



## Training and capacity building (soya and Solwezi beans value chains)

### On-farm experiments using 8 farmer groups

A household survey was conducted with 200 farmers: 110 from St Francis and 90 from Mutanda. Farmers worked in groups of 20-40; in total there were 8 groups in the two blocks. Experiments were used to assess impact of current and sustainable production in current and future climate. Fields experiments had the following treatments, all with Gliricidia planted at 8 m and 1 m inter and in row spacing, respectively.

#### 1. Maize, Soya and Solwezi beans (current farmer practice)

- Current practice = Local maize variety + 100 kg basal and Urea applied both at 3 leaf stage or at 9 weeks after planting, recycled soya and Solwezi bean seed with 50 kg basal fertilizer and no fertilizer, respectively

#### 2. Maize, Soya and Solwezi beans (sustainable agriculture intensification practice)

- Sustainable Agriculture Intensification (SAI) practice = Improved maize variety + rotation + Gliricidia biomass + half recommended rate of fertilizer applied at 3 leaf stage (basal) and top-dress at 6 and 9-10 weeks after planting

## Introduction

Markets are a challenge in smallholder agricultural production systems of Zambia. Productivity is low but number of farmers is high. Having points of aggregation would be beneficial for value chain actors such as farmers and traders. In view of this, World Agroforestry (ICRAF) partnered with the Copperbelt University's School of Natural Resources, the Zambia Agricultural Research Institute (ZARI), and the local government, to develop and test the scalability of establishing value chain Innovation Platforms (IPs). Through a survey and focus group discussions, 3 value chains, namely, village chickens, Solwezi beans (*Phaseolus vulgaris* L.) and soya beans (*Glycine max*) were selected by stakeholders. Current production is low, but demand is high within Solwezi due to the inflow of people from across the country in search of employment and service provision at the two largest copper mines. IPs were established at district and block level for training and capacity building involving different stakeholders on production and marketing.

## Training and capacity building (chicken value chain)

907 households from 8 agricultural camps were surveyed. Planned comparisons (PCs) were used to assess approaches that could (cost) effectively motivate farmers to increase their investment in local chicken production, reduce the disease burden, and link them to viable markets. Farmers were randomly assigned to 4 treatments:

#### 1. Control (waiting list)

- Business as usual

#### 2. Collection point (CP) only

- Provision of market and market information only

#### 3. CP + training

- Provision of market and market information plus one training on production and marketing of chickens

#### 4. CP + training + vaccination/incubation

- The group had about three more trainings and visits from extension officers, plus training on natural and artificial breeding of chickens

### Solwezi Local Chicken production manual



- Housing
- Nutrition
- Health and disease management
- Breeding
- Record keeping

- Village chicken farming as a business
- Marketing basics
- Marketing segmentation
- Value addition
- Risk management
- Innovation
- Business plan



VILLAGE CHICKEN MARKETING TRAINING MANUAL  
SOLWEZI INNOVATION PLATFORMS

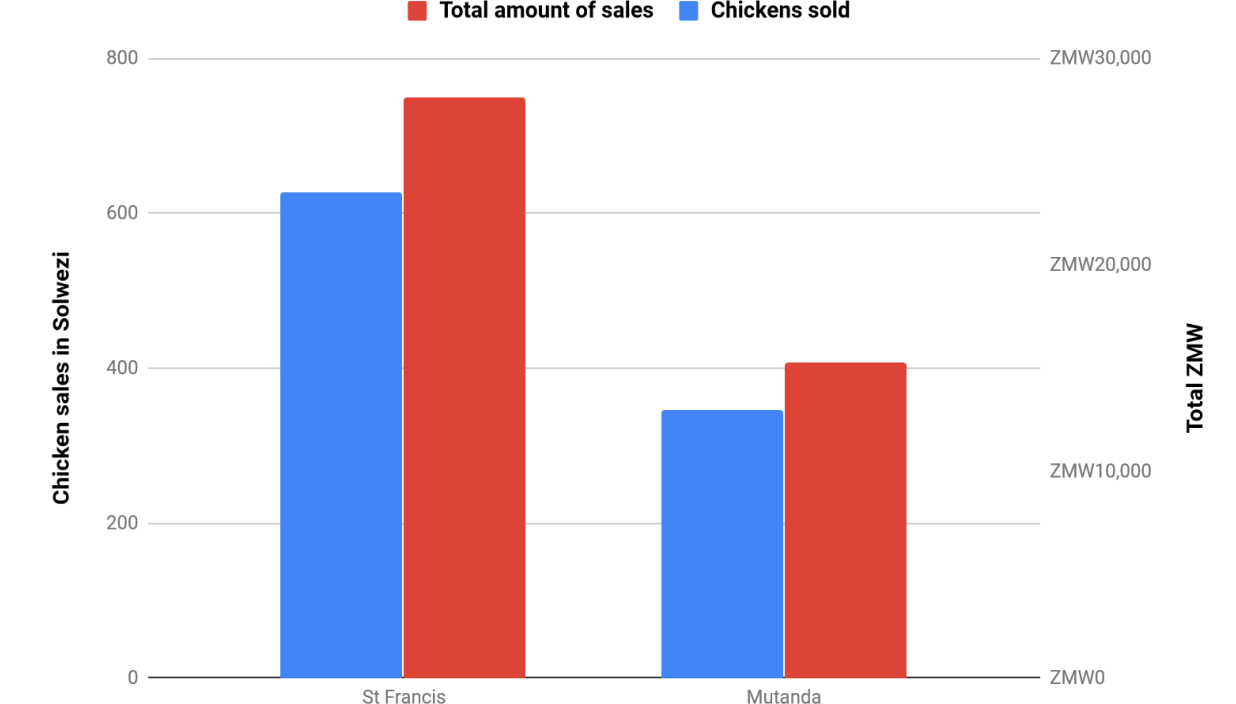
## Acknowledgements

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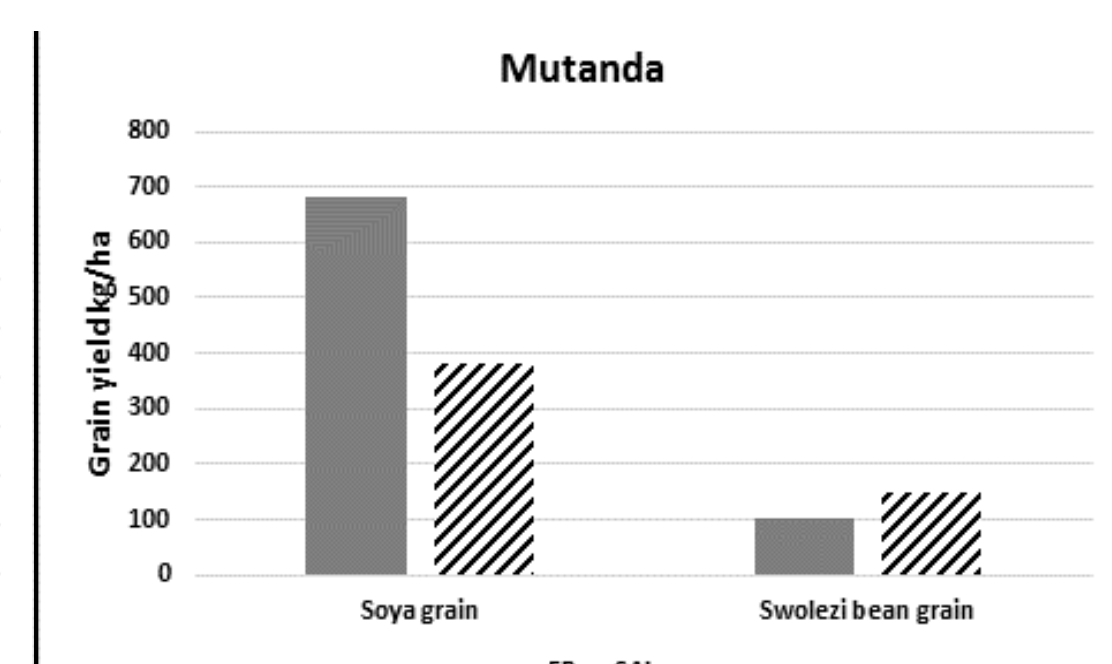
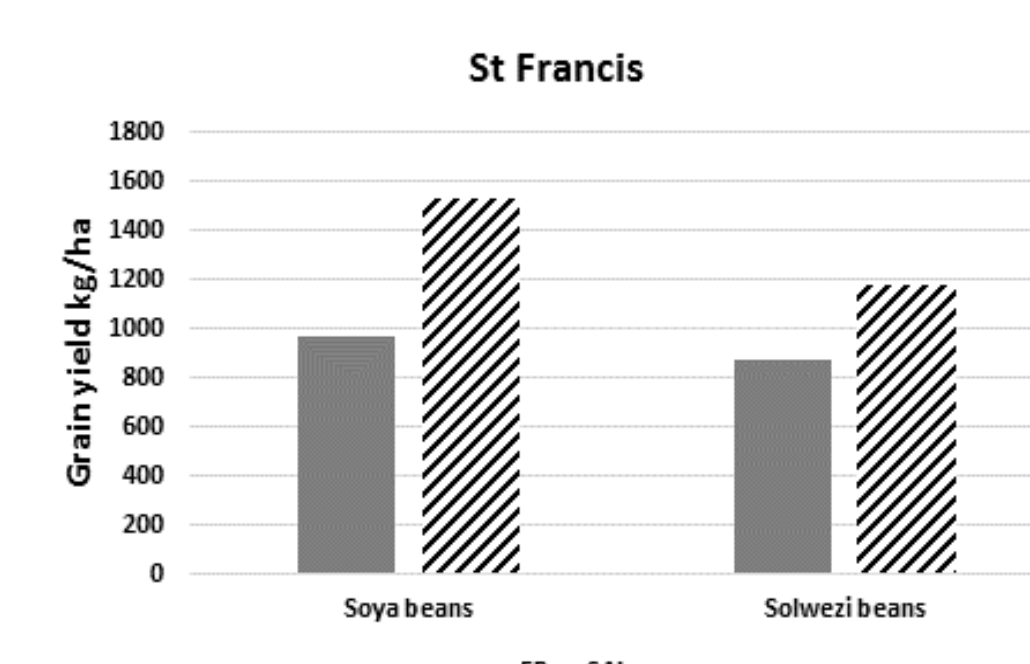
## Partial results on chicken sales

PC results will be shared sometime mid this year. Sales figures from November 2018 to February 2019: St Francis sold more chickens than Mutanda with total income of ZMW 28,070 (USD 2,339) and ZMW 15,303 (USD 1,275), respectively.



## Results of on-farm experiments

We present soya and Solwezi bean results for only one season as we await the harvest for the second season. In St Francis yields were higher than those in Mutanda block and results clearly show that the SAI practice yields were higher than the current farmer practice. For Mutanda, yields were lower and also showing mixed results.



## Lessons learnt

- Buyer-producer relationships that have been established have the potential to increase sales in the future
- Information moves very fast in communities, thus making it difficult to maintain uncontaminated treatments
- Development of innovation platforms would assist as an exit strategy for continued chicken and beans value chain
- On crops, both seasons have been good and results have generally indicated that SAI has potential to increase yields substantially
- Project has assisted in strengthening relationships between farmers, extension and research

## For further information

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<https://www.worldagroforestry.org/project/developing-value-chain-innovation-platforms-improve-food-security-east-and-southern-africa>

<http://www.worldagroforestry.org/project/bringing-evidence-bear-negotiating-ecosystem-service-and-livelihood-trade-offs-sustainable>