Production Systems and Seed technology diffusion in Burkina Faso: the case of SFDIAB project

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Introduction

In BF, there have been various attempts to modernize the agricultural sector:

- One is the modernization of the sector which refers to the improvement of the soil quality.
- another is relayed to the seed quality improvement.
- More recently it came to the attention that agricultural finances are one of the core issue for optimizing the productivity by increasing new technologies take-up by farmers, thus creating a sustainable innovation systems.

Brief presentation of SFDIAB project

- 3 years project funded by IDRC implemented by INERA, DID and RCPB
- Consists in implementing a define technological pack composed with seed, fertilizer and storage bags diffusion system called a technological pack

Research question

- To what extent the production system has been taken into consideration in the SFDIAB Project? And what are the implications?
- **The hypothesis was**: The pattern of the production systems impact deeply on the success or not of any innovation including seed system as it is the case here
- There is a relationship between stratifications in production systems and seed innovation.

Theoretical framework

I use here what we call in sociology (STS) the Social Construction of Technology (SCOT) as an analytical tool to understand such a mechanism

It helps understand how production system shapes farmers decision making and their entrepreneurship

The meaning given to any innovation including seed is influenced by both the technological but also and above the social systems (Pinch and Bijker, 1984; 1986; Bijker et al, 2012).

The proponents of this approach also argue that the ways in which a technology is used cannot be understood without understanding how that technology is embedded in its social and technological systems (Bijker et al. 2012)

Ex

Methodology

- Based on a quantitative (questionnaire) and qualitative (interview guide) method from the North (Yako et Koursi), the Central South (Po) and the Central West (Sapouy), of Burkina Faso.
- A survey on hundreds of farmers associations was first done followed by a census survey on 4000 households belonging to these associations
- Two different groups were considered (target and control)
- The option to receive the technological pack was a choice of the farmers
- Focus groups with farmers associations
- individual in-depth interviews with farmers who don't usually express themselves during focus groups

Production system in Burkina Faso

Small Farmers

Medium size Farmers

Big Farmers

Research findings

The degree in which the project has taken into account or not this aspect will influence the take up of the technology pack.

We did not distinguish among farmers who belongs to which group and define an approach for them according to their specificities

As a result,

- Among 4000 households in total enrolled at the census survey
- less than 30% from the target household were involved in 2016
- More than 70% were sceptic

- This number decreased this year to around 25%
- 75% still sceptic

Description of the production systems of farmers involved in SFDIAB project.

Small Farmers ????

Medium size Farmers ???

Big Farmers????

Evaluation of the degree of adoption of the proje[illegible] proposed innovations in relation to seed (Cowpea and maze)

- Year one 2016 farmers had between 0.5 and 4 hectares
- Year two 2017 farmers reduced the size of their land had between 0.5 and 3 hectares

Why such decline?

Our investigation this year using qualitative participative approach has shown that

Despite lack of rain, participants are not satisfied

As for women socio-cultural pressure make them more stronger as the following statement,

“hum, [silence] it was terrible, our team worked hard, when the harvest went wrong, we did not want anyone to know about our trouble, our mates would laugh at us and at our husbands, you know, some of us took the loan pack without telling our husbands, now that it went wrong we did not want our husband to be pointed out in the village as ‘this is her husband’ she cannot reimburse the loan…. Ahhhh we can never let this happen…”

Problem arising: enrolled farmers perspective in SFDIAB seed system

On the one hand most farmers are

- **Feeling cheated** as attest, “the financial man in charge of our association here does not greet me anymore…I know its because of my refusal to get the pack…’
- **Feeling abandoned** toward the market side
- **Feeling disappointed** not achieving their dreams
- **Feeling uprooted and hopeless**

On the other hand

- **Feeling hopeful** for future
- **Feeling satisfied**
- **Feeling grateful** to access specially the improved seeds

discuss the logic of farmers' entrepreneurial spirit in agriculture in Burkina Faso

- The problem up to now is that most of development projects relies in general in the fact that it is the technical systems that is taken into consideration leaving aside the social one
- However, as our theoretical framework has helped to evaluate, the social construction is the core for a success or a failure of any innovation systems.
- As an example during our farmer field school, one man standing a bit aside looking at the discussion on our experimental farm said. " you gays? You know why do you want us follow you people and abandoned what our parents and great grand parent have been doing…you want us forget our local cowpea…no, it won't happen?"

Conclusion

By highlighting the stratification of the production systems and its implication for new seed technology adoption, this paper contributes to the Legume Innovation Lab initiatives as it provides basis for tailoring innovation dissemination in developing countries such as Burkina Faso.

However, many projects as it is the case here do not take this dimension into account leading to some difficulties that could have been avoided

The understanding of production systems using SCOT help to understand the internal mechanisms of social group in order to put in place a diffusion approach suitable and more sustainable.

In the same way I believe ‘I’m a specialist’ I do deeply believe that “farmers are also specialists in their own world and knowing their world will help us rethink our world and strategies for sustainable seed systems”

Many thanks for your attention

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