Present and Future Agricultural Extension System of Ethiopia

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Background

The Agricultural Sector in Ethiopia

- **Agriculture is the basis of Ethiopian economy**
- **Accounts for >43% GDP**
- **90% the export revenue**
- **Employs 85% of the labour force**

- **Ethiopian agriculture is**

  - ***Virtually small-scale***
  - ***Subsistence-oriented***
  - ***Crucially dependent on rainfall***

The Agricultural Sector in Ethiopia…

- **Low productivity characterizes Ethiopian agriculture**

- **Increasing agri productivity will not be possible without**

  - **Developing & disseminating improved agri. technologies**

- **Yields of major crops under farmers' management are**

  - ***Still far lower than research managed plots***

Agricultural sector in Ethiopia…

- **The absence of effective linkage between**

  "Agricultural research and extension systems"

- ***Is the major reason for the low productivity of Ethiopian Agri.***

Agricultural extension System in Ethiopia

- **Agricultural extension service in started in 1953**
  - **With Mandate: Transferring local research out puts and technologies to farmers**
- **In 1963, the mandate to provide agr. extension was moved to the then Ministry of Agriculture**
- **The objective was to modernize the Ethiopian agri**
  - **Through a comprehensive package approach**
  - **Initially by implemented in selected pilot areas**
  - **Eventually to be scaled up to 90% of the farming community within 15–20yrs**

Agricultural extension System in Ethiopia…

- **The first comprehensive package extension program in Ethiopia was CADU,**
- **Later, became Arsi Rural Development Unit (ARDU)**
- **Started in 1967 with financing from SIDA**
- **The first nation wide extension program,**
  - **The Minimum Package Project I (MPP-I), 1971–1979 with financial assistance from SIDA**
- **In 1980, the MPP-II developed with funding from The World Bank, IFAD and SIDA**
- **MPP-II phased out in 1985 and replaced by a new program Peasant Agricultural Development Program (PADEP), with foreign funding**
- **The donors that funded PADEP:- IDA, IFAD, OPEC and EEC**

Present extension System in Ethiopia

- **In 1995, PADEP replaced by**

➢ **Participatory Demonstration and Training Extension System (PADETS)**

- **PADETS became the first extension program to be developed without foreign assistance**

- **PADETS aimed at**

➢ **Increasing productivity and production of smallholders**

➢ **Empowering farmers to be active participants in the devmpt process**

➢ **Increasing food self-sufficiency**

➢ **Increasing the supply of raw materials for domestic use, export**

Present extension System in Ethiopia

- **PADETS classified the country into 3 development zones:-**

1. **Moisture reliable areas,**
2. **Moisture stress areas and**
3. **Pastoral systems.**

- ***In accordance with this classification, 3 extension teams were organized at the MoA***

- **An interesting feature of PADETS is**

- **It was based on pilot extension program of the SG-2000**

- **The SG-2000 was a pilot extension service program in 1993 which lasted for 2yrs**

- **Available technology packages for maize, wheat, sorghum and *tef* were developed and tested in 4 major regions**

- **The remarkable yield increases demonstrated convinced the government to adopt it as a national extension intervention**

Present extension System in Ethiopia

- **The current extension service is almost**
- **Exclusively funded and provided by the governmt.**
  - **Through *district* level Agri. Offices**
  - **NGOs operating in limited and dispersed areas throughout the country**
- **The main extension services provided categorized into three groups:-**
  - ***Household package,***
  - ***Regular package and***
  - ***Minimum package***

Present extension System in Ethiopia…

- **Household package extension programs are**

➢ *Based on the selection of a package of technologies from a menu of package choices provided to farmers*

- **Regular package extension program aims at**

➢ *Enabling farmers adopt improved seeds with commercial fertilizer, improved management practices &soil moisture conservation practices*

- **Minimum package stipulates that**

➢ *Farmers adopt improved seeds with traditional soil fertility management practices (e.g. application of compost and manure) and soil moisture conservation practices*

Present extension System in Ethiopia...

- **PADETS involved**

- **The use of Extension Management & Training Plots (EMTP)**
- **Usually ½ ha on-farm demonstration plots**
- **Which managed by farmers**
- **Used to train farmers and extension workers**

- **Later, the program expanded its area coverage and number of technology packages and included:-**

- **Crop production for moisture stress areas,**
- **Livestock,**
- **High value crops,**
- **Post harvest technology, and**
- **Agro-forestry, among others**

Present extension System in Ethiopia...

- **Currently, the Ethiopian Governt increasing the number and education level of DAs through:-**

  - **Providing extensive technical vocational education and training (TVET) in agriculture and**

  - **The establishment of Farmers Training Centers(FTC) to transfer improved agricultural technologies and give adequate services at a closer reach.**

- **More than 25 agricultural TVET colleges have been established and**
- **Above 55,500 Development Agents have graduated and assigned at Farmers Training Centers (FTCs) in all regions**

The Future Agricultural Extension System in Ethiopia

- **There are several gaps with the extension service**

1. **Top down and non-participatory nature**
2. **While commercialization of agriculture is seen by the government as a focal point for agricultural development, this market orientation extension service not fully operationalzed**
3. **Most of the government interventions favor food-security-oriented rather than market-oriented approaches**
4. **Indigenous knowledge is not appreciated enough in the system and is disappearing**
5. **Irrigation extension is also neglected in the approach.**

- ***Therefore, the future extension strategy will give a due emphasis to those gaps***

The Future Agricultural Extension System in Ethiopia

- **The future extension services in Ethiopia also planned**

➢ **To centre around the use of FTCs**

- **The government plans to establish**

About 15 thousand FTCs throughout the country/
One FTC at each peasant association

- **Almost every *district* in the country started to construct FTCs**

- **Some *districts* have already constructed**

- **The FTCs are constructed with participation of the farmers**

The Future Agricultural Extension System in Ethiopia

- **The FTCs are expected to serve as**

- **Centres of extension service and information places**
- **Where modular training to farmers for up to 6 months are given**

- **FTCs will contribute**

- **To rural transformation rather than being limited to agricultural development only,**

- **Will operate on the wider principle of human resources development rather than in the limited view of transfer of technologies (TOT)**

- **DAs will not be involved in input supply and credit collection or other non-extension related activities**

The Future Agricultural Extension System in Ethiopia…

- **The agricultural extension service at the FTCs is**

- **Expected to play an active role in linking farmers with other institutional support services such as :-**

- **Input supply,**
- **Credit and co-operative promotion,**
- **Agricultural produce marketing**

- **3 diploma holder Development agent, each in the areas of**

- **Crop production**
- **Livestock production and**
- **Natural resource management, and most of which are expected to be graduates of the ATVETs, are expected to be placed at each FTC**

Conclusion and Recommendation

- All extension services prior to the PADETS were donor driven and funded from external sources

- Comprehensive package programs were more of rural development approaches than just extension service programs and were limited to only few high potential areas

- Minimum package projects had wider coverage compared with the others but still failed to cover the majority of the country

- PADEP was a victim of the ideological doctrine that was being followed by the Marxist military regime and so limited its services to producers' co-operatives.

- The current extension service appears to give more attention to smallholders compared to its predecessors

- The realization that farmers need to adopt technologies voluntarily and that Development agent should not be involved in non-extension activities are encouraging developments.

Conclusion and Recommendation

- **An extension approach that is**

  - ***More participatory and focuses on human resource development rather than on technology transfer per se would enhance the impact and sustainability of the extension service***

- **The focus of the extension system has been**

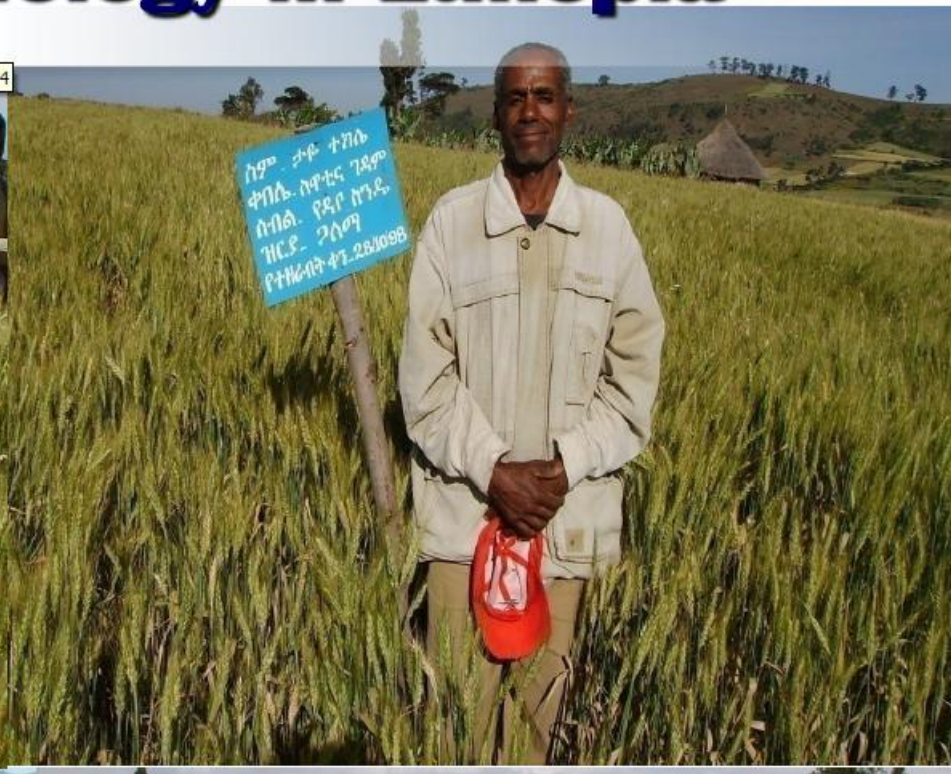
  On cereal crop production

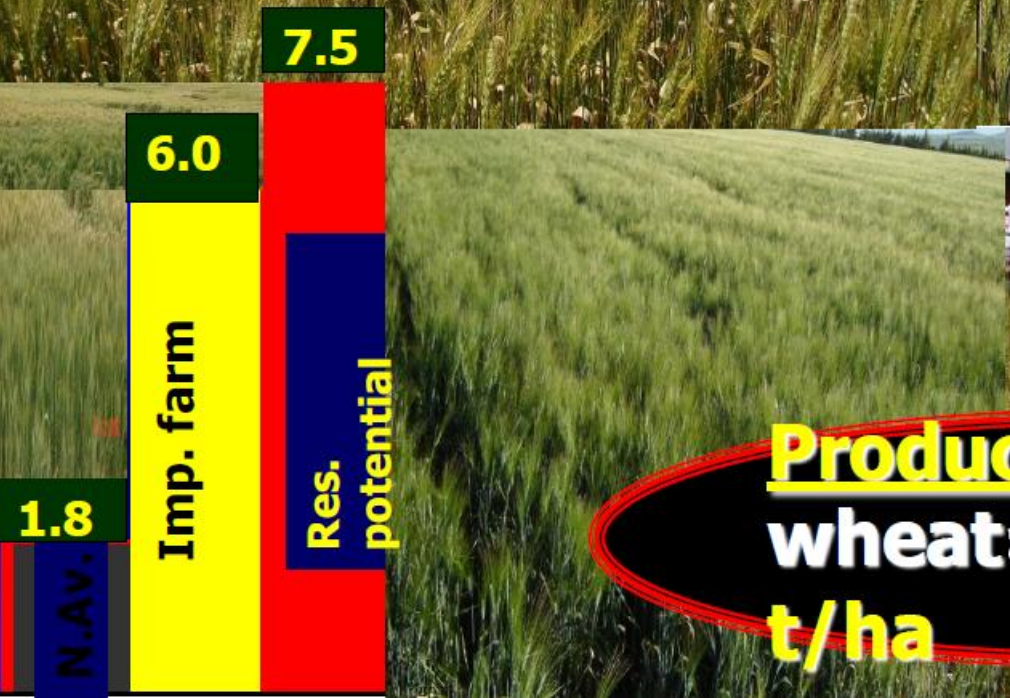
  Little attention was given to other subsectors,

  Especially the high value crop commodities and livestock subsector

- **The market oriented agricultural development strategy has raised the importance of the high value crop commodities, which indicates that the extension system for these commodities need attention.**

Wheat Technology in Ethiopia





Productivity
wheat: 4.0-6.0 t/ha

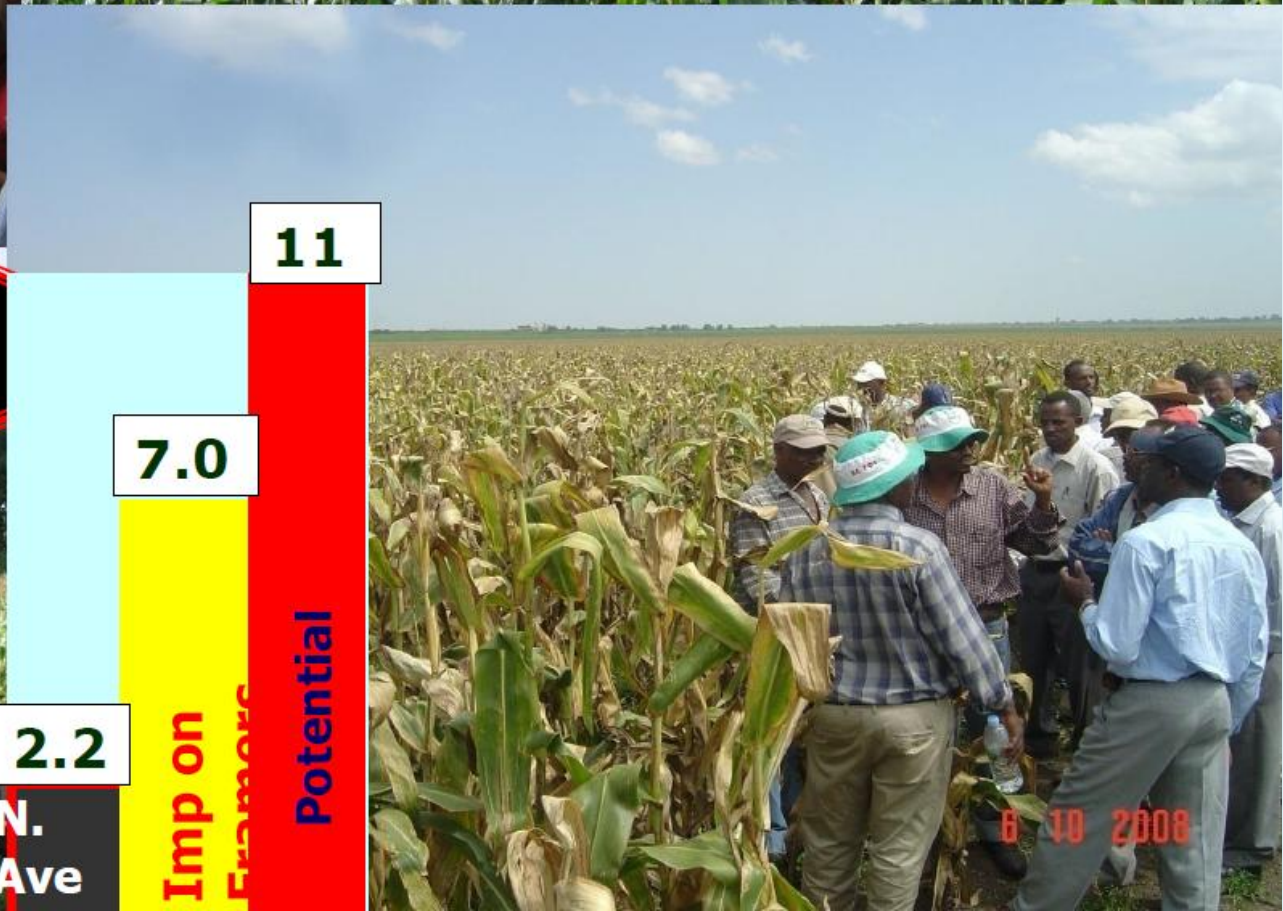
Tef Technology in Ethiopia

Productivity
2.5-3.5t/ha

With transplanting
upto 7 t/ha

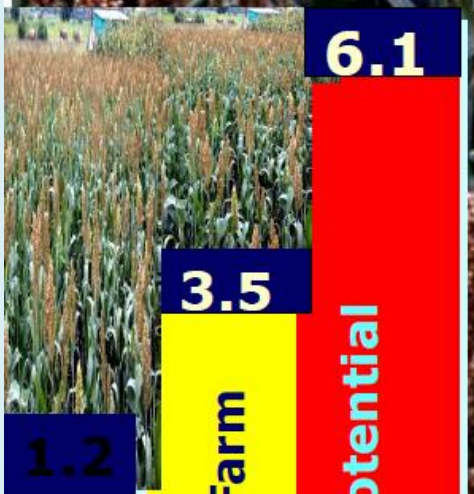
Maize Technology in Ethiopia

Maize
: 7.0-8.0 t/ha

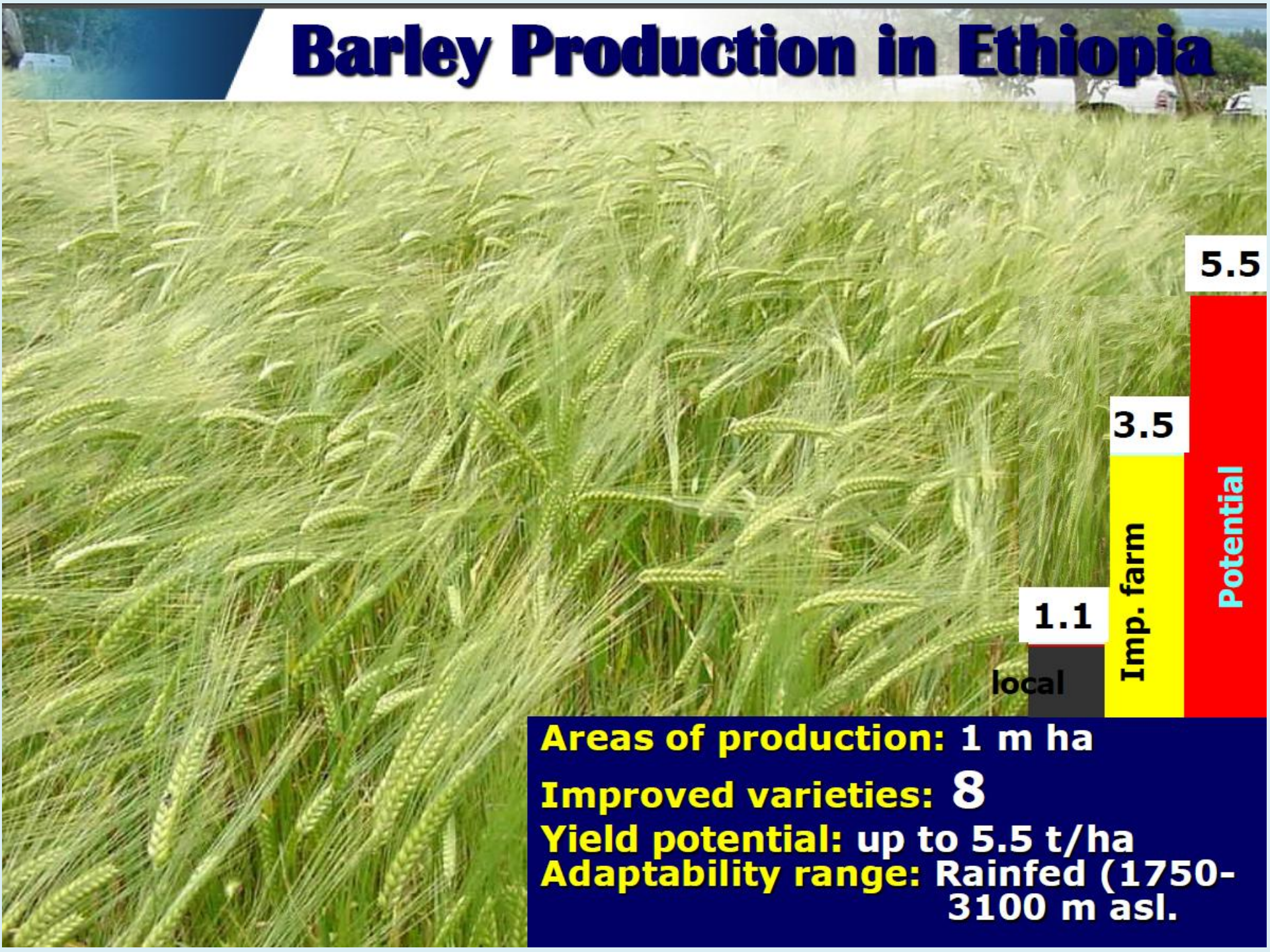


Rice Technology in Ethiopia

Sorghum Technology in Ethiopia



Barley Production in Ethiopia



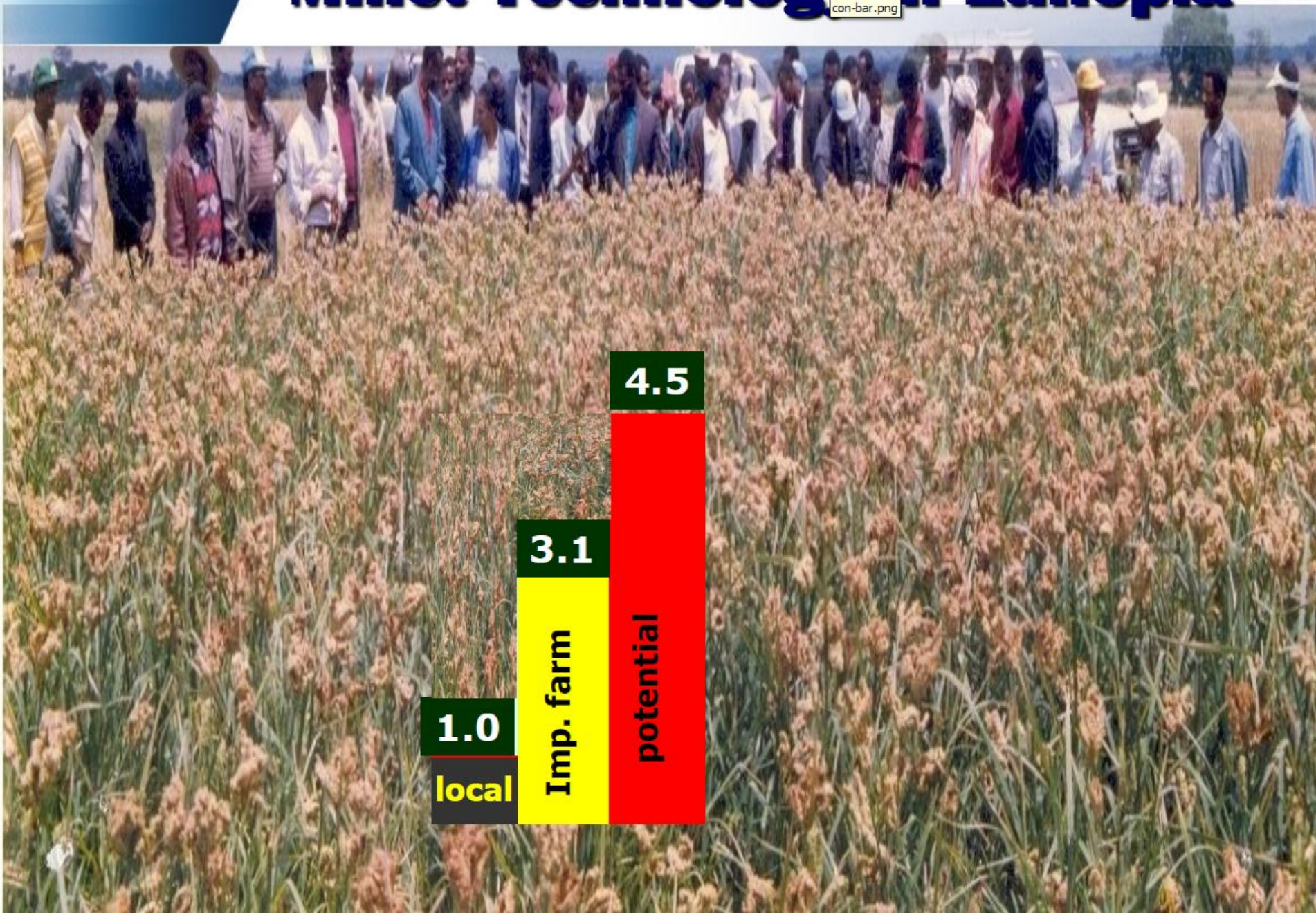
Areas of production: 1 m ha

Improved varieties: 8

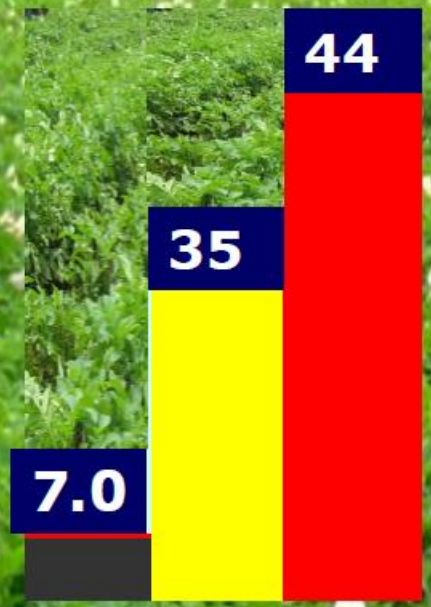
Yield potential: up to 5.5 t/ha

Adaptability range: Rainfed (1750-3100 m asl.

Millet Technology in Ethiopia



Potato Technology in Ethiopia



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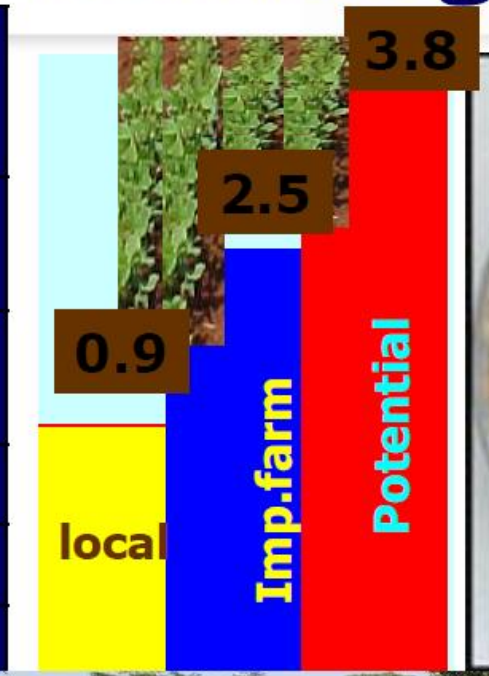
Productivity
25-32 t/ha

Soya bean Technology in Ethiopia

Variety	Days to maturity	Yield (t/ha)
Hawassa -95	90-120	2.6
Belesa-95	134-169	3.0
Jalale	120	2.2
Cheri	135	2.5
Clark 63K	121-150	2.5



Haricot bean Technology in Ethiopia

Areas of production: > 250,000 ha

Improved varieties: >8

Yield potential: up to 3.8 t/ha with recommended practices

Adaptability range: Rainfed (1450-1800 m asl.

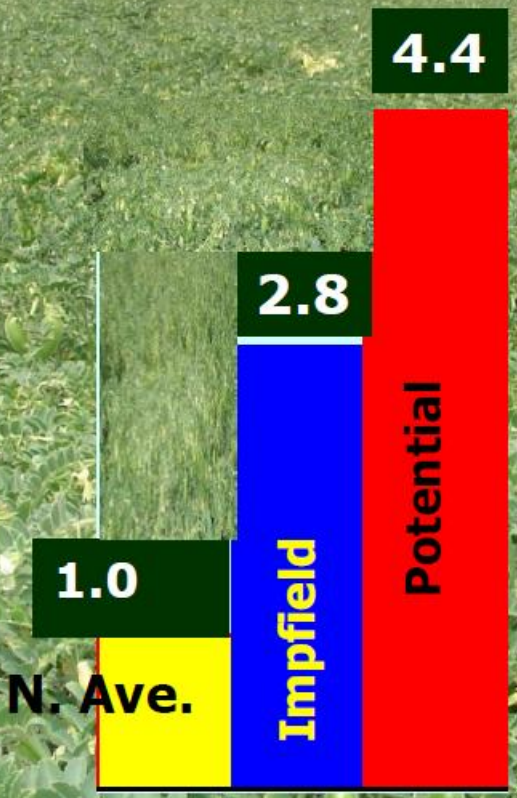
: Irrigated

Faba bean Technology in Ethiopia

Productivity

Fababean: 2.0-3.5 t/ha

Chick Pea Production in Ethiopia

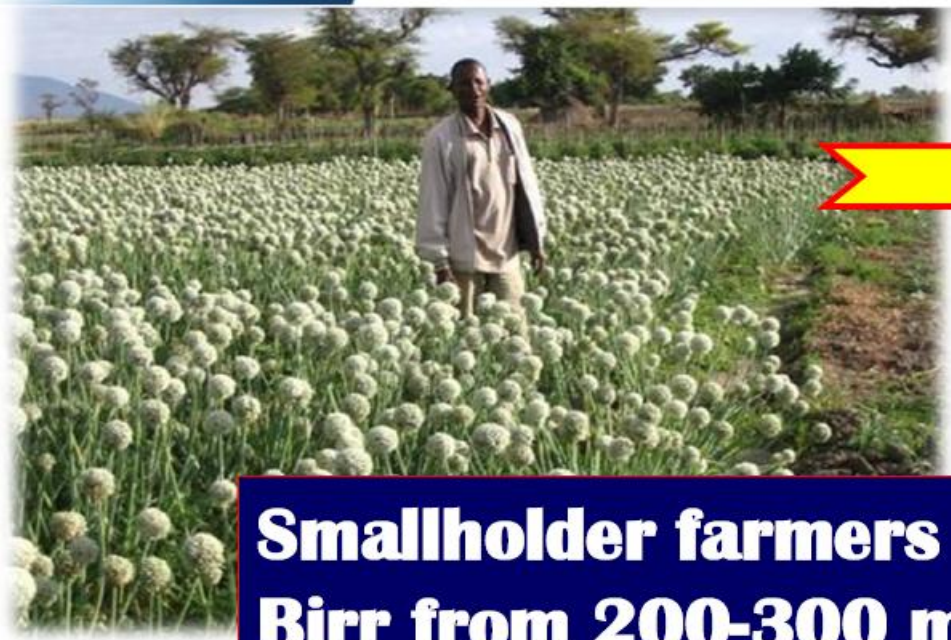


Productivity
Chick pea: 22-35 q/ha

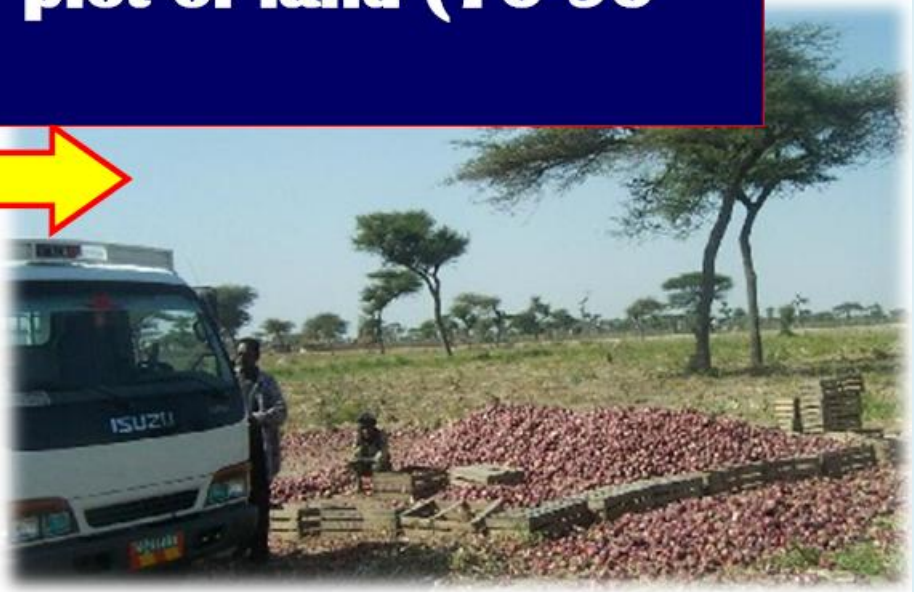
Lentil Technology in Ethiopia

Productivity
Lentil: 2.2-3.5 t/ha

Some impact records



Smallholder farmers got about 4000-5000 Birr from 200-300 m^2 plot of land (70-90 thousand Birr/ha)

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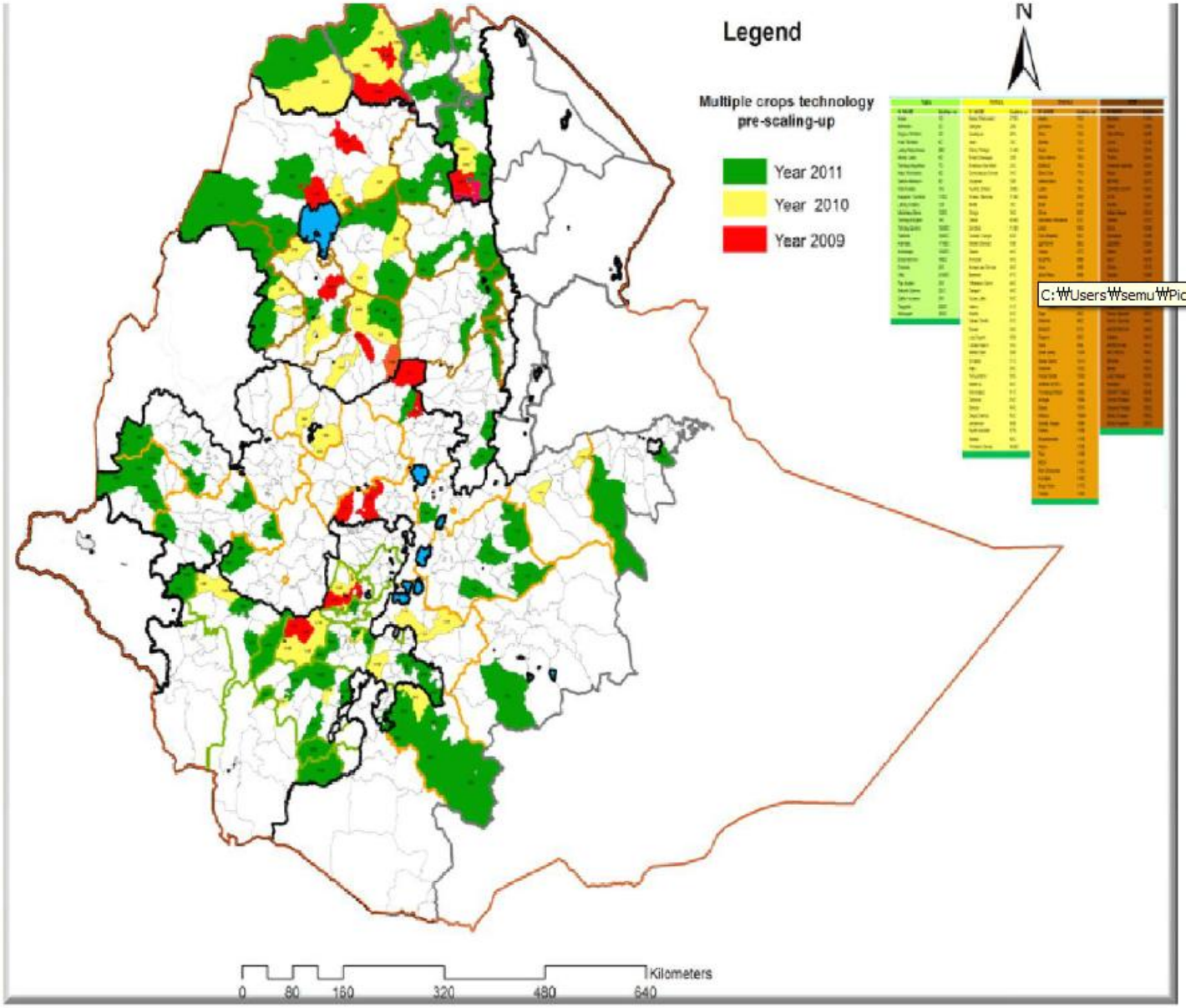
Blessings from
improved
technologies


Legend
Multiple crops technology pre-scaling-up
Year 2011
Year 2010
Year 2009
N
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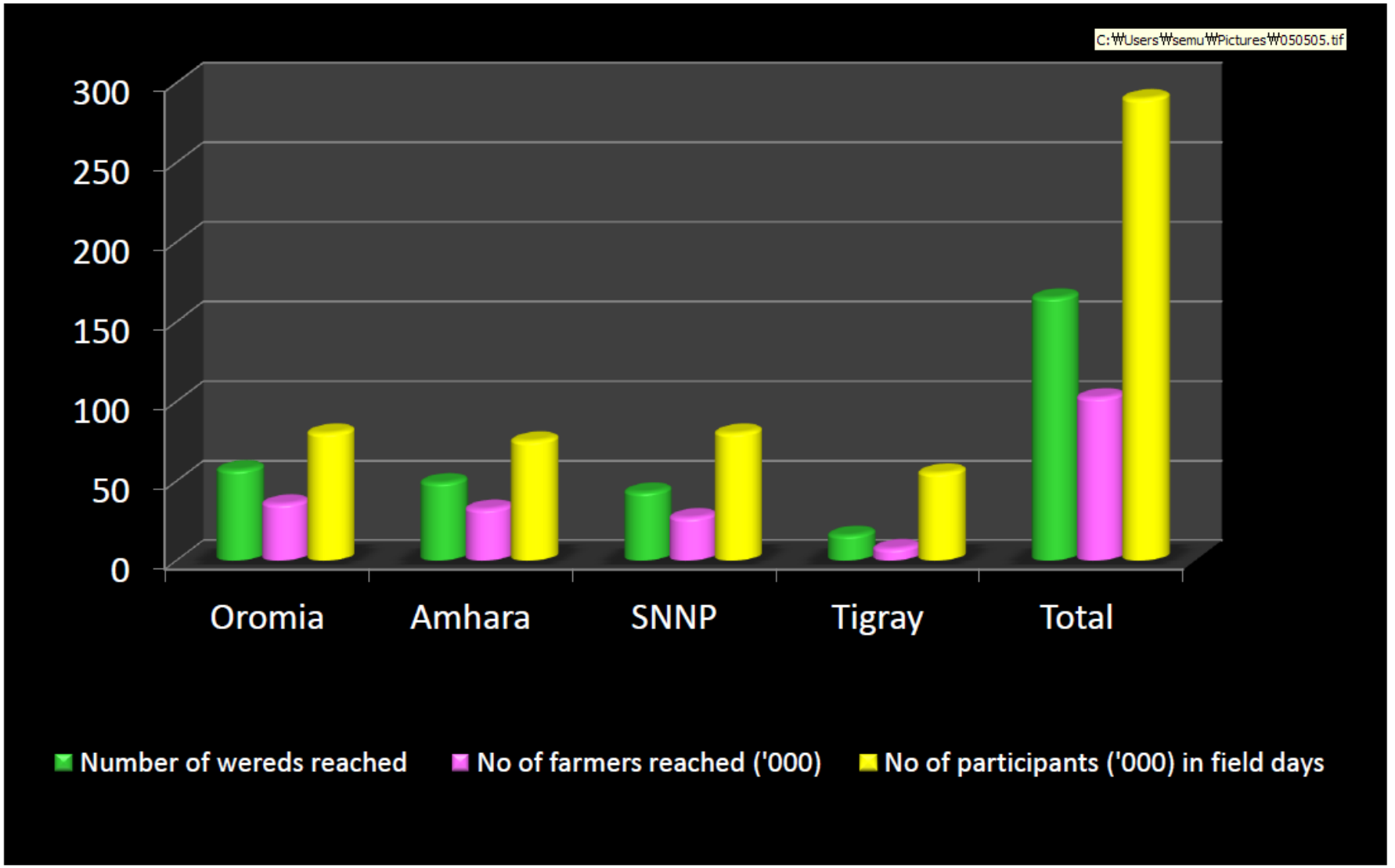
0
80
160
320
480
640
Kilometers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300
250
200
150
100
50
0
Oromia
Amhara
SNNP
Tigray
Total
Number of wereds reached
No of farmers reached ('000)
No of participants ('000) in field days

I thank you very much for your attention!!!