



Advancing agricultural mechanization in Africa – what kind of public-private strategies are needed?

Club of Bologna
15 November 2014

Tractors in Africa: from first-mover to latecomer

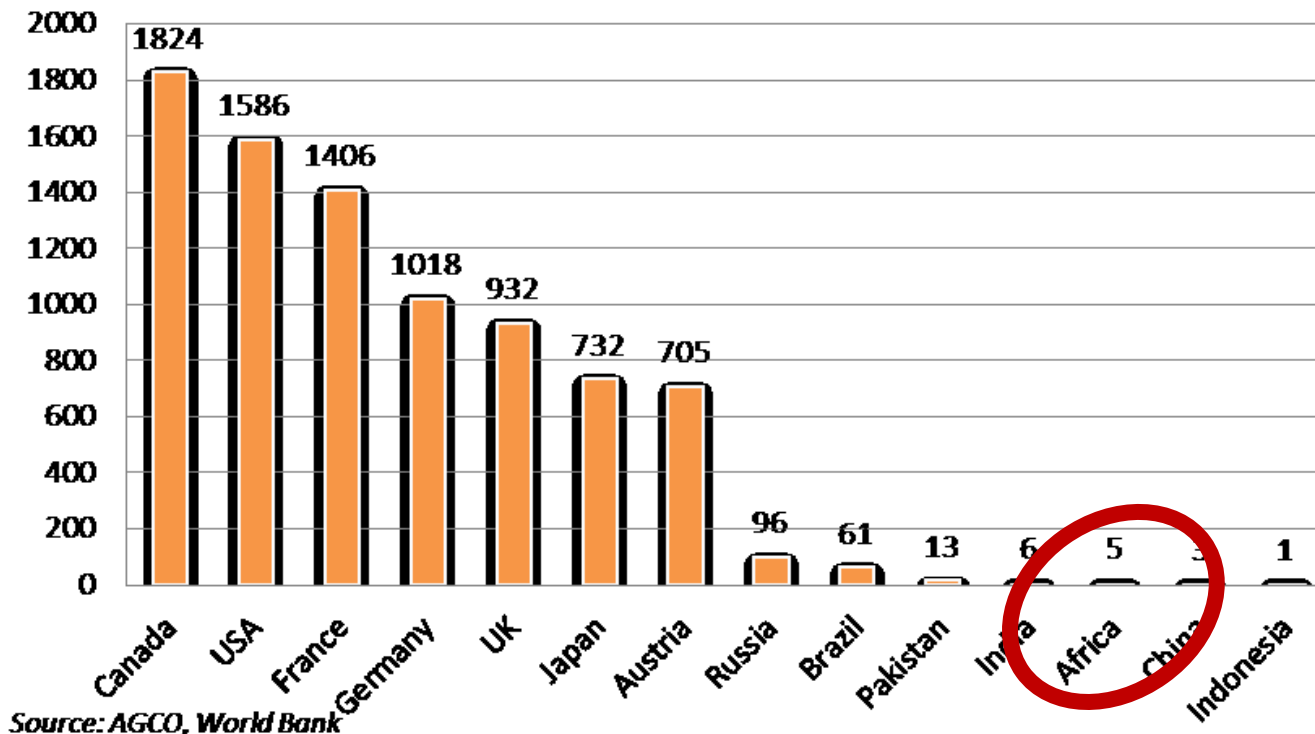


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- ▶ Why is the same progress & adoption not taking place in the case of agricultural mechanization?

The case for mechanization in Africa

Number of tractors per 1,000 farmers & agricultural workers



Percentage of tractors in various regions in Africa (2007)

Region	Number	Percentage
Northern Africa	397 415	63
Eastern Africa	87 486	14
Southern Africa	71 385	11
West Africa	55 841	9
Central Africa	14 150	2
Sub Saharan Africa	228 862	37
Africa- Total	626 277	

Source: Adapted from FAOSTAT (2010)

African imported tractors

Regional market segmentation (2009-2013Ø)

Region	<50 Hp	50-100 Hp	100-150 Hp	>150 Hp	Chinese*	Tot.
Northern Africa	196	7.037	158	180	5.411	12.982
Western Africa	51	2.086	188	64	257	2.646
Eastern Africa	168	1.976	284	182	680	3.291
Southern Africa	263	4.981	1.805	1.110	821	8.980
Tot.	678	16.080	2.435	1.535	7.168	27.898

**Most of Chinese manufactured tractors are below 50 Hp*

Most of Indian manufactured tractors are below 100 Hp

Source: Systematics, Chinese custom data

Africa: tractor production

- ▶ No European manufacturing presence in Africa
- ▶ SKD re-assembly:
 - ▶ Massey Ferguson: Algeria (<100 Hp, Indian origin)
>1.000 tractors/year
 - ▶ Minsk Tractor/Belarus: Egypt (<100 Hp)
 - ▶ Sonalika: Algeria, Cameroon, Nigeria (<100 Hp, Indian origin)

Africa: imported tractors

Market size & main production sources

Prod. Source	2009	2010	2011	2012	2013	Yearly Average
EU	6.162	4.669	6.246	7.091	6.644	6.162
USA	464	318	630	709	708	566
India	3.381	4.682	8.158	10.812	10.535	7.514
China	5.684	5.990	7.212	9.082	7.874	7.168
Brazil	4.300	2.667	1.713	2.135	2.800	2.723
Turkey	2.338	1.672	1.860	1.882	2.883	2.127
Others*	1.004	1.013	2.114	1.925	2.132	1.638
Tot.	23.333	21.011	27.933	33.636	33.576	27.898

Prod. Source	2009	2010	2011	2012	2013	Yearly Average
EU	26,4%	22,2%	22,4%	21,1%	19,8%	22,1%
USA	2,0%	1,5%	2,3%	2,1%	2,1%	2,0%
India	14,5%	22,3%	29,2%	32,1%	31,4%	26,9%
China	24,4%	28,5%	25,8%	27,0%	23,5%	25,7%
Brazil	18,4%	12,7%	6,1%	6,3%	8,3%	9,8%
Turkey	10,0%	8,0%	6,7%	5,6%	8,6%	7,6%
Others*	4,3%	4,8%	7,6%	5,7%	6,3%	5,9%
Tot.	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

*Others: Mexico, Korea

Source: Systematics, Chinese custom data

AM in Africa: learning the lessons from the past

- ▶ Pursuing AM in Africa as an isolated, one-off strategy has proven inappropriate
- ▶ Past examples have shown the shortfalls & risks of such approaches
 - ▶ **Major shortfall:** most efforts to accelerate AM driven by politics, rather than based on sound commercial propositions
 - ▶ **Major risks:** pressure on fragile natural resources, increase of soil erosion and compaction, overuse of chemical inputs and encouraging farmers to open lands that currently serve as valuable forest and rangelands.

Need for smart interventions to support efficient, lean & environmentally sound Mechanization!

Towards a tailored, inclusive and integrated approach for AM in Africa:

- ▶ **Tailored:** to local/regional conditions and needs. This means that different aspects are considered such as the local farming system and farm practices, existing farm infrastructure, as well as the broader socio-economic situation of farmers.
- ▶ **Inclusive:** benefits must reach farm holdings of different types and sizes and the overall rural community.
- ▶ **Integrated:** broader approach which foresees public-private partnerships and the active participation and support of farmers and other key agri-business stakeholders (food processors, industry producers, and financial institutions).

Barriers to mechanization in Africa (1)

Access to finance

Conundrum ('logjam') of low input - low output farming (of which low mechanization is one factor):

- ▶ To adopt high input – high output strategies (including mechanization) farmers require crop storage facilities for any surplus they produce as an incentive to undertake the necessary investment in high-cost inputs such as mechanization.
- ▶ No actor willing to invest to provide facilities because volumes too small to support them.
- ▶ Limited trade operations in the rural areas effectively reduce the public investment in rural infrastructure

Barriers to mechanization in Africa (2)

Training on operations, maintenance & repair

- ▶ Training (technical skills promotion) is of vital importance to ensure that machines are used in a safe and correct manner.
- ▶ Successful mechanization requires the building up of a supporting infrastructure in the form of repairs services, parts supply, fuel and lubricants.
- ▶ Increased investments are needed from national governments and the private sector to develop an adequate regional coverage of essential spare-part and maintenance services as well as replacement facilities.

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Case IH donates two tractors for small-holders in Kenya

Two Case IH JX55T tractors and implements provided for Tana River Area project / Strong engagement of Case IH German aid agency Welthungerhilfe / Donation goes hand in hand with stepping up Case IH presence in East Africa
St. Valentin, 10.06.2014

Ever since the starting signal given in Berlin in January this year, Case IH has taken the company's engagement with German private aid agency Welthungerhilfe very seriously. Following a first financial contribution of 45,000 Euro, Case IH has now donated two JX55T tractors to the Tana River Area project of Welthungerhilfe in Kenya, East Africa. The Florian Landorff from the aid agency during the launch event of the new partnership between Case IH and TTEA in

High-ranking participants from politics, business and finance, as well as agriculture

The celebration of the new sales and service co-operation between TTEA and Case IH in Nairobi and the hand-over of numerous high-ranking participants including Ms. Ann Onyango, Secretary of Ministry of Agriculture, Livestock and Fisheries, Kenya, was a success. "We have a vision of a sustainable, productive and prospering agriculture in East Africa in general and in Kenya in particular. TTEA has a professional automotive value chain with extensive experience and logistics capabilities and service network for vehicles. That will be an excellent base for the distribution and service of Case IH machinery in East Africa as well. This network will ensure easy, quick and reliable access to all types of machinery in East Africa", emphasised Foster.

Case IH is stepping up presence in East Africa

"When learning about the Tana River Area project and a drought relief initiative of Welthungerhilfe, we decided to get involved. And – what could be more appropriate for Case IH as manufacturer of modern and productive agricultural machinery than to provide access to financial services for farmers in Ghana, Malawi, Mozambique, Rwanda and Uganda with a \$2.5 million grant to Opportunity International's "Banking on Africa" initiative, a savings-based microfinance service for entrepreneurs and farmers in developing countries. According to Opportunity International, an estimated 80 to 85 million smallholder farmers in Africa are in need of such services. This is why we are particularly pleased with the parallel launch of our co-operation partner in East Africa. TTEA has a professional automotive value chain with extensive experience and logistics capabilities and service network for vehicles. That will be an excellent base for the distribution and service of Case IH machinery in East Africa as well. This network will ensure easy, quick and reliable access to all types of machinery in East Africa", emphasised Foster.

Strengthening small-holders

JOHN DEERE FOUNDATION'S \$2.5 MILLION GRANT HELPS AFRICAN FARMERS BY CREATING A SUSTAINABLE FRAMEWORK FOR INCREASED FOOD SECURITY

The [John Deere Foundation](#) is helping to provide access to financial services for farmers in Ghana, Malawi, Mozambique, Rwanda and Uganda with a \$2.5 million grant to [Opportunity International's](#) "Banking on Africa" initiative, a savings-based microfinance service for entrepreneurs and farmers in developing countries.



Image 1 of 1

According to Opportunity International, an estimated 80 to 85 million smallholder farmers in Africa are in need of such services.

John Deere Foundation's \$2.5 Million Grant Helps African Farmers by Creating a Sustainable Framework for Increased Food Security

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SHARE

AGCO'S COMMITMENT TO GROWING ITS PRESENCE IN AFRICA

AGCO Launches Model Farm Project in Zambia

AGCO launched a 150 hectare (371 acre) farm and learning center near Lusaka, Zambia in June 2012. "Africa has tremendous growth potential in the agricultural equipment sector and our mission is to provide agricultural solutions for the continent's farmers," said Hubertus Muehlhaeuser, Senior Vice President, General Manager, Europe, Africa & Middle East. "AGCO is committed to growing its presence within Africa by investing in distribution infrastructure and new training sites – like the one planned for Zambia. We have committed to invest US \$100 million in Africa in the coming years."



de l'alimentation, de la protection des consommateurs (BMELV) en est soutenu par des équipements agricoles et des entreprises agricoles marocaines.



LE CECAMA – CENTRE DE CONSEIL AGRICOLE MAROCO-ALLEMAND

Le CECAMA, projet pionnier au Maroc, vise à promouvoir et à vulgariser le



So now what?

More of the same will not work:

- ▶ Governmental institutions must NOT be the main/sole driver of AM approaches
- ▶ Overly donor/aid-driven approach has not worked for AM

Doing nothing is not an option either:

- ▶ National & supra-/international institutions have largely withdrawn from dealing prominently with the issue of AM BUT institutional support is critical given the range of different challenges on the ground

A new approach is needed:

1. Reinforce **institutional support for AM** in a new form
2. **Strengthen cooperation** with the private sector

Reinforce institutional support for AM in Africa

- ▶ Reintegrate Agricultural Mechanization Strategies more firmly again into agriculture-for-development agendas and development policy for Africa
- ▶ Make agricultural development & food security policies, strategies and programmes as well as national African agricultural policies “mechanization smart”



Institutional support 2.0 – CEMA asks

- ▶ FAO and UNIDO to reinforce their work on Sustainable Agricultural Mechanization Strategies (SAMS) in Africa
- ▶ World Bank (WB), the African Development Bank (ADB) and the International Fund for Agricultural Development (IFAD) to address the funding needs of future SAMS;
- ▶ UN to establish a regional Centre for Sustainable Agricultural Mechanization for Africa (CSAMA) [modelled on the regional Centre for Sustainable Agricultural Mechanization (CSAM) in the Asia Pacific Region]
- ▶ EU to integrate Sustainable Agricultural Mechanization Strategies (SAMS) more firmly into their development policy

Strengthened cooperation with the private sector

- ▶ Importance to create an enabling environment for the private sector locally so as to help countries to better help themselves
- ▶ Greater inclusion of the private sector in public/institutional activities by eg. enhancing PPPs
- ▶ International agencies and the EU to develop new cooperation schemes on mechanization with the private sector to achieve inclusive and sustainable growth in agriculture and agribusiness in developing countries

Strengthened cooperation with the private sector (2)

- ▶ Public schemes that help to alleviate lack of access to finance/investment in equipment
- ▶ Public support to industry to find suitable local partners/ stakeholders – e.g. capacity building with local farmer associations
- ▶ Support projects for mechanization centres in order to:
 - ▶ Provide agricultural services to farmers who can't afford to buy agricultural machineries
 - ▶ Develop and disseminate the correct application of agronomic practices through training facilities
 - ▶ Support to build up machinery-related skills and infrastructure (training workshops, repair/maintenance services)

Case examples: German Food Partnership – CARI & PIA

Competitive African Rice Initiative (CARI)

- ▶ **Objectives:** Improve living conditions of rural population and raise competitiveness of rice production
- ▶ **Countries:** Nigeria, Ghana, Burkina Faso, Tanzania
- ▶ **Timeline:** 2013-2017
- ▶ **Budget:** c. EUR 26mn



Potato Initiative Africa (PIA)

- ▶ Studies to assess forward-looking approaches for improved potato cultivation in Kenya and Nigeria

CEMA Publications on AM in Africa

CEMA - the voice of the producers of
Agricultural Machinery in Europe

4,500 manufacturers, 28bn€ production value, 10 national associations, 1 common platform

[More about CEMA](#)

Food for Thought
A vision for unlocking the potential of
agriculture and the food industry in the EU

IN PICTURES: Food for Thought Event

Advancing Farm Mechanization in Africa

- ▶ <http://www.cema-agri.org/publication/advancing-farm-mechanization-africa>

Promouvoir le développement rural et agricole en Afrique grâce à la mécanisation agricole (MA) avancée

- ▶ <http://www.cema-agri.org/publication/promouvoir-le-d%C3%A9veloppement-rural-et-agricole-en-afrique-gr%C3%A2ce-%C3%A0-la-m%C3%A9canisation>

Thank you!

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