Agriculture

Continued low agricultural productivity

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Despite isolated success stories (e.g. Ethiopia, Madagascar, Mauritania and Sierra Leone), the agricultural sector in Africa is significantly less productive than in other regions and is likely to remain so into the future. The most recent FAO data (2018) shows that 17 of the 20 countries with the lowest average cereal yields per hectare globally were in Africa. [7] At the same time, only one African country — Egypt — is among the top 12 most productive cereal yields; the next African state on the list, South Africa, is ranked 40th, and here agriculture contributes less than 3% to the gross domestic product (GDP).

Chart 3 presents a snapshot of the average yields per hectare (pre-loss) in Africa and two global comparative regions South Asia and South America in 1980, 2000 and the Current Path forecast for 2020 and 2040.

The slow progress has been recognised since the mid-1970s, [8] and has remained a topic of transformation concern, with the World Bank noting that Africa has approximately 45% of the global total surface area suitable for sustainable production expansion, and that low labour costs could encourage labour-intensive agricultural production. [9]

The modest increases in agricultural production in Africa since independence were generally the result of increased area under cultivation rather than improved productivity, leading to Africa being described in 2013 as ‘the only developing region in which the percentage of area exceeded growth in yield over the period 1990–2007.’ [10]

Land rotation practices in Africa have traditionally used slash-and-burn techniques, with farmers clearing new lands and leaving the old field fallow for a year or two to recover. Although this worked well while population densities were low, shortages of arable land due to increasing population numbers forced farmers to cultivate the same fields season after season. Rapid population growth and urbanisation in countries such as Kenya and Ethiopia have driven up land prices and swallow some of the best farmland. [11]

Only those farmland close to urban areas generally had roads good enough for produce to be transported to the market. The lack of paved roads and other infrastructure in prime agricultural areas far from major population centres means that large parts of the available arable land is not used for large-scale production. Closer to population centres, unsustainable cultivation practices in these high-density areas contribute to substantial soil degradation, as average farm sizes shrink and decrease soil fertility. [12]
Endnotes


5. T Lewis, *Transatlantic slave trade*, 2018


14. World Bank, *Aggregated LPI*

15. World Bank, *Aggregated LPI*

16. Embassy of the DR Congo, *Invest in DRC, Agriculture*


19. In 2003, the New Partnership for Africa’s Development (now called the African Union Development Agency) published its Comprehensive Africa Agriculture Development Programme, with ambitious goals, namely to: allocate at least 10% of national budgets to agriculture; reach rural growth rates of 6% annually by 2015; integrate and invigorate regional and national agricultural markets; significantly increase agricultural exports; transform Africa into a ‘strategic player’ in global agricultural science and technology; practise sound environmental and land management techniques; and reduce rural poverty (see: M Fleshman, *Boosting African farm yields*, 2014).

20. The commitment to devote at least 10% of national budgets to agriculture and rural development was also included in the 2003 Maputo Declaration by African heads of state and reiterated in the 2014 Malabo Declaration on Accelerated Agricultural Growth and Transformation in Africa.

21. On aggregate, Africa spends only 5–7% of national budgets on agriculture, although a 2018 study found that 11 African countries did manage to allocate 10% or more of their budgets to agriculture in some years since 2005, with Ethiopia, Kenya, Mozambique and Sierra Leone achieving 6% agricultural

22. AllAfrica, Communique: Africa food security leadership dialogue, August 5, 2019

23. IPPMedia, Value add in Africa: First steps in a long journey, 2019; also see: African Cashew Alliance, About us

24. The world cocoa industry is worth more than US$100 billion annually; also see: Y Adegoke, Why Europe dominates the global chocolate market while Africa produces all the cocoa, 2018; D Philling, The African farmers taking on big chocolate, Financial Mail, 16 December 2019; H Fofack, Overcoming the colonial development model of resource extraction for sustainable development in Africa, 2019


29. See: F Mugira and A McGinnis, Sucked dry, Daily Maverick, 2021


31. World Bank, Agriculture in Africa: Telling facts from myths


33. World Bank, Agriculture in Africa: Telling facts from myths

34. In contrast to the tripling in growth cited earlier, this was an improvement across the entire country, so the growth is understandably much smaller; see: JY Lin, The Household Responsibility System in China’s Agricultural Reform: A Theoretical and Empirical Study, Economic Development and Cultural Change, 36:53, 1988, S199–S224

35. China-Africa Project, Chinese and African agriculture have a lot more in common that most people think: Interview with Xinqing Lu, Associate Programme Officer for Alliance for a Green Revolution in Africa, 3 December 2019

36. OEC, Brazil

37. GL Galford, B Soares-Filho and CEP Cerri, Prospects for Land-use Sustainability on the Agricultural Frontier of the Brazilian Amazon, Philosophical Transactions of the Royal Society B, 368:1619, 2013, 20120171.

38. L Abboud, The robot revolution down on the farm, 2018


40. R Kimani and P Bosire, FarmDrive, 2019

41. In most of rural Africa, precise location of a farm is objectively unknown so the location is determined via a series of SMS questions (e.g. time to walk to different primary schools). The more schools a farmer is familiar with in their area, the easier it is to hone in on their specific location.

42. J Bird, ‘Smart’ insurance helps poor farmers to cut risk, Financial Times, 5 December 2018; also see, for example, https://agrocenta.com/ and https://www.zenvus.com/.

43. World Food Programme & Oxfam America, The R4 Rural Resilience Initiative, 2011
44. S Gebre, AGRA plans to invest $500 million in African seed companies, Bloomberg, 7 September 2016

45. The Alliance for Food Sovereignty in Africa and its allied organisations argue that ‘AGRA has unequivocally failed in its mission to increase productivity and incomes and reduce food insecurity, and has in fact harmed broader efforts to support African farmers.’ See: Various co-signatories, Open letter: The Green Revolution in Africa has unequivocally failed, 15 September 2021


47. Ammonia manufacturing contributes 1% of worldwide carbon dioxide emissions. See LK Boerner, Industrial ammonia production emits more CO2 than any other chemical-making reaction. Chemists want to change that, Chemical & Engineering News, 15 June 2019


49. Indorama Petrochemicals, About IEPL, Port Harcourt


54. Food and Agriculture Organization, Food wastage: Key facts and figures

55. InspiraFarms, Our team

56. The improvements in yields are similar in magnitude to the improvements seen in South Asia between 1980 and 2020, and in a similar timeframe. Indeed, South America achieved a much more rapid increase between 2000 and 2010, moving from roughly 7.8 tons per hectare to about 11.8 tons.

57. Chart 14 presents the reduction in extreme poverty in African countries across the low- and middle-income categories. The reduction in extreme poverty in Seychelles, Africa’s only high-income country, is negligible.

58. The contribution of agriculture as a proportion of the Seychelles’ economy, the continent’s only high-income island state, was about 4% in 2019.

59. Some of these constraints can be overcome through technology, such as the use of precision irrigation and application of precise amounts of fertiliser exactly where they are required. Then there is also the potential of vertical farming, which could produce 180 m tons of food globally, according to some analysts.


61. Food and Agriculture Organization, Government expenditure on agriculture, 2019


63. Intergovernmental Panel on Climate Change, Working Group II: Impacts, adaptation and vulnerability, 2018


65. The International Institute of Tropical Agriculture does particularly impressive work in this regard. See: https://www.iita.org/
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