

Inventing a competitive, diversified and sustainable Agriculture



Improvement of Rice productivity

The experience of Senegal through National Rice Self-Sufficiency Program (PNAR)





Presentation Outline

1. Background

2. PROGRESS

3. ANALYSES

4. TESTIMONIES OF STAKEHOLDERS

5. CONCLUSION



Background

1

- Senegal is one of the largest rice consuming countries in western Africa with per capita consumption of 90 kg, with an annual demand growth at approximately 9 % per year (Seck and al., on 2013).

2

- Senegalese rice is produced mainly by smallholder farmers. Between 200,000 and 300,000 households, or at least 1.5 million people are directly engaged.

3

- Rice demand is nearly 1 million MT, while the supply of domestically produced rice is estimated at 125 000 MT resulting in a strong dependence on rice importation

4

- This dependence leads to deterioration of the trade balance and drain of scarce foreign exchange

5

- The Government of Senegal has set up a program (NRDS/PNAR National Rice Self-sufficiency Program), aiming at achieving self-sufficiency in rice by 2017

Background (2)

achieve rice self-sufficiency by 2017
by producing



**1,600,000 MT
of Paddy**

or

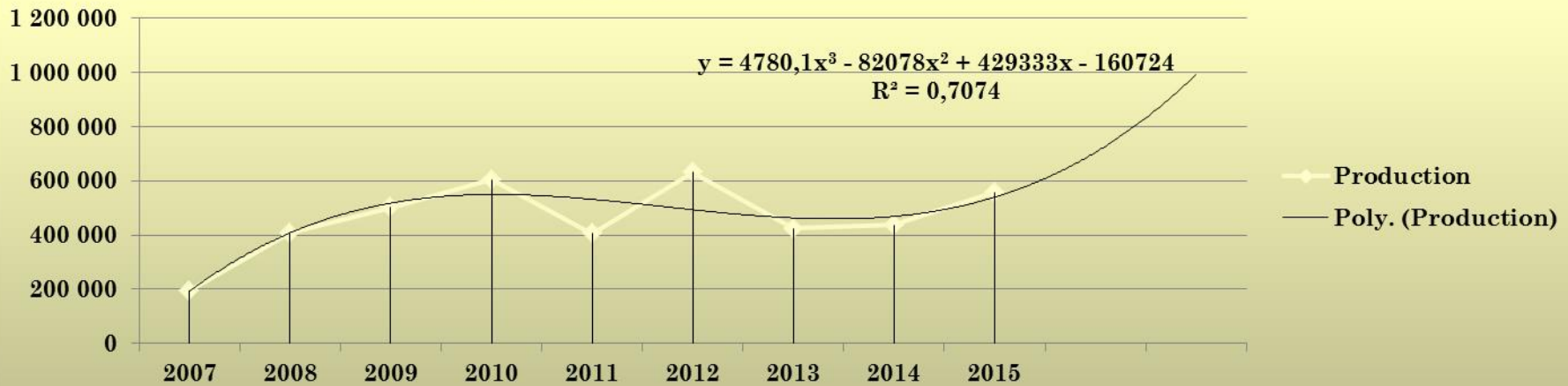


**1,080,000 MT
quality white rice**

Are we achieving the objective?

Progress

Trend of paddy's production from 2007 to 2014



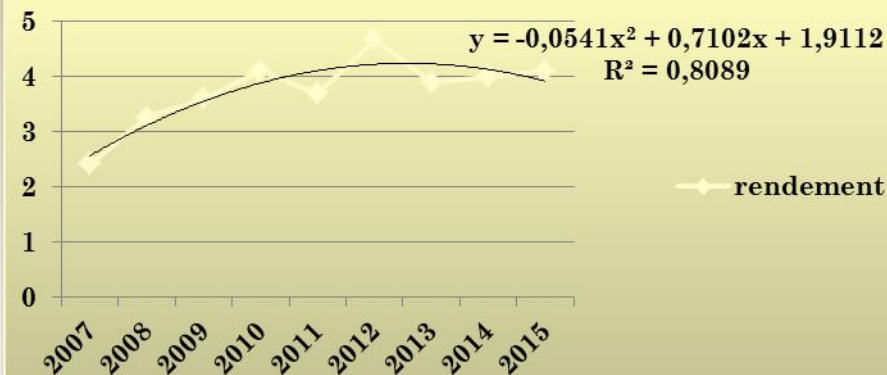
Paddy production has fluctuated so much with peaks in 2010 and 2012, while it shows the upward trend (increase by 119%) between 2007 and 2014.

The production level is more than doubled.

Progress

70% this progress is attributed to by the improvement in productivity (*K.Saito et al., 2014*), while also attribute to by expansion of cultivated areas

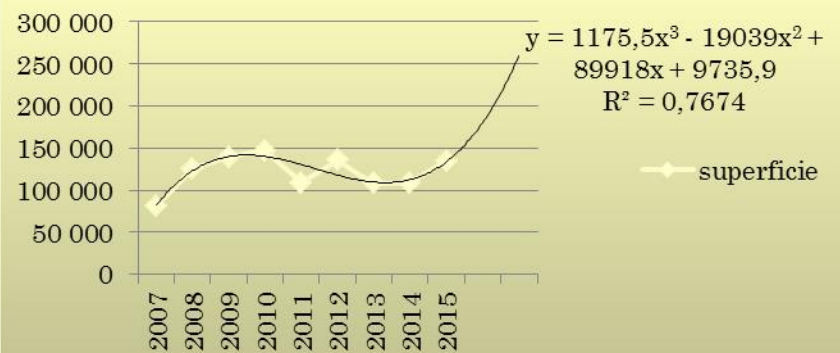
Evolution of Rice productivity from 2007 to 2014



Yield has increased during this period by 62% from 2.4 t / ha to 4 t / ha,

In 2014 the average yield was 3989 kg / ha, which is the 7% increase compared to 2013 and the 17% increase compared to the average of last 5 years

Evolution of rice cultivation areas from 2007 to 2014



The total area for rice cultivation has increased by 35% during the same period.


In 2014, the area was 134,973 ha, the 24% increase compared to 2013



Analyses

Measures taken by the Government and other stakeholders to realize high productivities include:

7 ministerial interventions measures



1. Redefining of the contribution from different

- 60% of production in irrigated area and 40% rainfed rather than irrigated area by 80% and 20% rainfed
- For rainfed, promote rainfed upland and lowland rice plain (Tambacounda, Kolda, Ziguinchor, Fatick and Kaolack with NERICA 1, 4, 5 and 6 and appropriate technological packages);

2. Redefining of the mission of production areas for the supply of rice in Senegal


- Senegal River Valley: Feeding Urban Centers (Dakar, Thiès, Touba, ...)
- Self-sufficiency in areas with more than 800 mm rainfall
 - Tamba nourrit Tamba
 - Kolda nourrit Kolda
 - Ziguinchor nourrit Ziguinchor



Analyses

Measures taken by the Government and other stakeholders to realize high productivities include:

7 ministerial interventions measures



3. Reconstruction of seed stocks through :

- Importation of registered seeds to Sénégal
- Contracting with International Research Institutions
- Strengthened the national production (Research– Multipliers)

4. Water Management : Accelerate the realization of irrigation scheme management

5. Intensification of double cropping

6. Increased processing efficiency and improved quality

7. Révision of Mechaniation Strategy



Analyse

8 measures under the President



Measure No. 1: Abolition of the fixed tax for non-production period;

Measure No. 2 : Systematic procurement and supply of local rice to public institutions (Army, Police, Hospitals, National defence force, national unions, Food security office, (CFS), Prisons, customs, universities, etc.);

Measure No. 3 : Suspending rice import

Measure No. 4: Imposing quota for purchase of locally produced rice, in exchange of providing rice import license, based on contracts with millers approved by SAED or SODAGRI in their intervention areas;

Measure No. 5 : Establishment of a guarantee fund for rice millers (approximately 3 billion FCA) to alleviate their conditions of eligibility to funding CNCAS;;

Measure No. 6 : Establishment of marketing funds (€ **5 billion**) to facilitate access to finance to the actors in rice value chain through strengthening capacities and enhancing the interest rate of credits for purchase and processing of paddy



Analyse

8 measures under the President



Measure No. 7 : Subsidizing agricultural equipment at least by 50 %.

Measure No. 8 : Tax exemption of materials and equipment for the rice value chain

TESTIMONIES OF STAKEHOLDERS



« We have a lot of hope in the future of domestic rice production because, year after year, our production has improved both in terms of quality and quantity. »

Ibrahima Sall Coumba Nor Thiam



« We increased the rice processing capacity from 8 000 in 2011 to 10 000 tons in 2012 ».

Mbodj & Frères, transformation et commercialisation du riz



« We hope to maintain this momentum with seeds with improved quality, good fertilizers application, and capacity building in rice farming which we benefit from SAED ».

Madame Ndèye Gaye, représentante Union Gie Femmes productrices de Ross Béthio



Conclusion

Despite this achievement backed up with strong political will, **only 47% of rice demand is covered by domestically produced rice.**

Achieving the goal of rice self-sufficiency calls for continued increase in productivity. As Tanaka showed (*et al.*, 2015), in SRV, rice productivity can be further improved (additional 2.2 to 3t/ha), mainly through the following efforts:

- ✓ Adoption of better crop management techniques (timely sowing, proper land preparation, pest control, fertilization, etc.)
- ✓ Modernization of harvesting and processing



Conclusion

- ✓ **Agricultural intensification (the key to improve productivity)**
- ✓ **Technical supports (e.g. training, coaching), proper pricing policy (e.g. subsidy, tax exemptions) and provision of credit service**
- ✓ **Strengthening linkages between production and markets to ensure sustainable intensification of production.**
- ✓ **Value chain integration through strengthening linkages among stakeholders in the rice value chain, specially private sector**



Thank You for Your Attention

