



Smallholder Farming in Malawi

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Presentation at the Virtual Policy Seminar on the Future of Smallholder Farming in Malawi
LILONGWE, MALAWI

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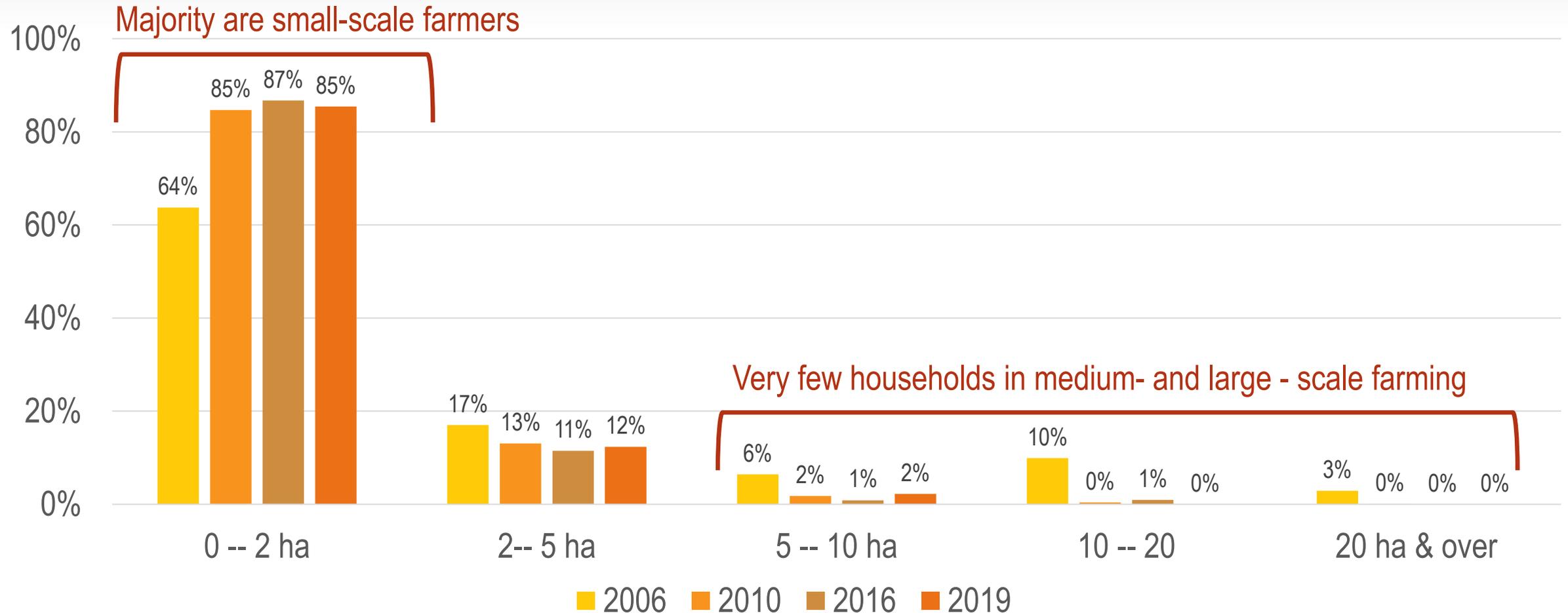
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Presentation aims to achieve the following objectives:

- 🌅 Understand what the smallholder agriculture sector looks like now
- 🌅 Outline the emerging challenges facing the sector
- 🌅 Identify possible strategies for moving the sector forward

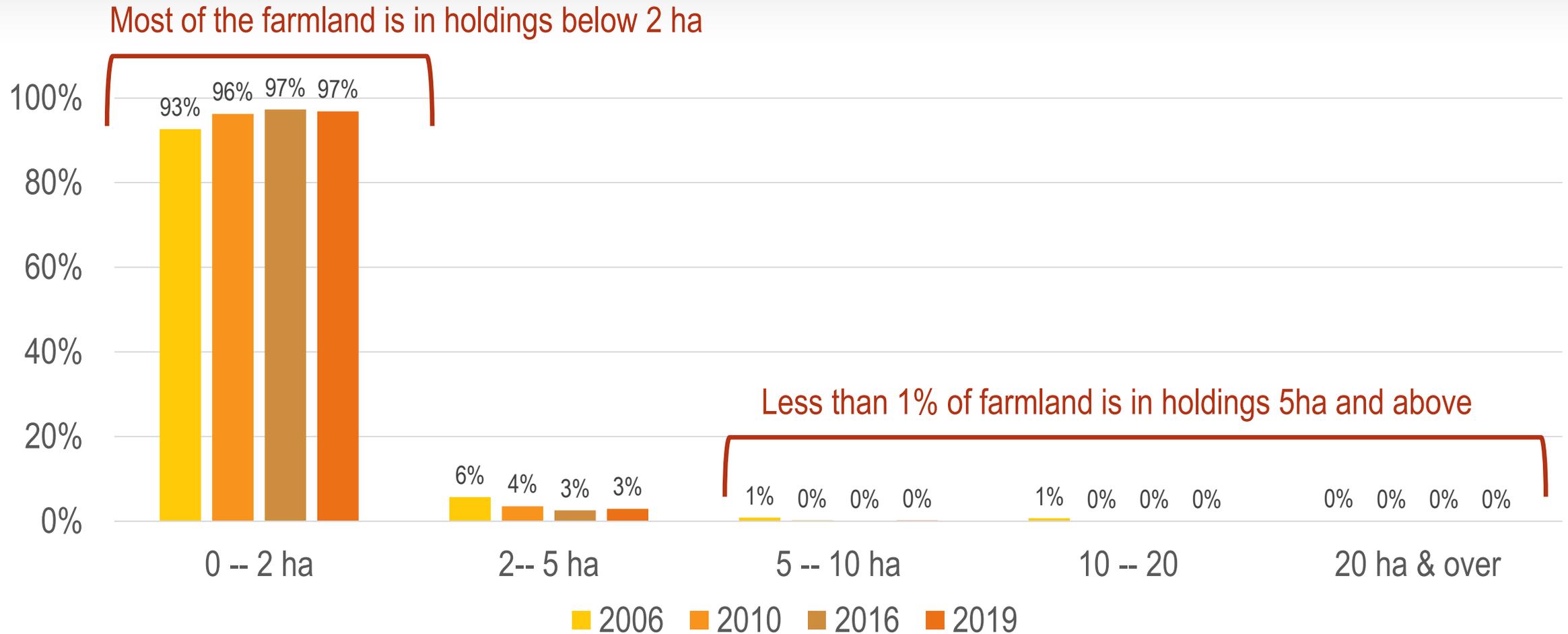
Smallholder Farming in Malawi

Figure 1. Trend in farm households' distribution across farm categories in Malawi



Data source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Figure 2. Trend in farmland distribution by farm categories in Malawi

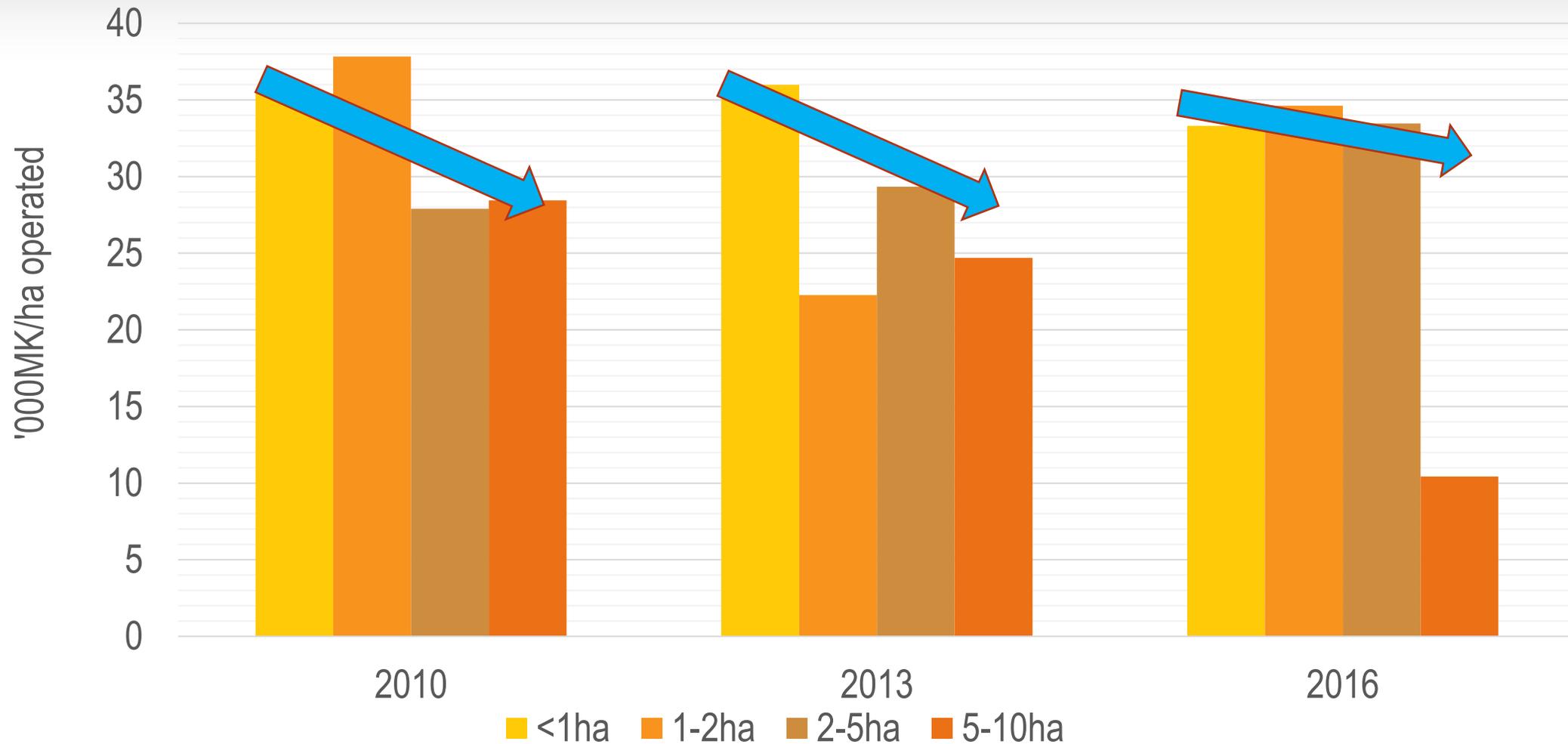


Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Table 1. Overview of changes in farm households and farmland between 2004 and 2020

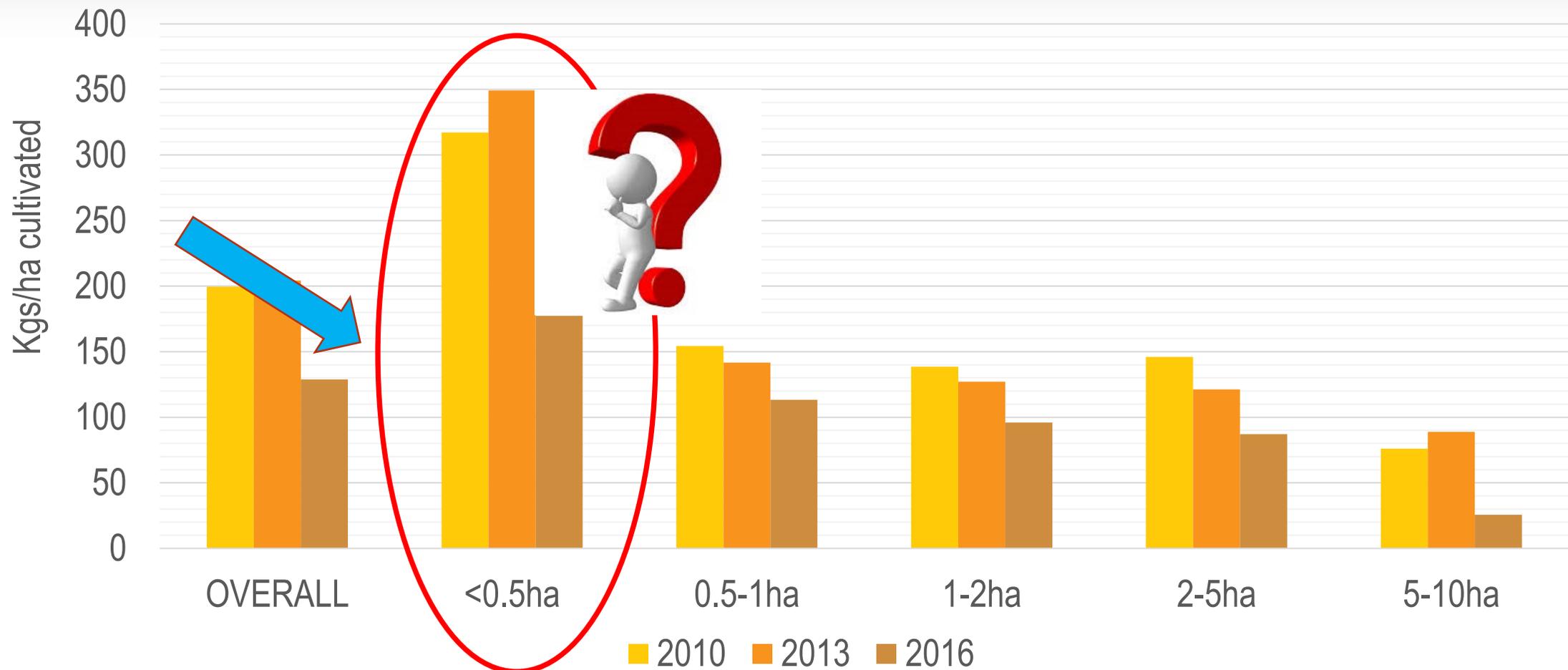
Farm category –ha operated	% change in farm households			% change in farmland		
	Overall	Rural	Urban	Overall	Rural	Urban
0 -- 2 ha	41%	37%	127%	26%	24%	85%
2-- 5 ha	-31%	-32%	11%	-32%	-33%	27%
5 -- 10 ha	-67%	-71%	-10%	-68%	-71%	-12%
10 -- 20	--	--	--	--	--	--
20 ha & over	--	--	--	--	--	--

Figure 3. Crop productivity --gross value of output/ha operated--



Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Figure 4. Fertilizer application rates --kgs/ha operated



Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Figure 5. Share of farmland allocation by broad crop categories

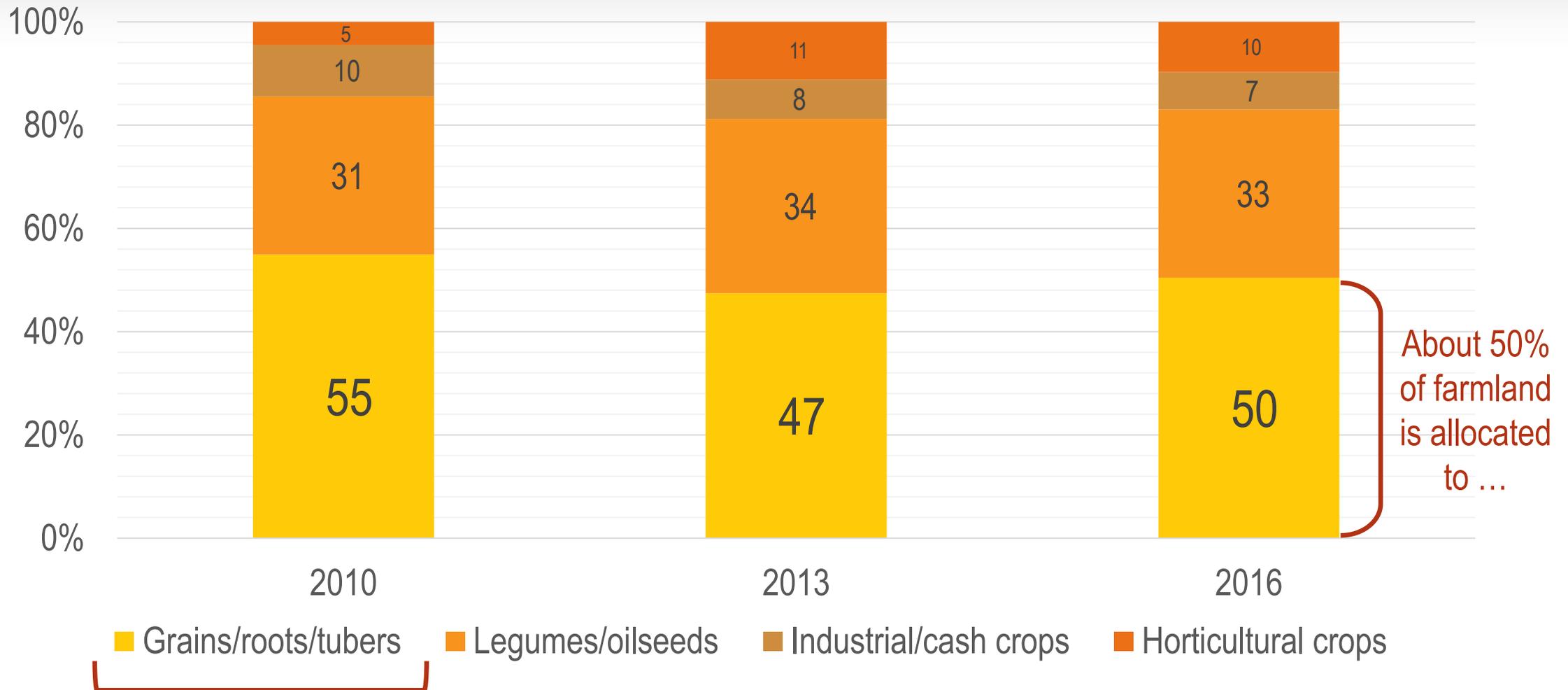


Figure 6. Share of **gross value** of crop production by broad crop categories

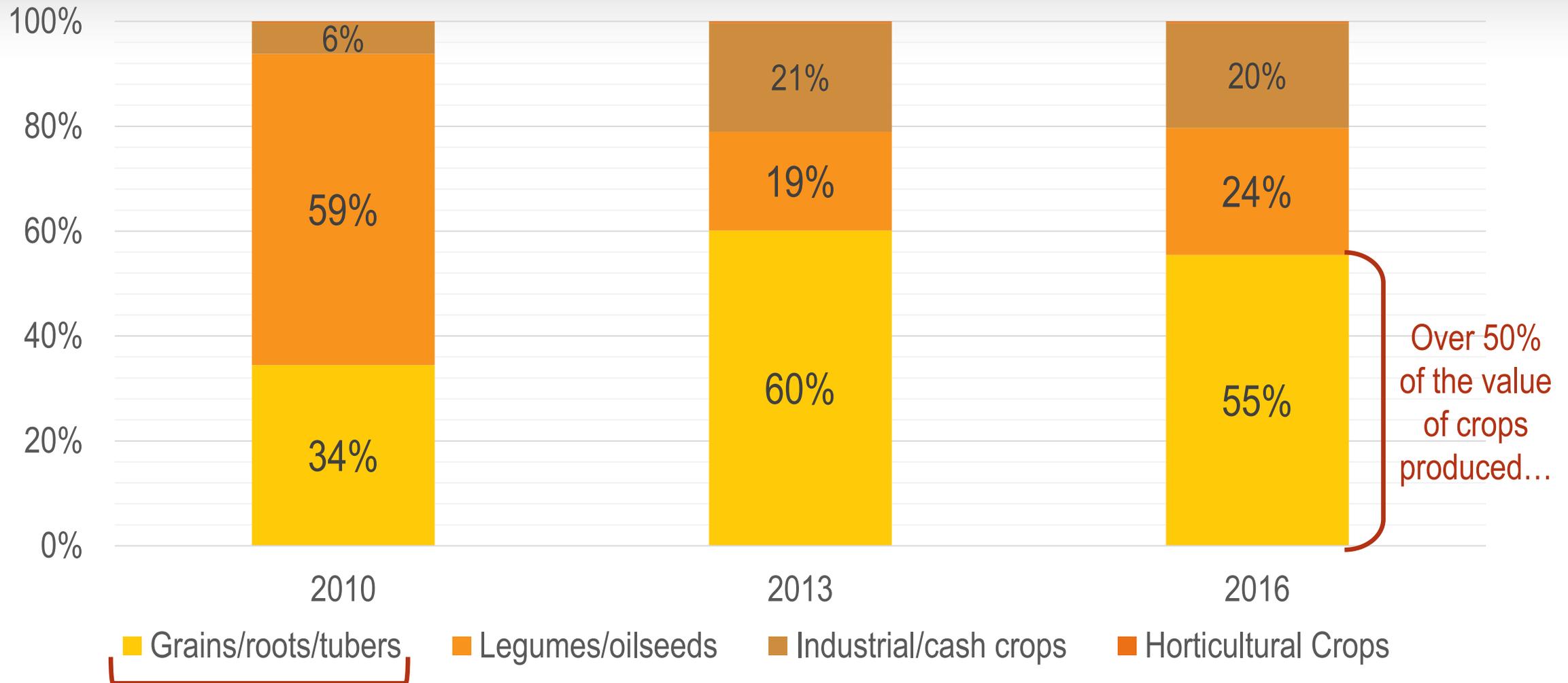


Figure 7. Share of **gross value** of crop production by farm sizes

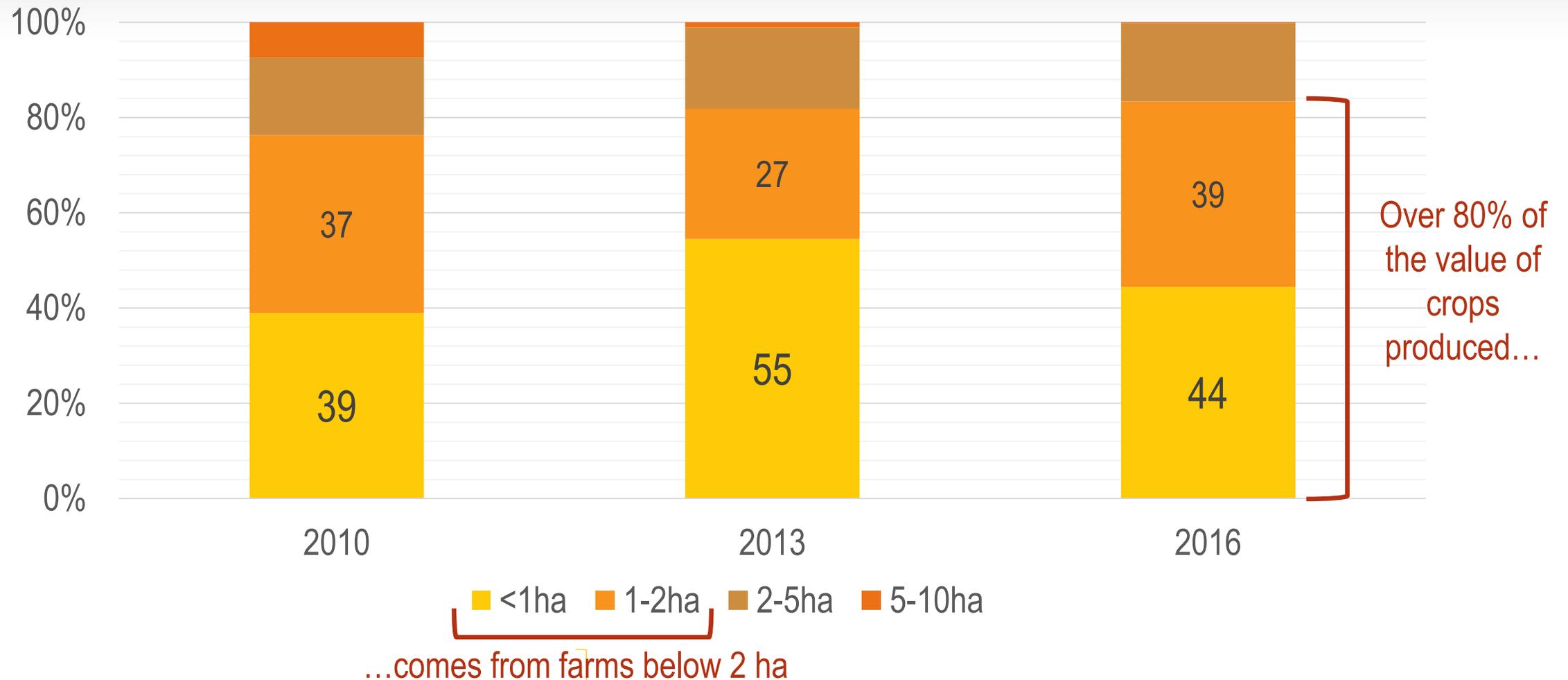


Figure 8. Household crop commercialization by farm categories

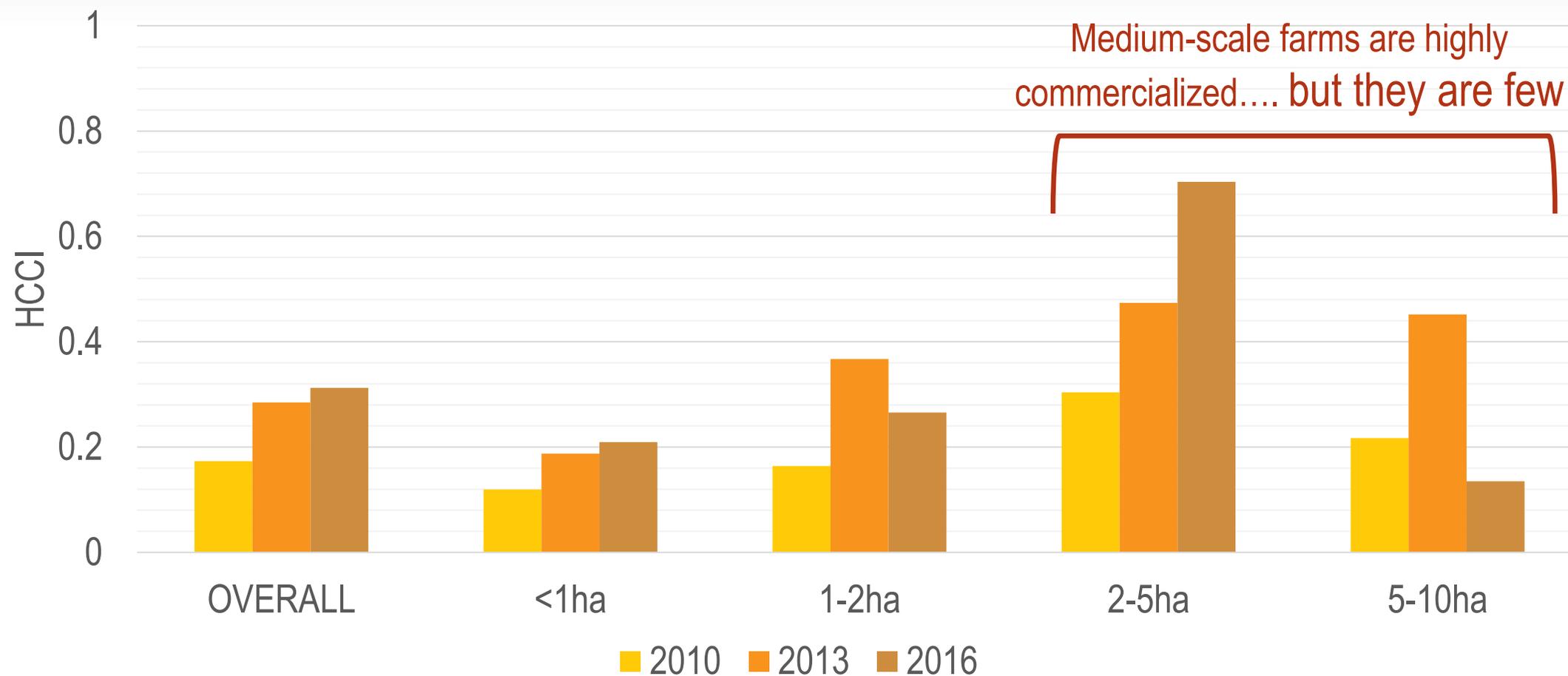


Figure 9. “Marketed” crop surplus by crop categories

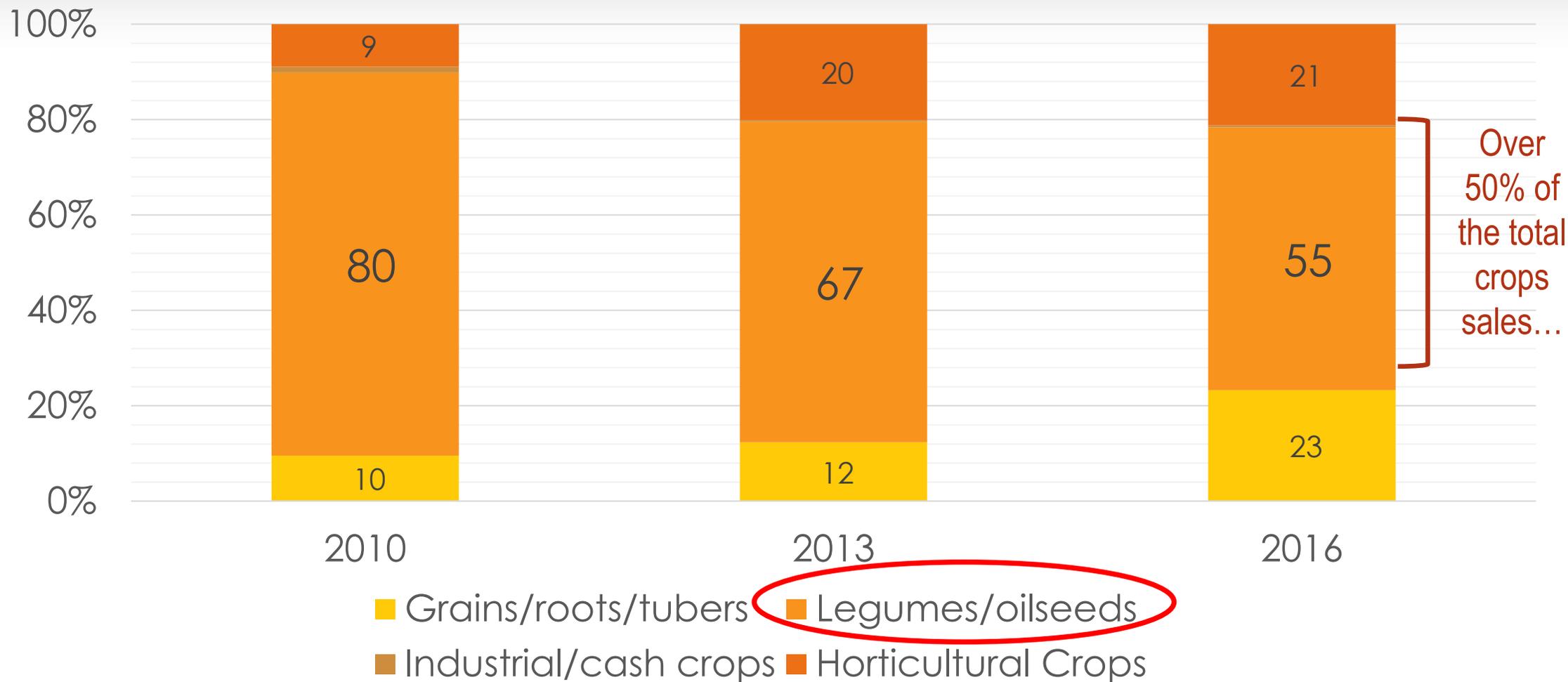
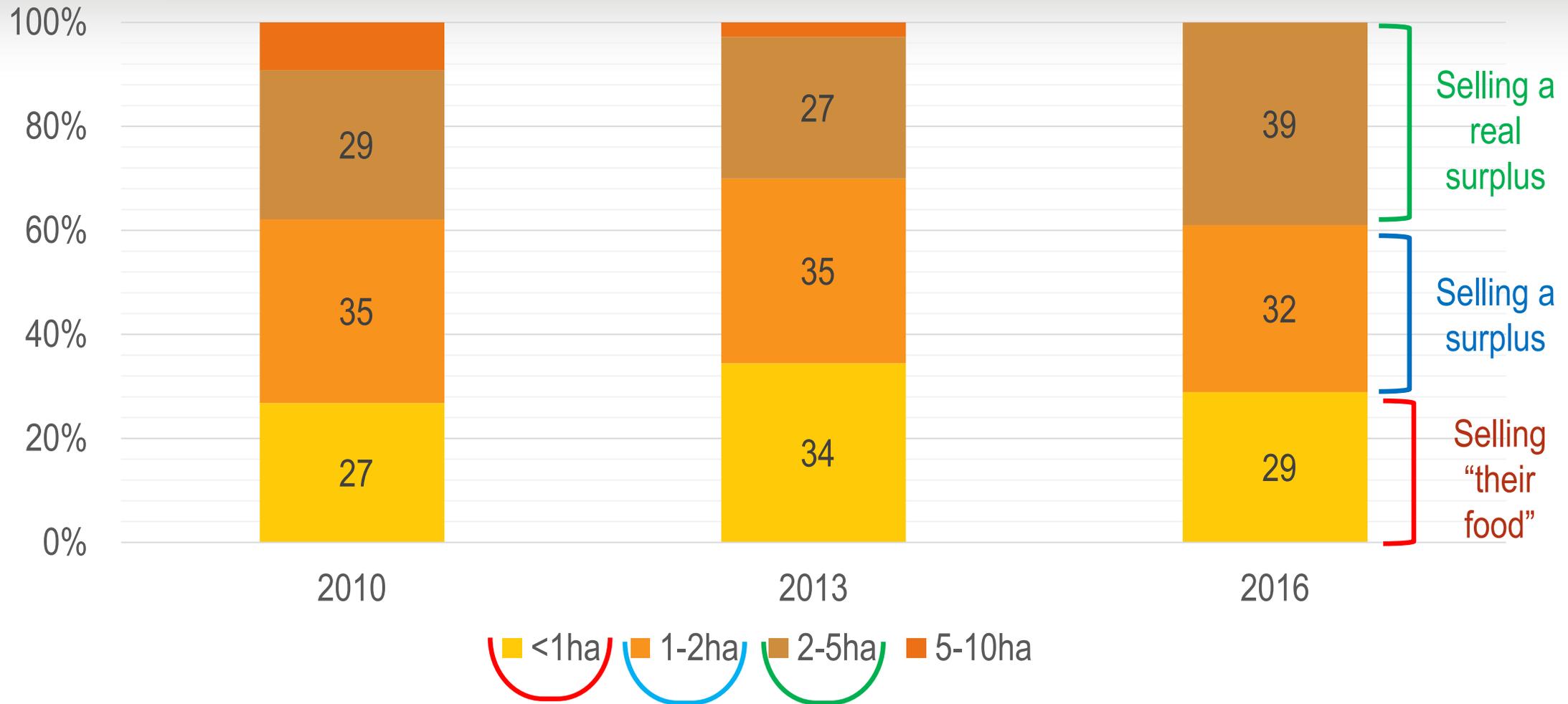


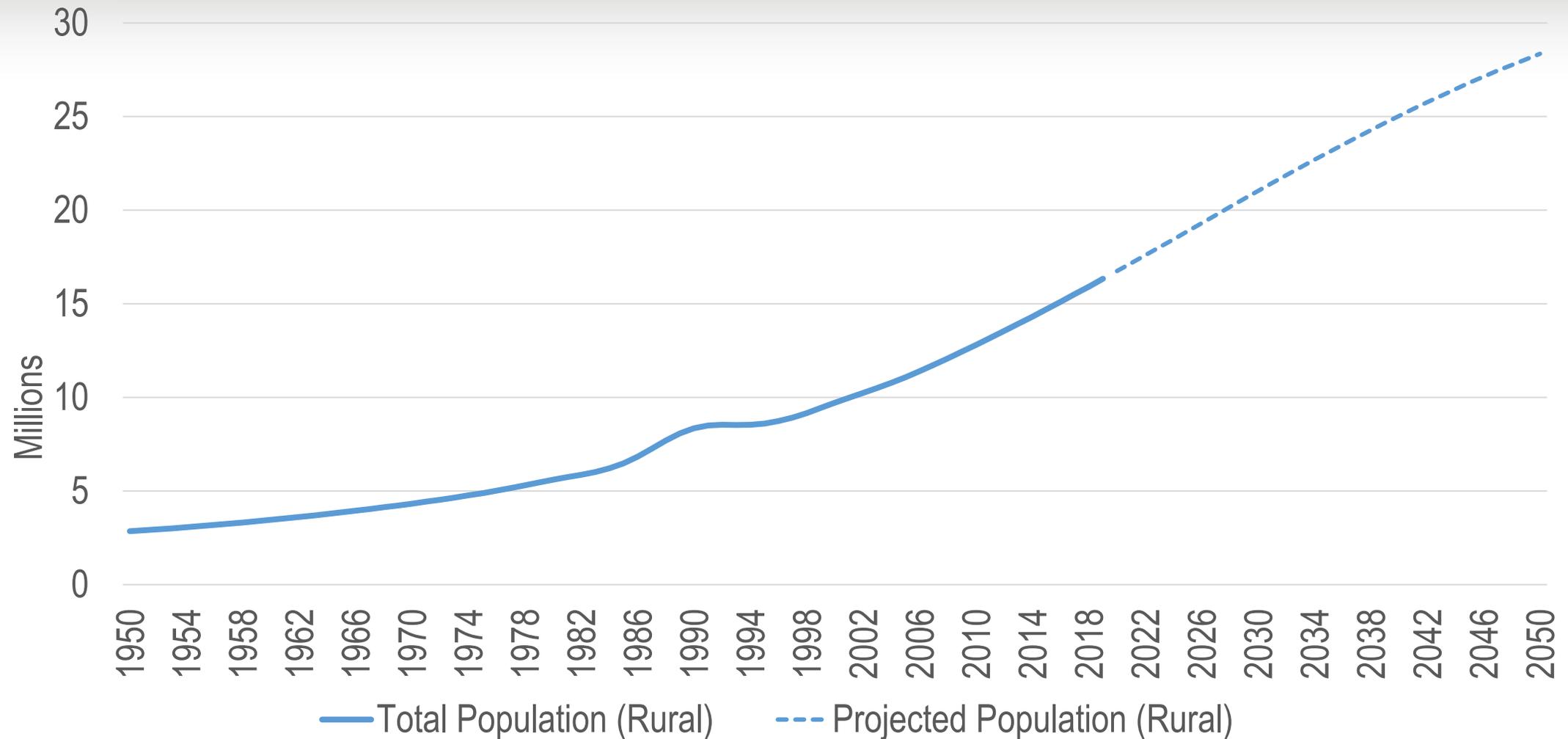
Figure 10. “Marketed” crop surplus by farm sizes



Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Main Challenges facing Agricultural Growth in Malawi

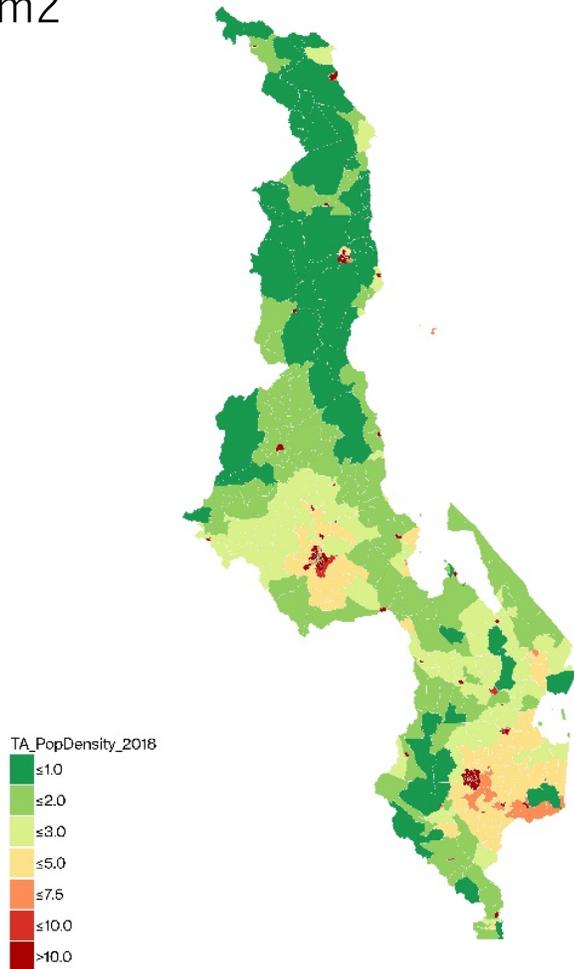
Figure 11. High population growth leading to shrinking farm sizes



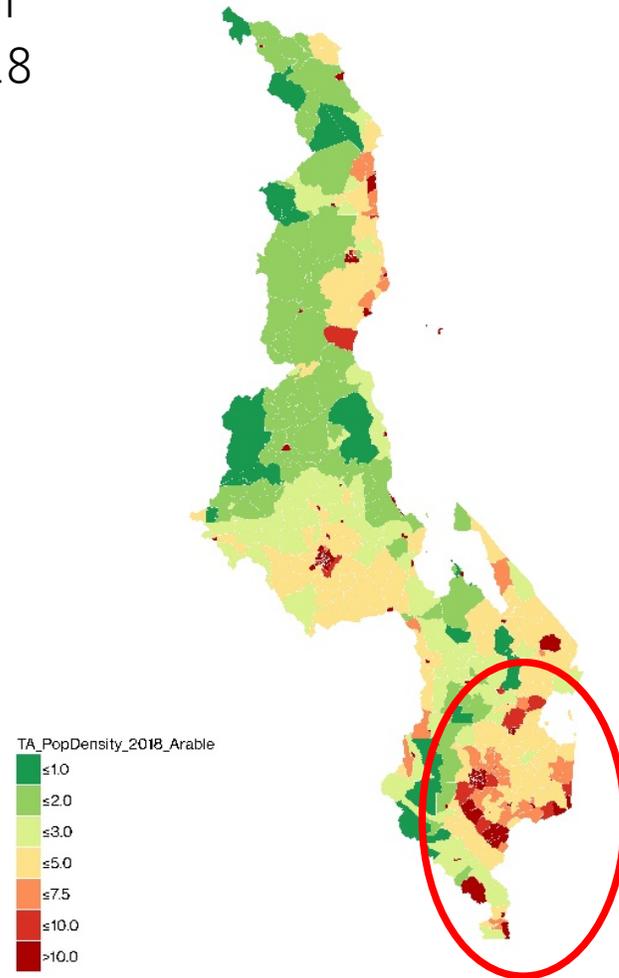
Source: World Development Indicators (2020)

Figure 12.1. Rural population densities

a. Persons/km²
in 2018



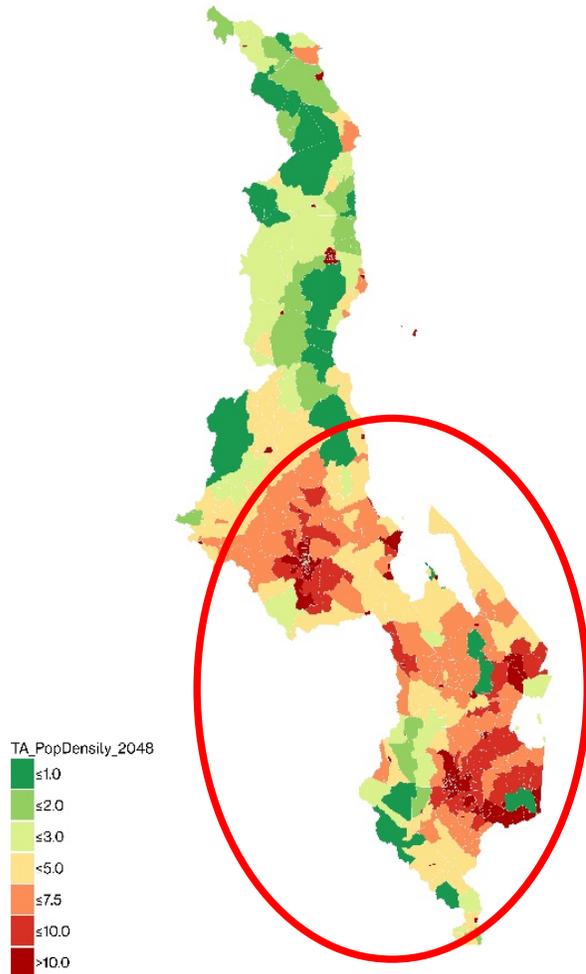
b. Persons/km² of
arable land in 2018



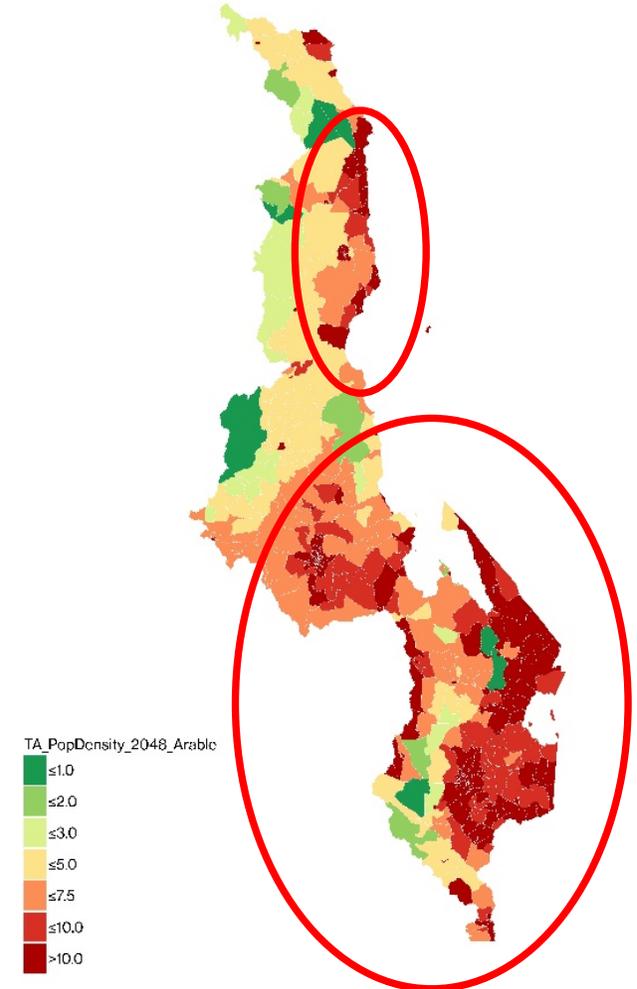
Source: Maps produced by ORG PERMANENT MODERNITY using 2018 Malawi Population and Housing Census Data

Figure 12.2. Projected rural population densities in 2048

a. Persons/km² in 2048



b. Persons/km² of arable land in 2048



Source: Maps produced by ORG PERMANENT MODERNITY using 2018 Malawi Population and Housing Census Data

Is there any scope for agricultural intensification with shrinking farm sizes?

-  Yes, but beyond 500 pp/km², the positive relationship between population density and productivity breaks down
-  Assuming household size of 5 persons, 500 pp/km² translates to one ha/household
-  Average farm size in Malawi is about 0.73ha -- 30% of families operating less than 0.5 ha
-  Many households in Malawi are trapped in areas where sustainable intensification is not possible

What causes unsustainable forms of agricultural intensification?



- 🌅 Farmers say “soils become tired”
- 🌅 Prof. Rattan Lal say “soils become rebellious”
 - Continuous cultivation without fallowing
 - Dwindling soil organic matter (carbon) and critical soil micronutrients
 - Increased soil acidity due to continued use of inorganic fertilizers

Table 2. Percent of the population that would have to exit their TA to maintain one hectare per household

Region	2018 PHC	2028 Projected	2038 Projected	2048 Projected
Southern	5.3%	10.4%	16.6%	22.5%
Centre	0.7%	17.0%	27.4%	35.8%
Northern	0.3%	5.7%	6.2%	6.2%
Overall	6.3%	13.4%	25.0%	38.8%

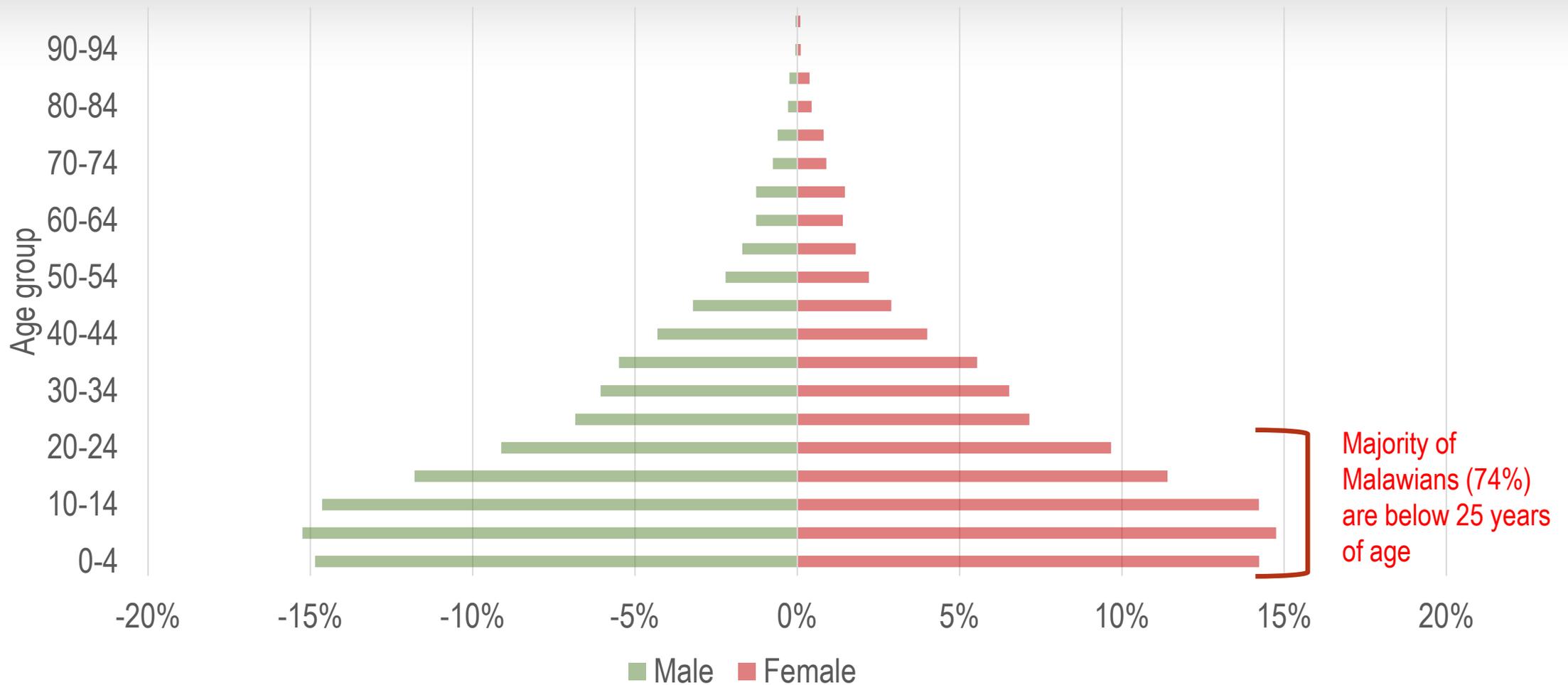
Source: 2018 Malawi Population and Housing Census and projections by the authors.

Table 3. Land markets are informal, and land rights are largely tenuous

Source of Land	Farm size category								
	Under 2 ha			2-5 ha			Above 5 ha		
	2010	2013	2016	2010	2013	2016	2010	2013	2016
	-----Share of (area/plots/households) acquired/acquiring by source-----								
Inherited	78	77	68	77	78	64	77	63	71
Local leaders	9	7	13	9	7	11	13	12	13
Leased/rented	7	9	8	7	9	12	2	8	6
Purchased	1	2	3	2	4	5	5	11	5
Borrowed	2	3	3	2	1	2	0	1	0
Other	3	2	5	4	1	6	3	6	4
Total	100	100	100	100	100	100	100	100	100

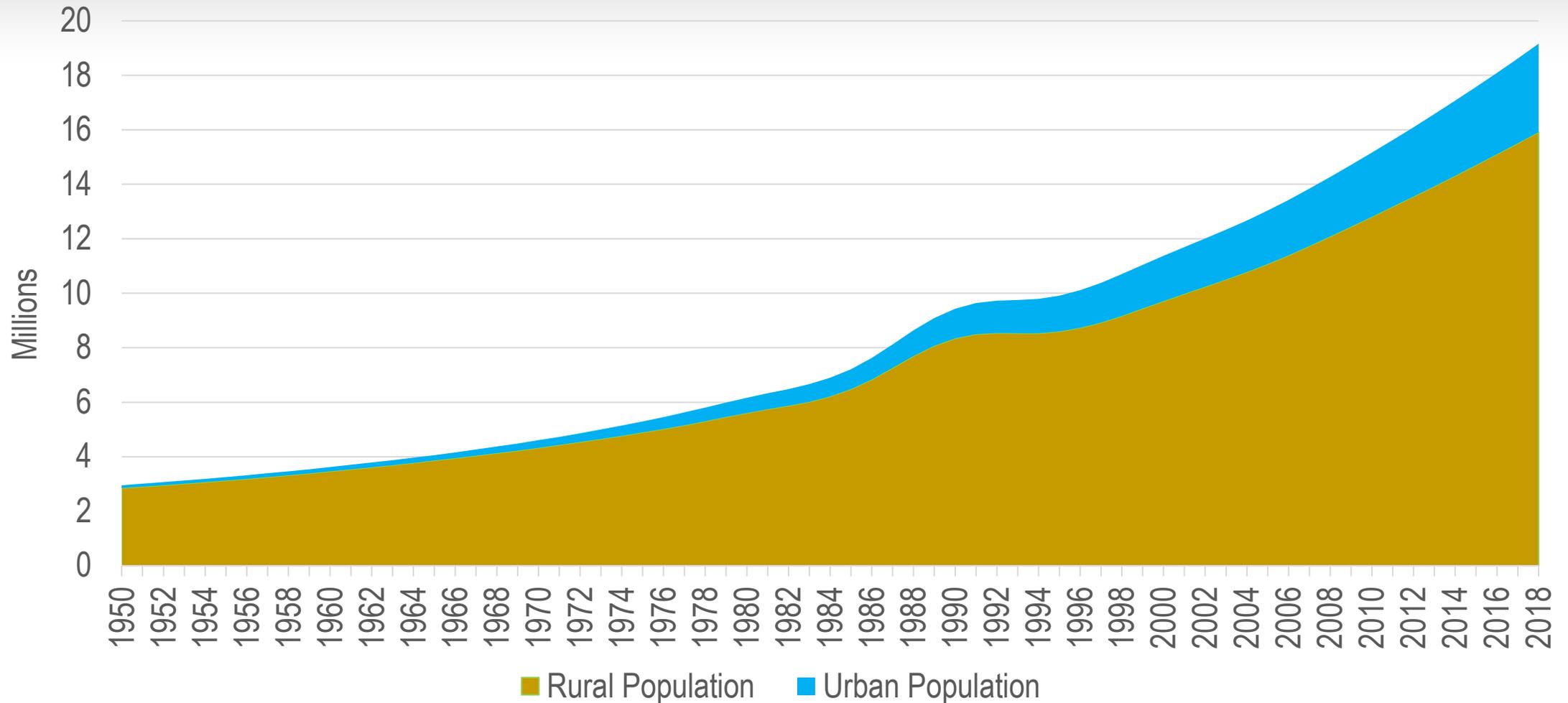
Source: WB/NSO IHS

Figure 13. Rapid rise in the number of young people



Source: 2018 Malawi Population and Housing Census.

Figure 14. Urbanization is low and happening slowly in Malawi



Source: FAOSTAT (2020)

Figure 15. Limited opportunities outside of agriculture



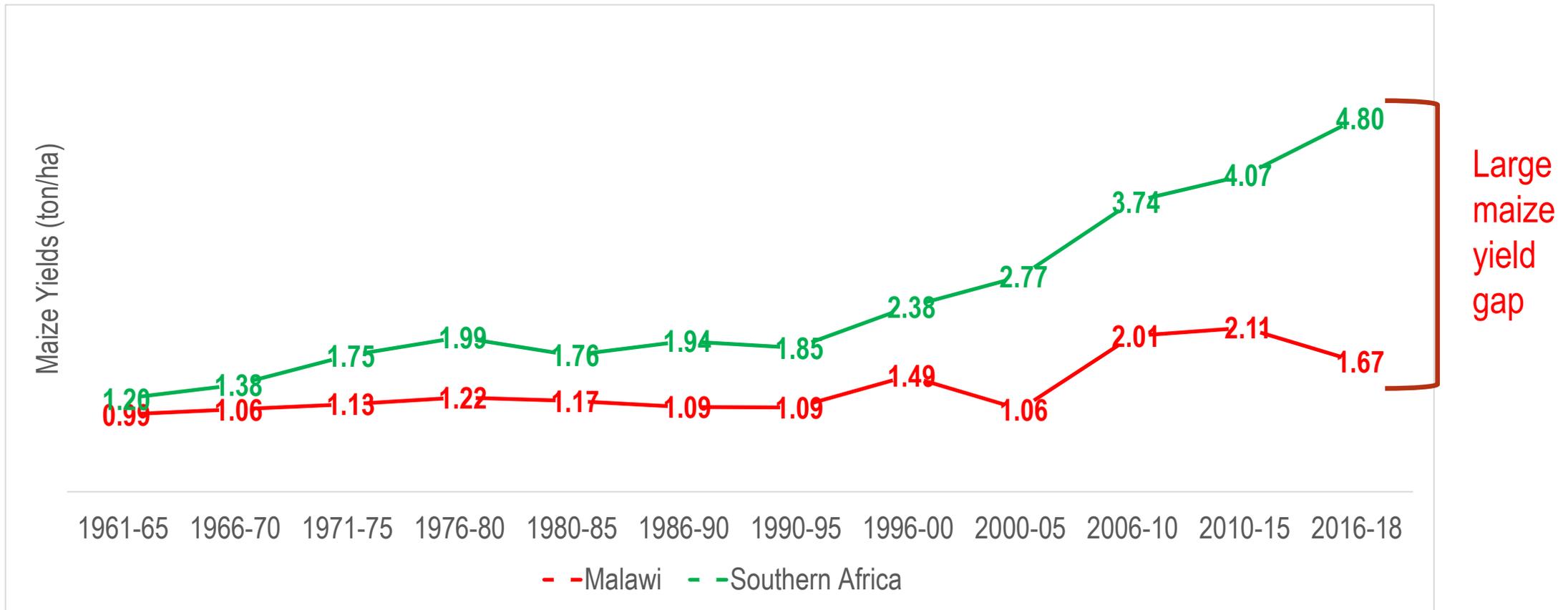
World Bank (2020), based on modeled ILO estimates



Broad strategies for moving the agricultural sector forward

Key policy thrusts for addressing challenges facing smallholder farming [1]

☀ Invest in increased agricultural productivity and improved soils



Source: 2018 Malawi Population and Housing Census.

Key policy thrusts for addressing challenges facing smallholder farming [2]

- ☀️ The greatest return on investment for agricultural productivity growth is likely:
 - i. Research and development
 - ii. Education (especially farmer extension)
 - iii. Infrastructure (especially roads and electricity)



SOIL PHYSICS

Key policy thrusts for addressing challenges facing smallholder farming [3]

- 🌅 Invest in irrigated agriculture
- 🌅 Shore up land rights and tenure laws
- 🌅 Improve access to rural finance
- 🌅 Make policy environment predictable
- 🌅 Improve policy coordination- more inclusive
- 🌅 Diversify employment creation beyond agriculture



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Changes in farm structure in Zambia (2001-2012)

Farm size category	Number of farms		% growth in number of farms	% of total cultivated area	
	2001	2012		2001	2012
0 – 2 ha	638,118	748,771	17.3	34.1	16.2
2 – 5 ha	159,039	418,544	163.2	45	31.7
5 – 10 ha	20,832	165,129	692.6	14.3	25.0
10 – 20 ha	2,352	53,454	2272.7	6.6	15.0
20 – 100 ha	--	13,839	na	--	12.1
Total	820,341	1,399,737		100	100

Table 1a. Changes in farm households' distribution across farm categories in Malawi

Category (ha operated)	2006 [NACAL]		2019 [IHS]		% change between 2004 and 2019
	Number	%	Number	%	
0 -- 2 ha	2,227,512	93%	3,135,489	97%	41%
2-- 5 ha	136,769	6%	94,787	3%	-31%
5 -- 10 ha	20,617	1%	6,794	0%	-67%
10 -- 20	16,859	1%	0	0%	-100%
20 ha & over	2,337	0%	0	0%	-100%
Total	2,404,094	100%	3,237,070	100%	-257%

Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Table 1b. Changes in farm households' distribution across farm categories and residence

		2006 [NACAL]		2019 [IHS]		% change between 2004 and 2019
Residence	Category (ha operated)	Number	%	Number	%	
Rural	0 -- 2 ha	2,139,284	93%	2,935,623	97%	37%
	2-- 5 ha	131,832	6%	89,320	3%	-32%
	5 -- 10 ha	19,348	1%	5,655	0%	-71%
	10 -- 20	16,847	1%	0	0%	-100%
	20 ha & over	2,337	0%	0	0%	-100%
	Total	2,309,648	100%	3,030,598	100%	-266%
Urban	0 -- 2 ha	88,228	93%	199,867	97%	127%
	2-- 5 ha	4,937	5%	5,468	3%	11%
	5 -- 10 ha	1,268	1%	1,139	1%	-10%
	10 -- 20	12	0%	0	0%	-100%
	20 ha & over	0	0%	0	0%	0%
	Total	94,445	100%	206,474	100%	0%

Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Table 2a. Changes in farmland distribution by farm categories in Malawi

Category (ha operated)	2006 [NACAL]		2019 [IHS]		% change between 2004 and 2019
	Area operated (ha)	%	Area operated (ha)	%	
0 -- 2 ha	1,416,379	64%	1,790,603	85%	26%
2-- 5 ha	378,453	17%	258,793	12%	-32%
5 -- 10 ha	142,967	6%	46,334	2%	-68%
10 -- 20	220,191	10%		0%	-100%
20 ha & over	64,540	3%		0%	-100%
Total	2,222,530	100%	2,095,730	100%	-6%

Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Table 2b. Changes in farmland distribution by farm categories and residence

		2006 [NACAL]		2019 [IHS]		% change between 2004 and 2019
Residence of household	Category (ha operated)	Operated area (ha)	%	Operated area (ha)	%	
Rural	0 -- 2 ha	1,369,401	64%	1,703,880	86%	24%
	2-- 5 ha	366,924	17%	244,095	12%	-33%
	5 -- 10 ha	133,844	6%	38,282	2%	-71%
	10 -- 20	220,038	10%		0%	-100%
	20 ha & over	64,540	3%		0%	-100%
	Total	2,154,748	100%	1,986,257	100%	-8%
Urban	0 -- 2 ha	46,978	69%	86,723	79%	85%
	2-- 5 ha	11,529	17%	14,698	13%	27%
	5 -- 10 ha	9,123	13%	8,052	7%	-12%
	10 -- 20	152	0%	0	0%	-100%
	20 ha & over	0	0%	0	0%	0%
	Total	67,782	100%	109,473	100%	62%

Source: NSO NACAL 2006 & WB/NSO IHS 2004 & 2019

Table 6: Population aged 6 to 17 Years in school and out of school, 2018

	Primary (6-13-year-old)			Secondary (14-17-year-old)		
	In-School	Out-of-school	% out of school	In-School	Out-of-School	% out of school
Total	3,126,670	1,016,202	25	297,339	1,372,806	82
Male	1,523,759	516,619	25	134,712	698,754	84
Female	1,602,911	499,583	24	162,627	674,052	81

Source: 2018 Malawi Population and Housing Census

Promoting industrialization

- 🌅 Improve the competitiveness of local agri-food industries
- 🌅 Invest in agri-food processing to harness the changing diets
- 🌅 Promote locally produced products (e.g.: Best Buy Malawi Strategy)
- 🌅 Enforce compliance to rules of origin to curb possible “food fraud”
- 🌅 Reform food aid to reduce market distortions
- 🌅 Curb unregulated food importation