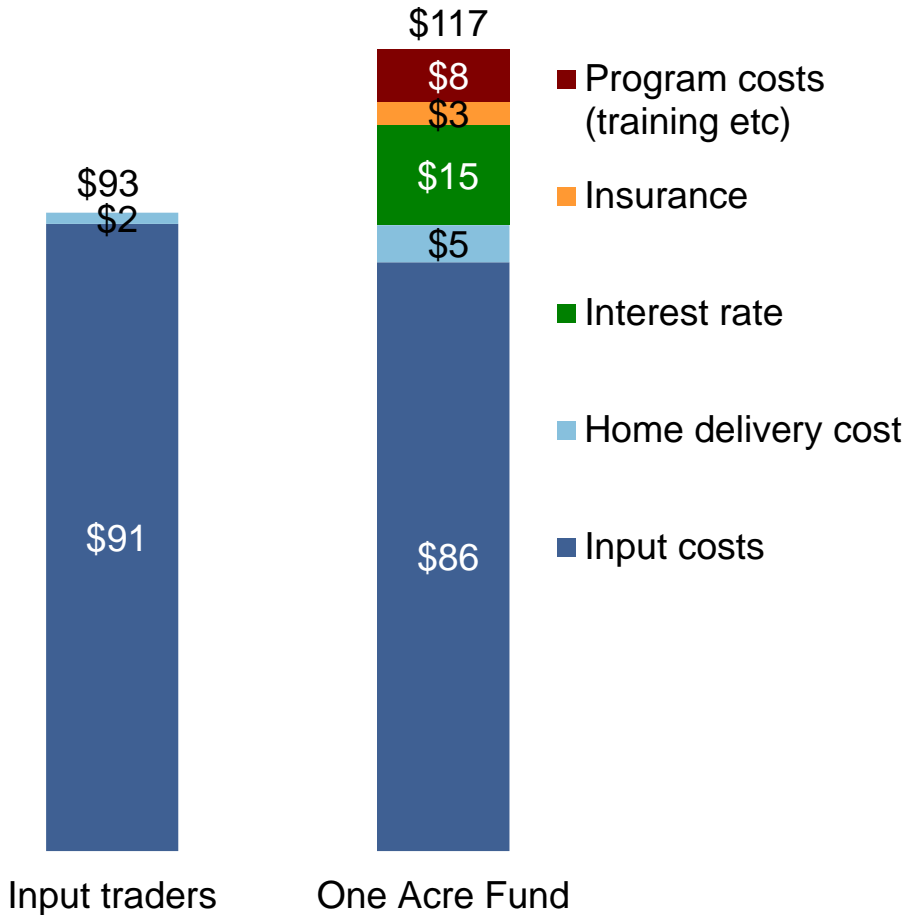
Credibility of threats insured by the fact that Margarita can easily source elsewhere

How to get to a win-win when one side is more dependent than the other?



Increasing value to farmers is an effective way to become more relevant to them

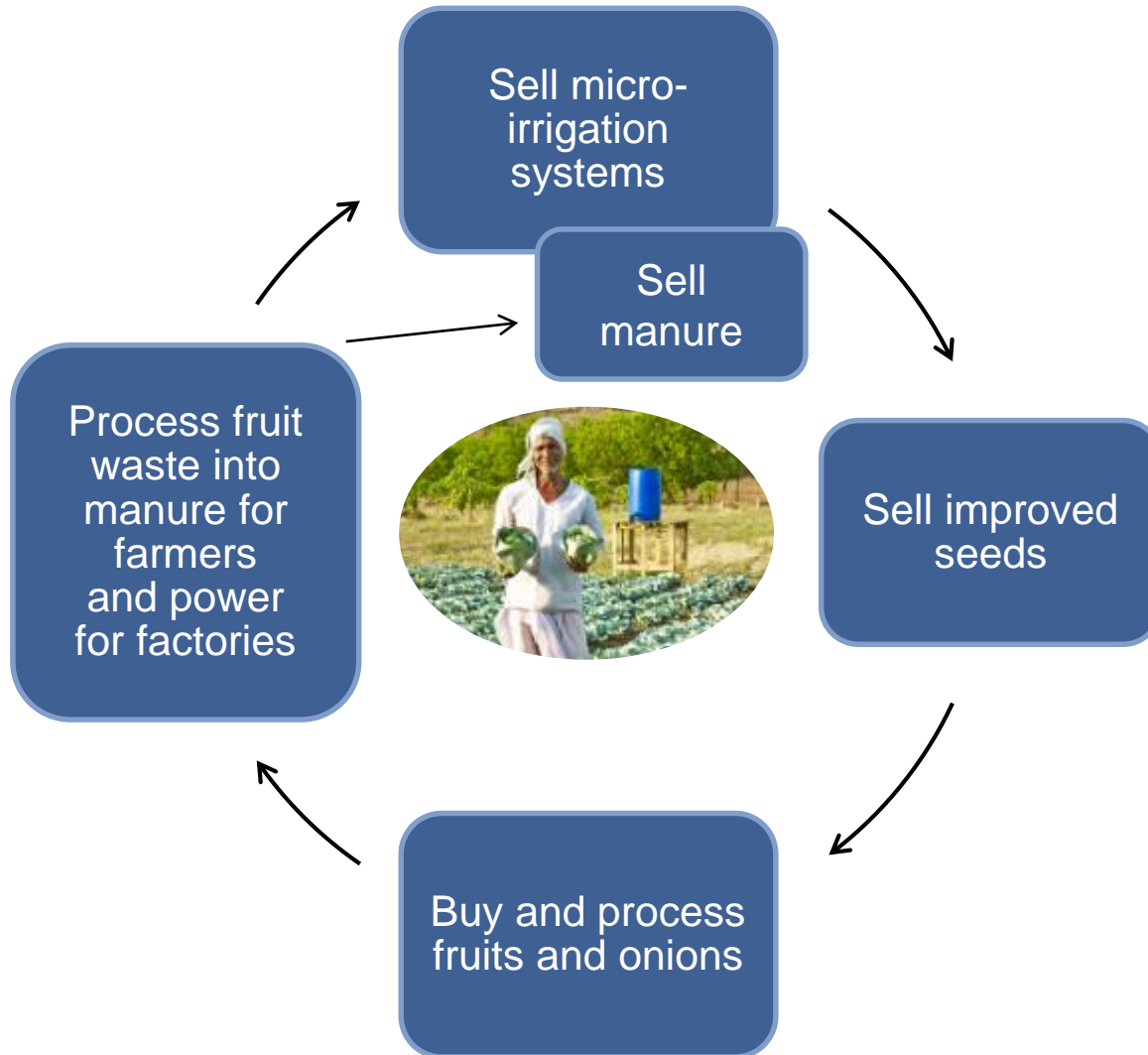
Price of input package for 1 acre



2014 results (Kenya)

- ⇒ Over 80,000 farmers paid a premium for a holistic bundle including:
 - Certified, verified input quality
 - Delivery at time of planting
 - Training to maximize productivity
 - Flexible payment terms
 - Crop and death insurance
- ⇒ 100% repayment rate

Integration over the whole supply chain creates plenty of opportunities to develop win-win strategies



2014 results

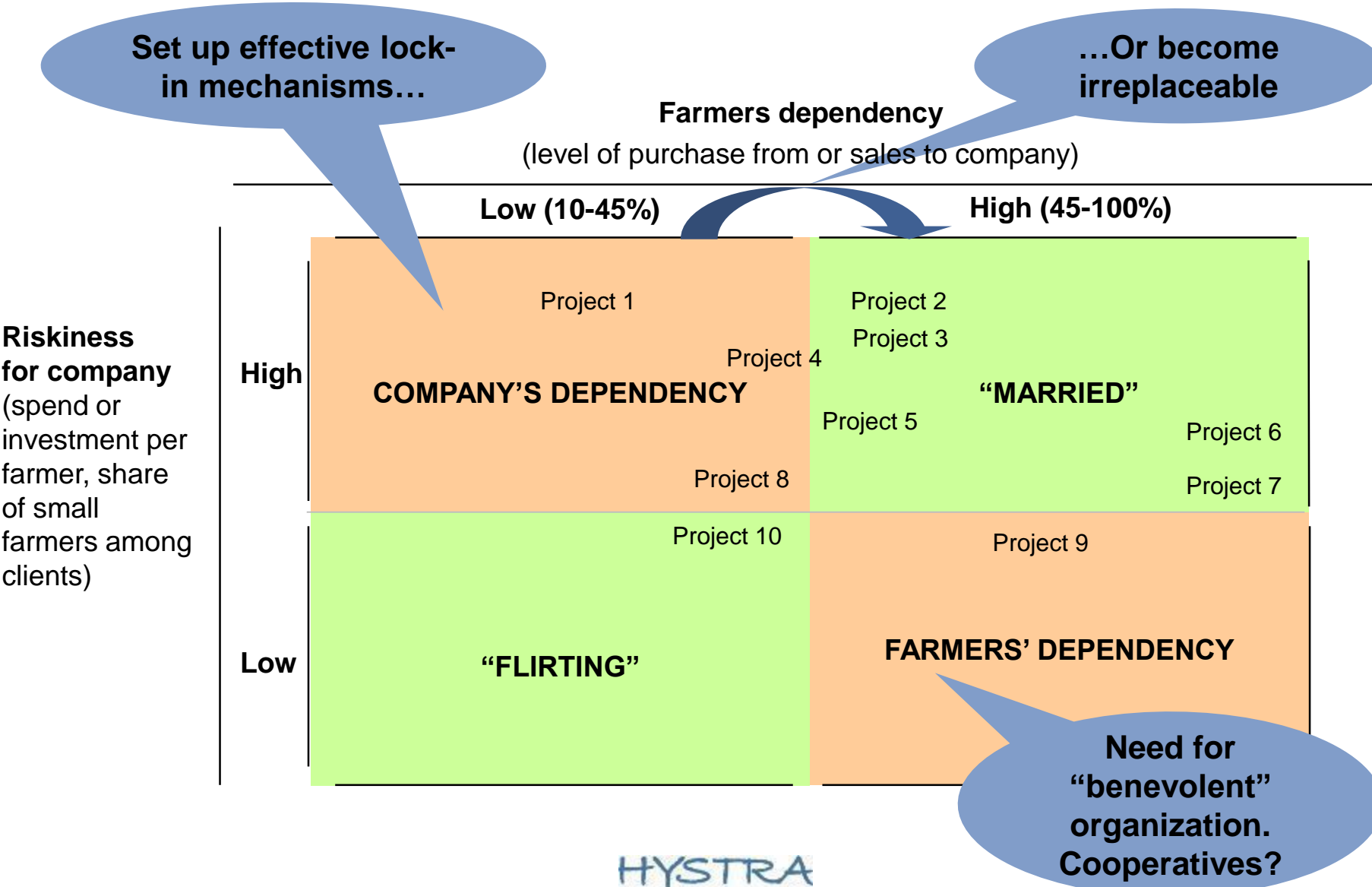
Business: \$1bn turnover, 20% yoy growth*

Farmers: 200,000 micro-irrigation clients per year, 4m farmers impacted, including 60% from the BoP

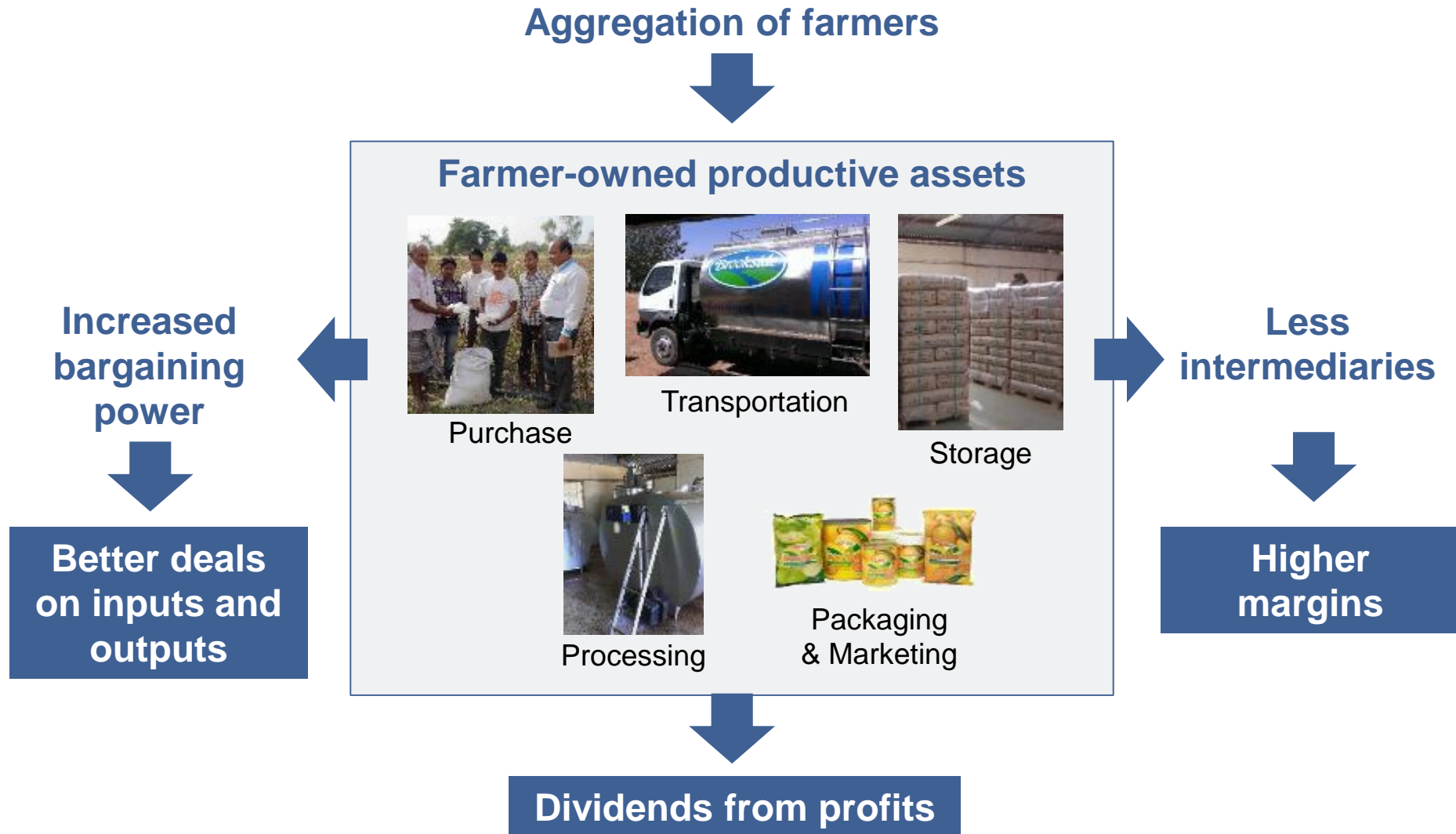
Increase in farmer income: + \$400-4000 per year linked to productivity gains

Environment: 25 billion m³ of water saved since 1988

How to get to a win-win when one side is more dependent than the other?



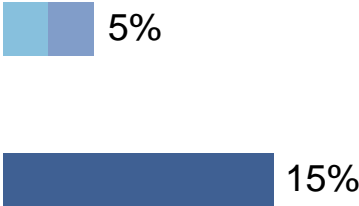
Are cooperatives a solution to better align incentives?



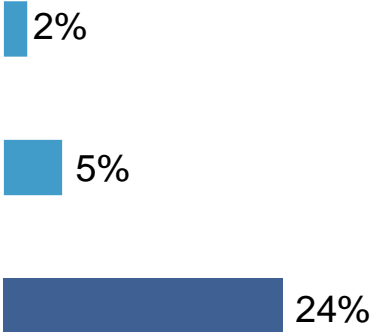
Cooperative models do not seem to generate more value than companies...

Additional net margins for buyers of produce* (as % of sales)

Cooperative model



Non-cooperative model



- Premium on selling price
- Better quality of produce
- Logistical gains

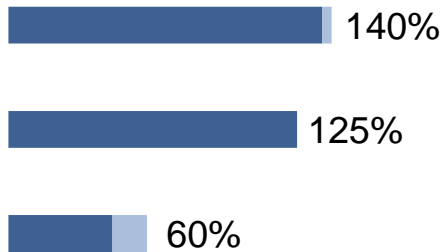
*On top of margins made at the processing plant or dairy hub level

...resulting in marginal increases in value for farmers

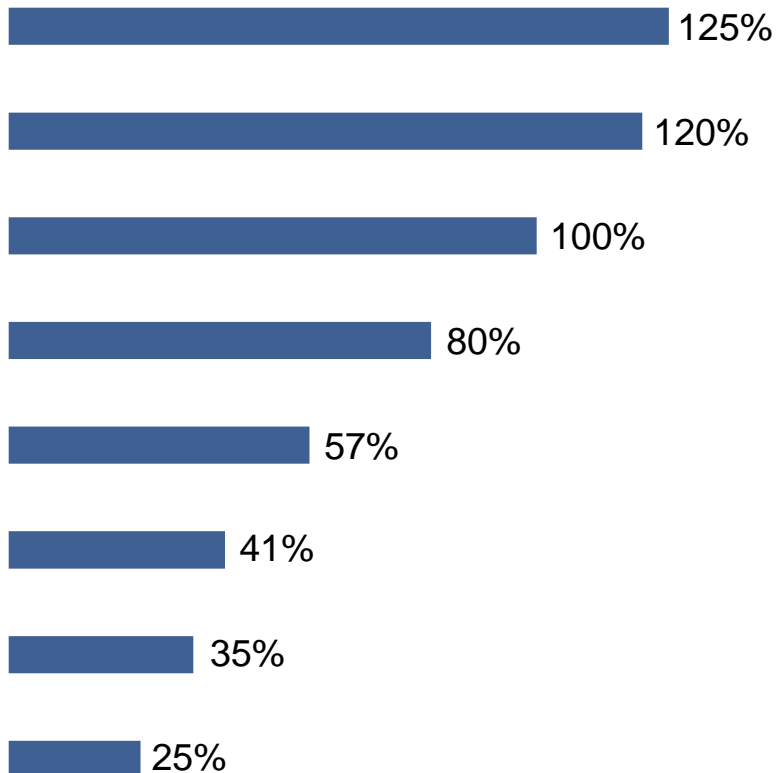
Increase in farmer net income

- Higher production, productivity or price, lower costs
- Dividends and bonuses

Cooperative model



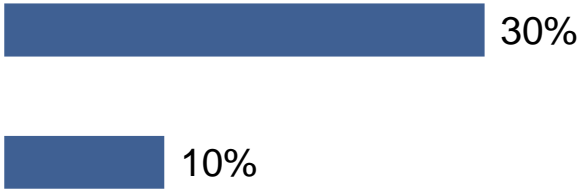
Non-cooperative model



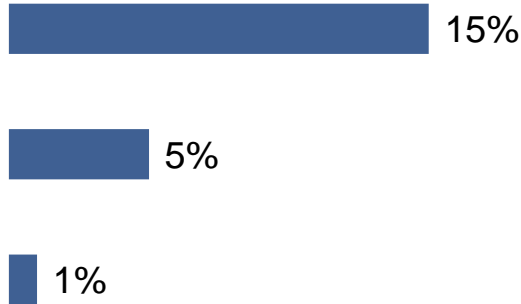
While cooperative and non-cooperative models experience similar levels of cheating

Non-respect of engagement (% of farmers side-selling, or default rate)

Cooperative model



Non-cooperative model





THANK YOU

