

Challenges to the Economic Sustainability of Cotton in Developing Countries

Roundtable of Sustainable Agriculture and Trade

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Identifying Key Cotton Production and Trade

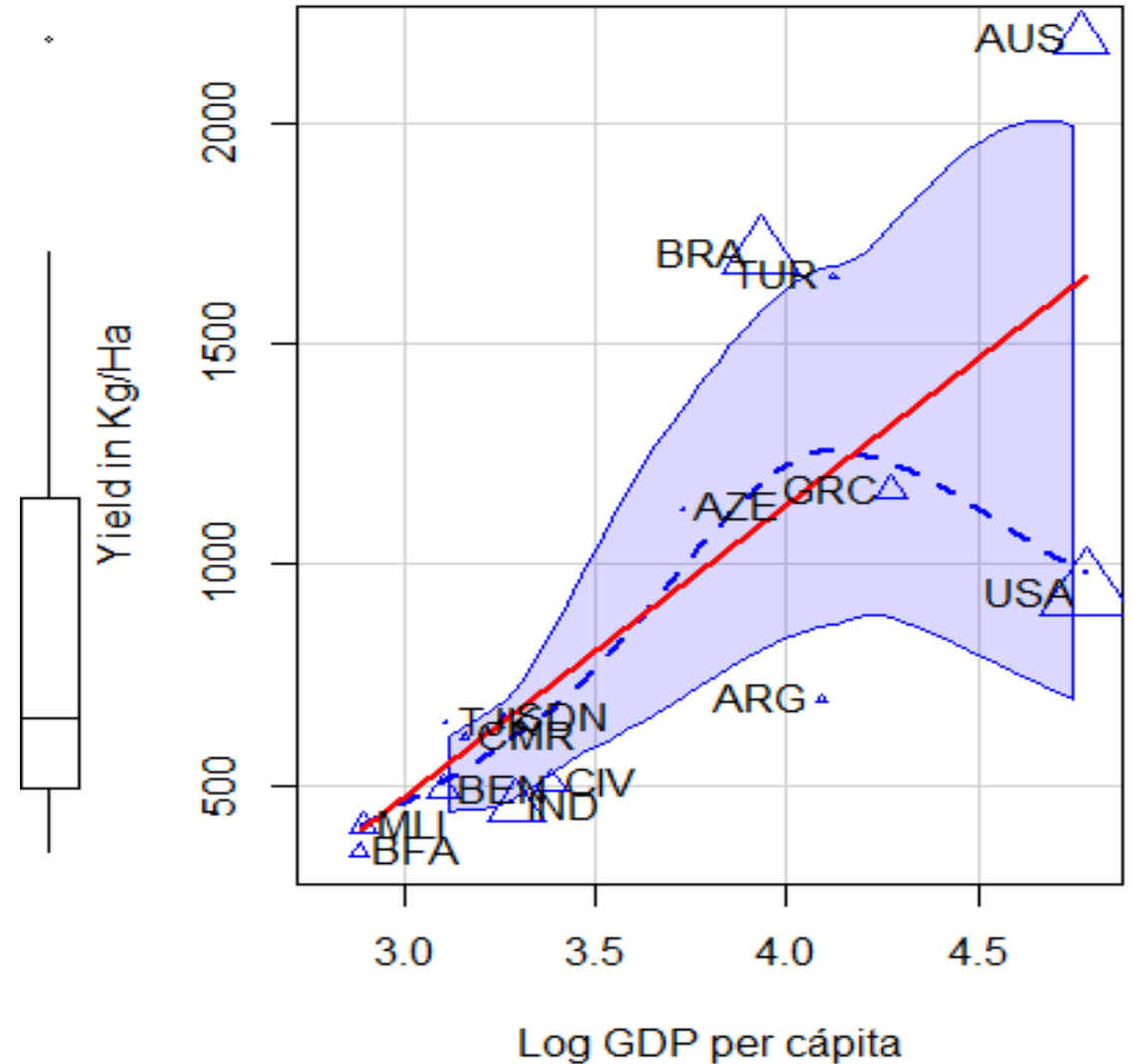
- 19 countries concentrate most of cotton production and international trade.
- Both developed and developing countries play an important role as both producers, exporters and importers.
- Some key net importers (CHN, TUR, PAK) are also important cotton producers, accounting for almost one-third of world production.
- The four largest net exporters (USA, BRA, IND, AUS) accounted in 2019-21 for more than half of world production.

ISO Code	Country	Net Exports (mean)	Production (mean)	Production Share (2021)
USA	United States of America	15.492	17.348	15.14
BRA	Brazil	9.212	12.107	10.12
IND	India	3.003	26.867	21.16
AUS	Australia	2.172	3.058	4.97
GRC	Greece	1.475	1.475	1.17
BEN	Benin	1.313	1.432	1.23
CIV	Côte d'Ivoire	1.056	1.017	0.91
MLI	Mali	0.992	1.027	1.24
BFA	Burkina Faso	0.972	0.930	0.83
CMR	Cameroon	0.583	0.655	0.55
ARG	Argentina	0.537	1.383	1.30
KOR	Republic of Korea	-0.553	0.001	0.00
THA	Thailand	-0.682	0.002	0.00
IDN	Indonesia	-2.458	0.002	0.00
PAK	Pakistan	-4.590	5.567	5.18
TUR	Türkiye	-4.640	3.383	3.28
VNM	Viet Nam	-6.800	0.003	0.00
BGD	Bangladesh	-8.000	0.147	0.13
CHN	China	-9.183	27.950	23.15
Key Net Exporters		36.807	67.299	58.62
Key Net Importers		-36.906	37.055	31.74
Key Net Exporters & Importers		-0.099	104.354	90.36

Source: Author's elaboration using export and import data from the PSD database of the USDA FAS. Unit: millions of bales of 480 pounds each.

Challenge I: Heterogeneous Yields

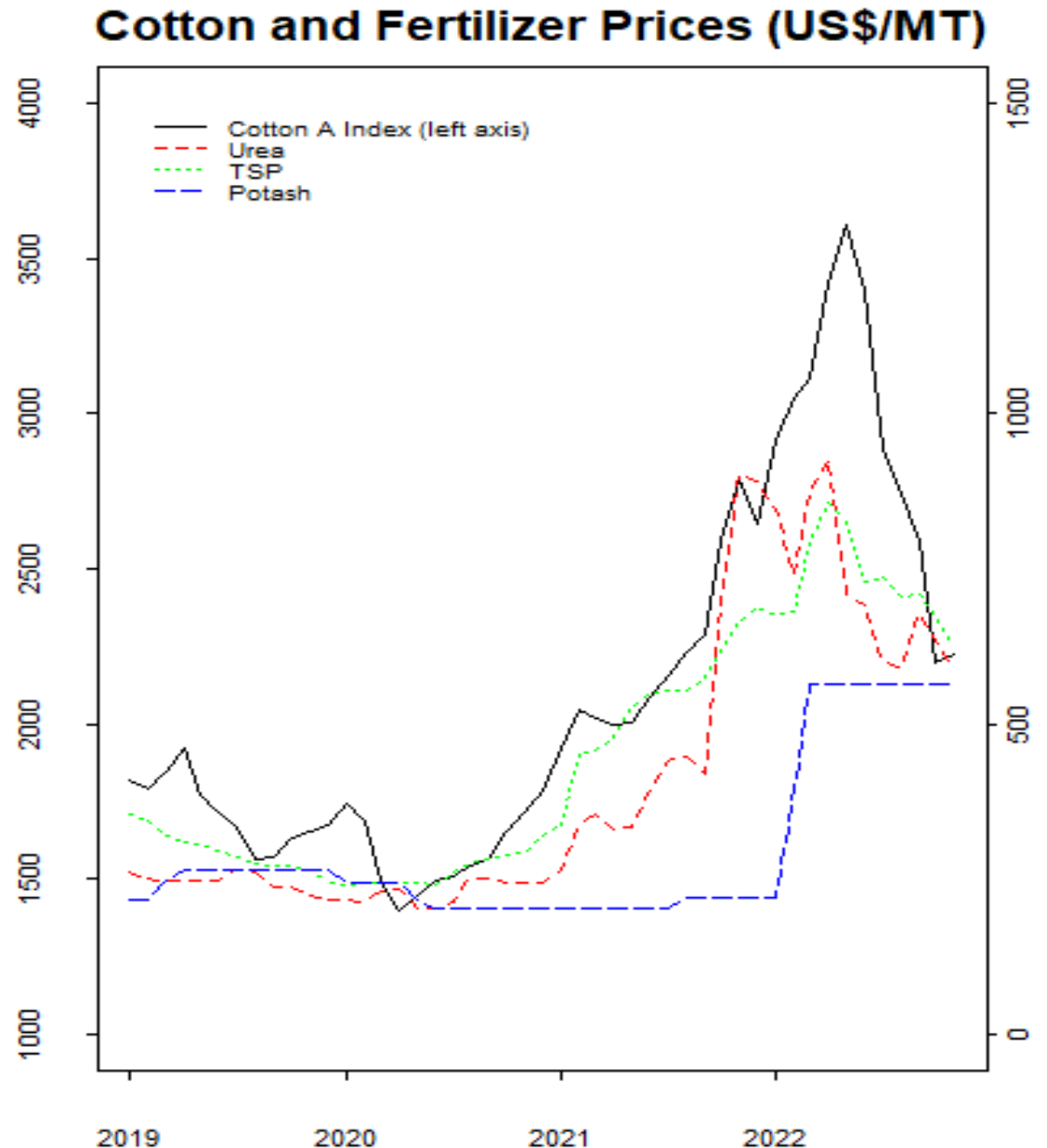
- Among the largest exporters of cotton, developing countries with lower incomes have significantly lower average yields: the median for 8 of those countries is close to 500 Kg/Ha.
- Middle-income developing country exporters and developed ones have higher yields, with a median of close to 1200 Kg/Ha.
- Factors influencing yields include the scale of operation, access and use of inputs (e.g. seeds, fertilizers, water), access to finance, access to capital goods and technology, farmer characteristics and others.
- Low yields in poor dev. countries affect the economic sustainability of smallholder cotton farmers, and has multiple implications for poverty reduction, migration, by-products, etc.



Source: Author's elaboration using export and import data from the PSD database of the USDA FAS.

Challenge II: Price Volatility

- The prices of cotton and key inputs (like fertilizers) are very volatile.
- Correlation between cotton and input prices is positive, significant and high but differs across inputs (e.g. 68% for potash 2019-22).
- Smallholder cotton farmers in dev. countries:
 - Have insufficient access to formal finance (key role of downstream stakeholders, like intermediaries).
 - Lack access to insurance
- Vertical coordination contracts often do not protect farmers from volatility.



Source: Author's elaboration using World Bank data

Challenge III: Value Chain Performance

- Value chain characteristics are key for the economic sustainability of farming in general, including cotton.
- Challenges illustrated by a recent survey in Kara province, Togo.
- Smallholder **access to inputs**: in time, affordability and quality. Almost half of the surveyed farmers in Kara had issues, led by the availability of inputs, their timing, and credit issues.
- Even in countries where inputs are subsidized and lent to smallholders, these issues lead to underuse or alt. sourcing.
- High **heterogeneity of prices** received by farmers.
- Insufficient use of cotton **by-products** as an income source.
- In our survey, less than 1 in 4 farmers reported selling them.

Thank you!

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