

# WS1 - Are Local Investor Farmers Making Small-Scale Farmers More Productive and Commercialized? Evidence from Nigeria

Milu Muyanga, Thomas Jayne, Adebayo Aromolaran, Saweda Liverpool-Tasie, Titus Awokuse

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# Presentation Overview

1. Introduction
2. Key questions
3. Methodology
4. Sampling design
5. Preliminary results
6. Conclusion
7. Next steps

# Introduction

- Recent evidence documents changing structure of land ownership in sub-Saharan Africa
- Data from national survey data and farm listings show rapid investment by medium-scale **investor** farmers in the region
- Objectives of WS1/Nigeria are to understand:
  1. the characteristics of these investor farmers
  2. how they are influencing the behaviour and welfare of the millions of small-scale farm households around them
  3. Whether MS farms are more or less productive than SS farms
  4. whether MS investor farms should be promoted as a policy tool to promote ag commercialization and transformation

# APRA study sites in Nigeria



# Field Team



Leadership

# Enumerators



# Villages



# Getting to the villages



# Survey pre-test & interviews



# Key Questions

- What are the characteristics of the medium-scale farms?
- Does the increased acquisition of farmland by local investor farmers contribute to land scarcity and accelerate out-migration from densely populated rural areas?
- Does increased land acquisition by medium- and large-scale farms expand off-farm employment through ag growth multipliers?
- Is the rise of commercialised medium-scale farms – with greater surplus production – attracting new investment in input and output markets that influence market access for local smallholders?

# Definitions

- **Medium-scale (MS) farms:** farms operating  $> 5$  hectare
- **Small-scale (SS) farms:** farms operated  $< 5$  hectares

*operated land:* area under cultivation + area under animal production

# Sampling- Medium Scale Farms Data challenges

- Most available nationally representative survey datasets in sub-Saharan Africa (e.g. LSMS) contain too few medium- and large- farms to form accurate conclusions about them
- Correcting this informational blind spot requires new kind of sampling method
- Involves compilation of lists of the full population of medium/large farms in selected study sites

# Data collection activities

- The 2017/18 fieldwork was conducted in two phases:
  1. Population listing of all medium-scale farms in 3 Local Government Areas (LGAs) in Ogun and Kaduna States, with basic information collected on all farms – September/October 2017
  2. Detailed survey of SS and MS randomly selected farms in these 3 LGAs in each State – March/June 2018
- N= roughly 1000 SS and 1000 MS farms
- The panel survey is anticipated to be repeated May/June 2020

# Listing of medium/large-scale farms

## STEP I:

- Nigeria is administratively divided into 36 States
  - Kaduna State from North and Ogun South were picked purposively

## STEP II:

- Each state is divided into three senatorial districts
- Each senatorial district is divided into Local Government Areas
  - One LGA was purposively selected from each senatorial district

## STEP III:

- Complete listing of all households controlling (owned, rented in, borrowed, etc.) or operating five hectares and above in all the selected LGAs
  - LGAs consist of Wards (administrative units within LGAs numbering between 9 and 12), and each Ward contains several communities, which may be villages/towns

# Sampling – Multistage sampling of MS farms [I]

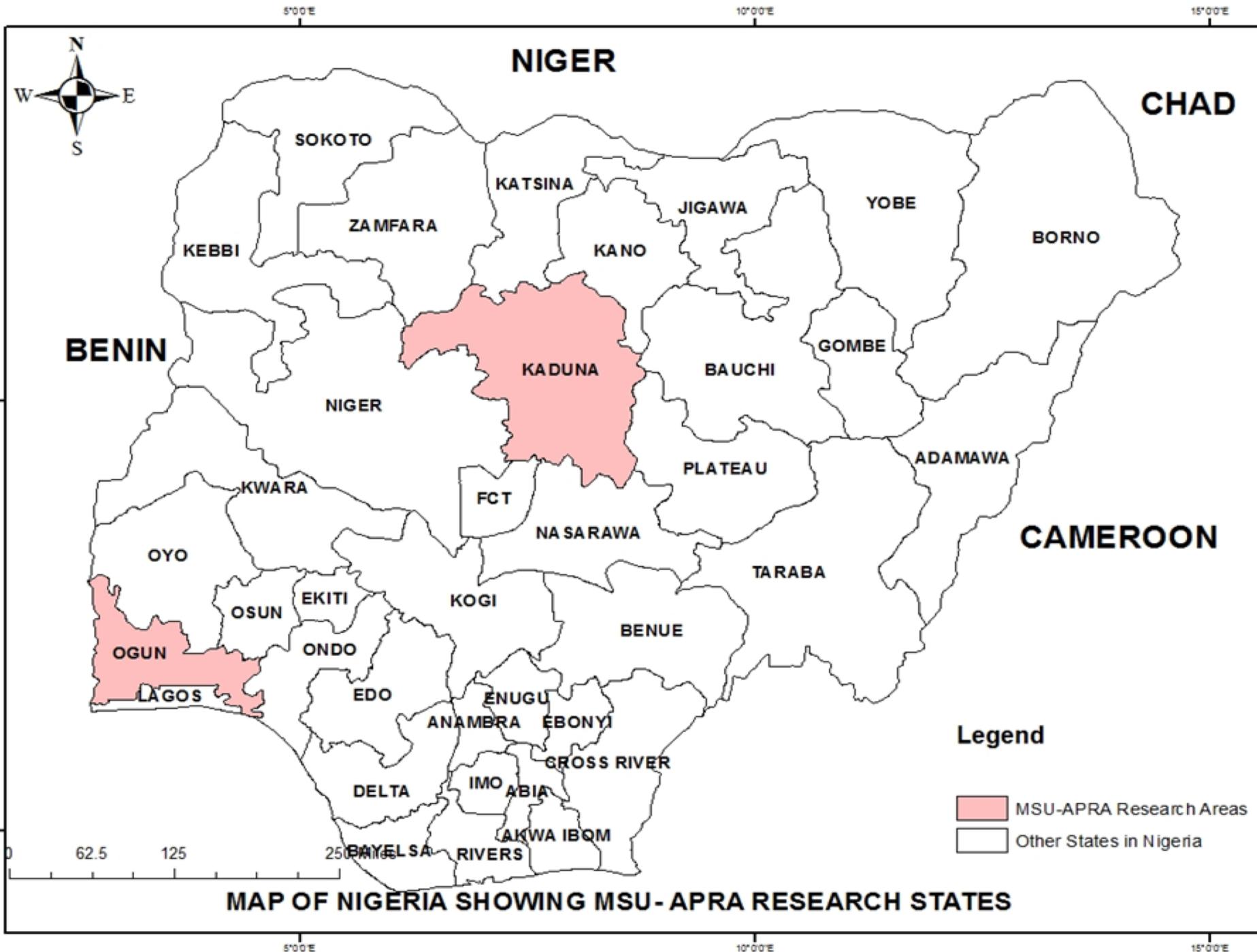
- Combination of purposive, cluster, proportionate random sampling techniques
- Due to budget constraints, we limited our sample size to 1000 medium-scale farms, 500 respondents from each state
- **Stage I:** To ensure representation of all the wards within each LGA, all wards were ranked based on the concentration of medium/large farms
- **Kaduna State-** Wards were next stratified into terciles (thirds), yielding three relatively equal groups:
  - High concentration, medium concentration, and low concentration

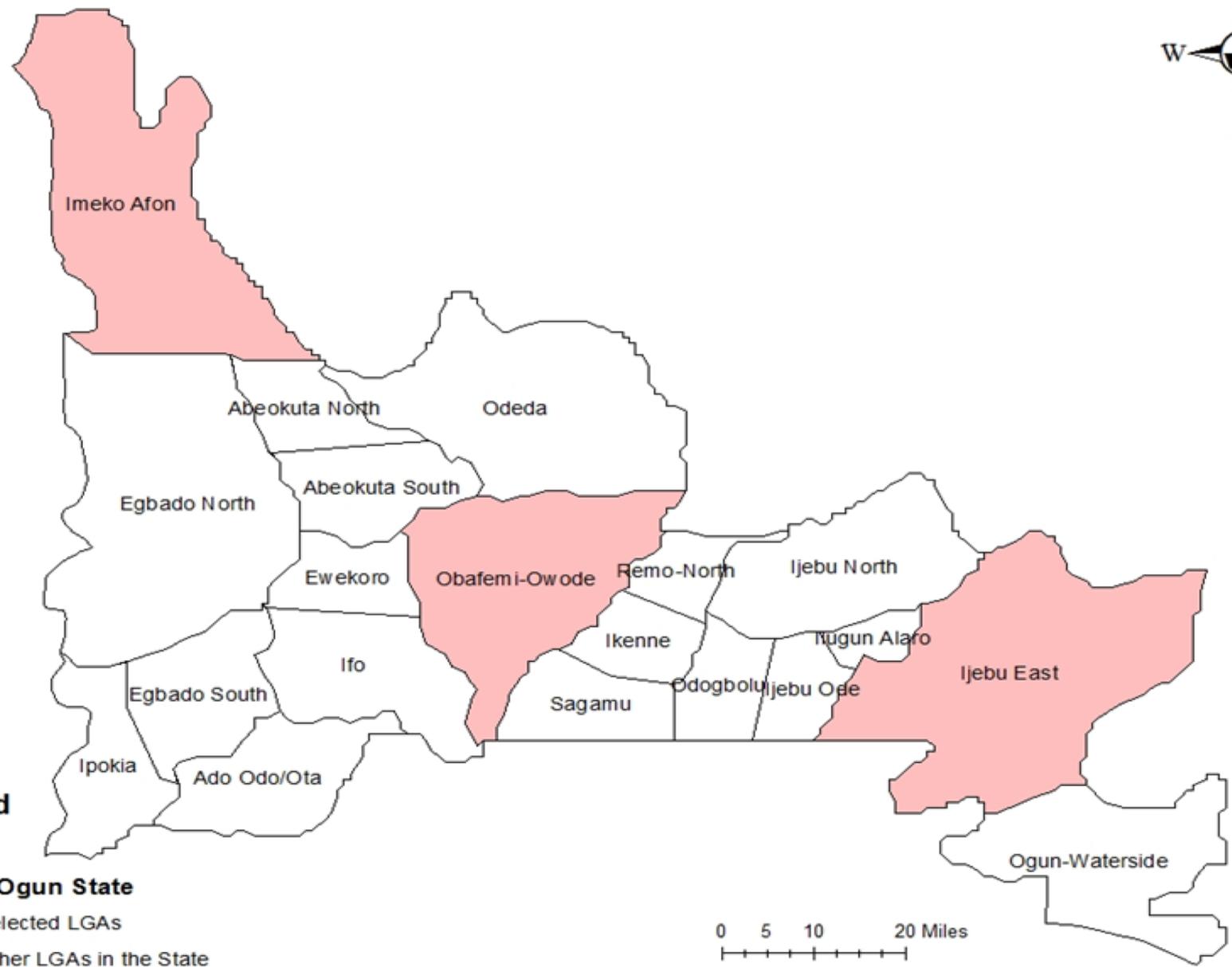
# Sampling – Multistage sampling of MS farms [II]

- **Ogun State-** Due to small numbers of medium/large scale farms in Ogun Wards, a slightly different approach was used
  - Wards were stratified into quartiles yielding four relatively equal groups: high concentration, medium-high concentration, medium-low concentration, and low concentration
- **Stage II:** One ward was selected randomly from each of the terciles (Kaduna)/quartiles (Ogun) in each of the selected LGA
  - Three (four) wards per LGA in Kaduna (Ogun) State
- **Stage III:** A proportional random sampling was adopted to select households for interview from the selected wards
  - The number of respondents in each wards depended on the population of medium/large farms listed in that ward relative to other selected wards in that LGA

# Listing and sampling of Small-scale farms

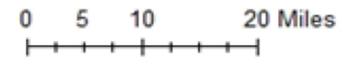
- One of the primary objective of this study is to understand how the medium/large-scale farmers are influencing the behaviour and welfare of smallholder farm households around them
  - Smallholder farmers at close proximity to the medium-scale farms had to be included in this study
- This involved a complete listing of all the smallholder farmers in the sampled Wards
  - A proportional random sampling of smallholder farms was followed to pick SS farms to include in the study
- We limited smallholder sample size to 1000 farms, 500 respondents from each state

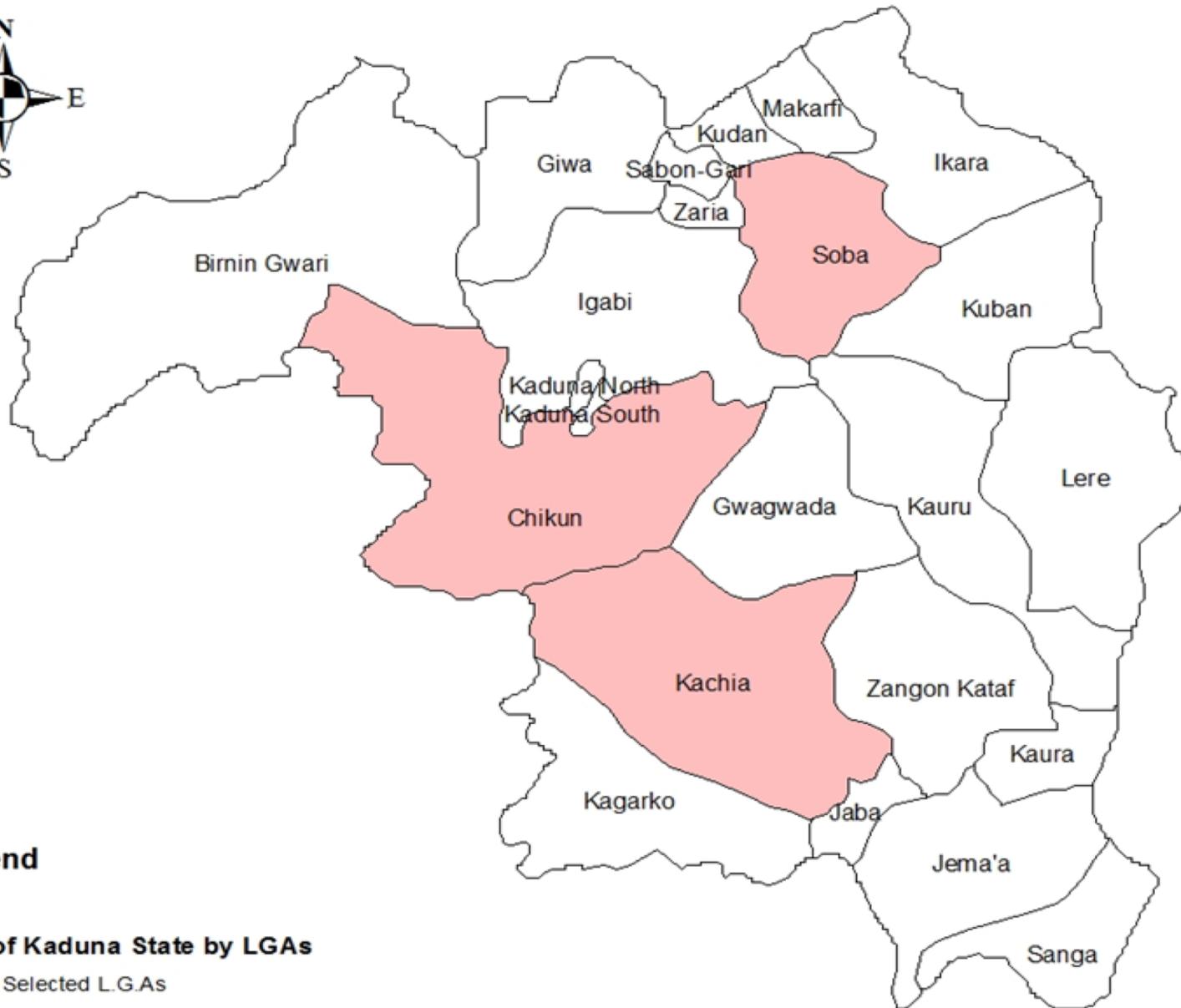




**Legend**

- Map of Ogun State**
-  Selected LGAs
  -  Other LGAs in the State





**Legend**

**Map of Kaduna State by LGAs**

-  Selected L.G.As
-  Other LGAs in the State



# Table 1: Ogun State- Medium-Scale Sample

LGA	Ward	Target	Actual (listing- land operated)	Achieved (%)	Actual (survey- land operated)	Achieved (%)
<b>Imekon Afon</b>	Atapele	35	38	109%	41	117%
	Imeko	102	103	101%	119	117%
	Agberiodo	10	13	130%	17	170%
	Obada	20	23	115%	30	150%
<b>Ijebu East</b>	Itele	66	66	100%	82	124%
	Owu	76	75	99%	85	112%
	Ikija	11	12	109%	17	155%
	Imobi	14	17	121%	33	236%
<b>Obafemi Owode</b>	Alapako	46	50	109%	60	130%
	Owode	71	69	97%	79	111%
	Oba	27	28	104%	38	141%
	Obafemi	24	26	108%	27	113%
<b>Total</b>		<b>502</b>	<b>520</b>	<b>104%</b>	<b>628</b>	<b>125%</b>

## Table 2: Ogun State- Smallholders Sample

LGA	Ward	Target	Actual (listing-land operated)	Achieved (%)	Actual (survey-land operated)	Achieved (%)
Imekon Afon	Atapele	54	19	35%	16	30%
	Imeko	63	76	121%	60	95%
	Agberiodo	22	23	105%	19	86%
	Obada	28	59	211%	52	186%
Ijebu East	Itele	33	45	136%	29	88%
	Owu	41	36	88%	26	63%
	Ikija	48	48	100%	43	90%
	Imobi	45	51	113%	35	78%
Obafemi Owode	Alapako	72	66	92%	56	78%
	Owode	16	62	388%	52	325%
	Oba	20	35	175%	25	125%
	Obafemi	58	25	43%	24	41%
<b>Total</b>		<b>500</b>	<b>545</b>	<b>109%</b>	<b>437</b>	<b>87%</b>

## Table 3: Kaduna State- Medium-Scale Sample

LGA	Ward	Target	Actual (listing-land operated)	Achieved (%)	Actual (survey-land operated)	Achieved (%)
<b>Chikun</b>	Kunai	35	38	109%	47	134%
	Kuriga	38	41	108%	43	113%
	Rido	93	89	96%	90	97%
<b>Kachia</b>	Agunu	87	88	101%	103	118%
	Bishini	29	33	114%	37	128%
	Gidan Tagwai	51	54	106%	59	116%
<b>Soba</b>	Dan Wata	37	41	111%	43	116%
	Gami Gira	111	108	97%	109	98%
	Garu	19	20	105%	28	147%
<b>Total</b>		<b>500</b>	<b>512</b>	<b>102%</b>	<b>559</b>	<b>112%</b>

## Table 4: Kaduna State- Smallholders Sample

LGA	Ward	Target	Actual (listing-land operated)	Achieved (%)	Actual (survey-land operated)	Achieved (%)
Chikun	Kunai	73	79	108%	70	96%
	Kuriga	29	32	110%	30	103%
	Rido	65	69	106%	68	105%
Kachia	Agunu	105	106	101%	91	87%
	Bishini	23	27	117%	23	100%
	Gidan Tagwai	38	42	111%	37	97%
Soba	Dan Wata	52	54	104%	52	100%
	Gami Gira	59	62	105%	61	103%
	Garu	56	62	111%	54	96%
<b>Total</b>		<b>500</b>	<b>533</b>	<b>107%</b>	<b>486</b>	<b>97%</b>

# Findings

Descriptive Statistics

Listing Data

## Table 5a: Landholding in Kaduna State

LGA	Farm type	N	Mean land controlled (ha)	Mean land planted (ha)	% area planted/controlled
Chikun	Small-scale	2654	4.88	2.12	43
	Medium-scale	409	13.20	8.36	63
Kachia	Small-scale	4770	3.30	3.05	92
	Medium-scale	749	16.68	8.75	52
Soba	Small-scale	4427	2.97	2.45	83
	Medium-scale	522	14.41	10.86	75
<b>KADUNA</b>	Small-scale	11851	3.53	2.62	74
	Medium-scale	1680	15.13	9.31	62
	<b>OVERALL</b>	<b>13531</b>	<b>4.97</b>	<b>3.45</b>	<b>69</b>

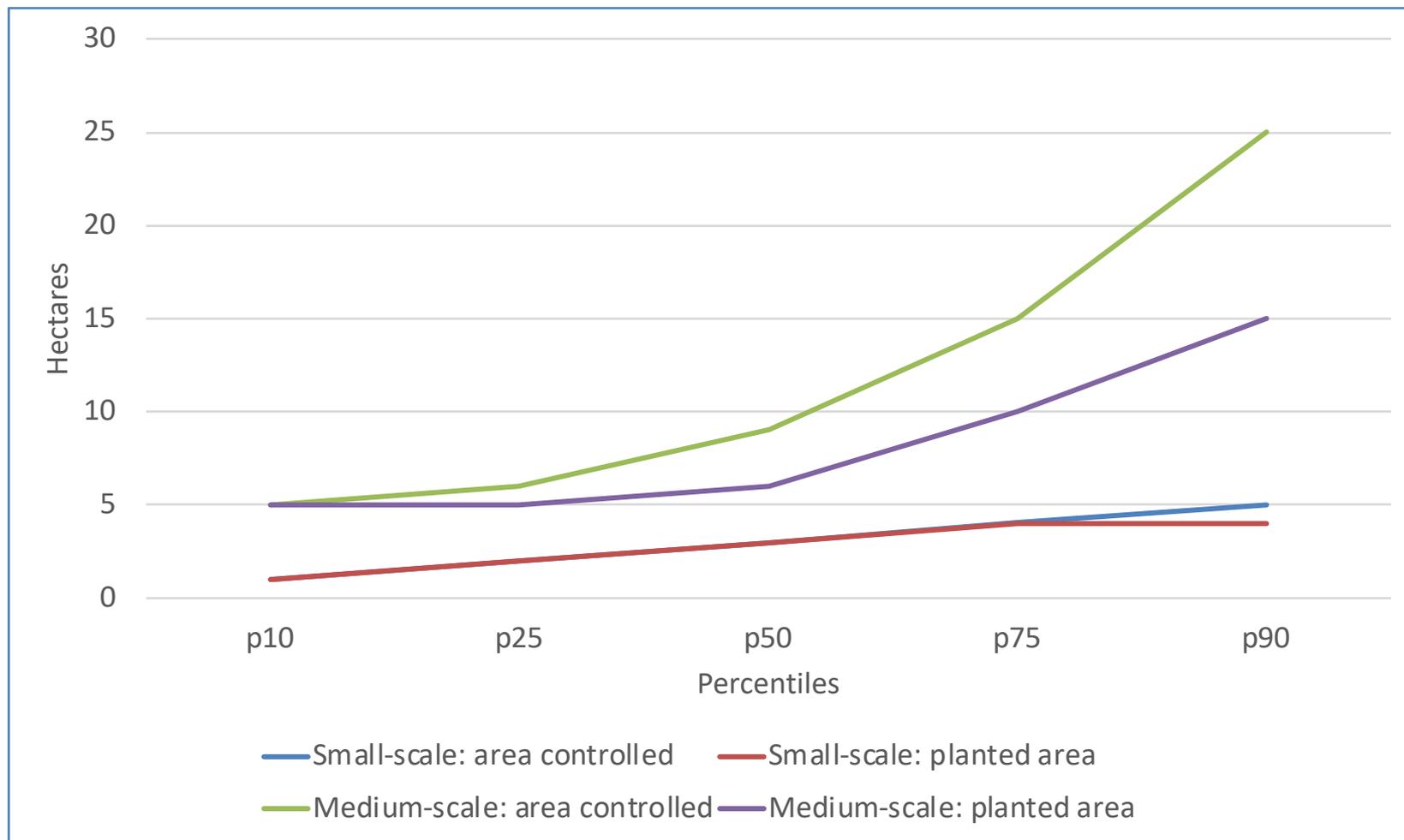
## Table 5b: Land access in Kaduna State

LGA	Farm type	N	% of total farms	Total area controlled (ha)	% of total area	Total area planted (ha)	% of total area planted
Chikun	Small-scale	2654	20	12,939	19	5,620	12
	Medium-scale	409	3	5,397	8	3,421	7
Kachia	Small-scale	4770	35	15,748	23	14,539	31
	Medium-scale	749	6	12,492	19	6,552	14
Soba	Small-scale	4427	33	13,141	20	10,866	23
	Medium-scale	522	4	7,521	11	5,669	12
<b>KADUNA</b>	Small-scale	11851	88	41,828	62	31,025	66
	Medium-scale	1680	12	25,410	38	15,642	34
	<b>OVERALL</b>	<b>13531</b>	<b>100</b>	<b>67,238</b>	<b>100</b>	<b>46,666</b>	<b>100</b>

## Table 5c: Farm Structure in Kaduna State

Farm size category	Number of farms	% of farms to total	Total land controlled (ha)	% land controlled	Area planted (ha)	% area planted
Less than 2 ha	2,372	18	3,408	5	2,119	5
2-5 ha	9,450	70	38,194	57	28,726	62
5-10 ha	1,277	9	12,044	18	7,526	16
10-20 ha	300	2	6,358	9	3,532	8
20 ha and over	133	1	7,234	11	4,764	10
Total	13,532	100	67,238	100	46,666	100

# Figure 1: Landholding in Kaduna State



## Table 6a: Land access in Ogun State

LGA	Farm type	N	% of total farms	Mean land controlled (ha)	Mean land planted (ha)	% planted/controlled
Imeko – Afon	Small-scale	2687	35	5.43	2.08	38
	Medium-scale	839	11	24.48	11.83	48
Ijebu East	Small-scale	1271	17	4.85	2.05	42
	Medium-scale	761	10	15.20	8.94	59
Obafemi Owondo	Small-scale	1684	22	5.17	2.08	40
	Medium-scale	452	6	15.14	7.85	52
<b>OGUN</b>	Small-scale	5642	73	5.22	2.07	40
	Medium-scale	2052	27	18.98	9.88	52
	<b>OVERALL</b>	<b>7694</b>	<b>100</b>	<b>8.89</b>	<b>4.15</b>	<b>47</b>

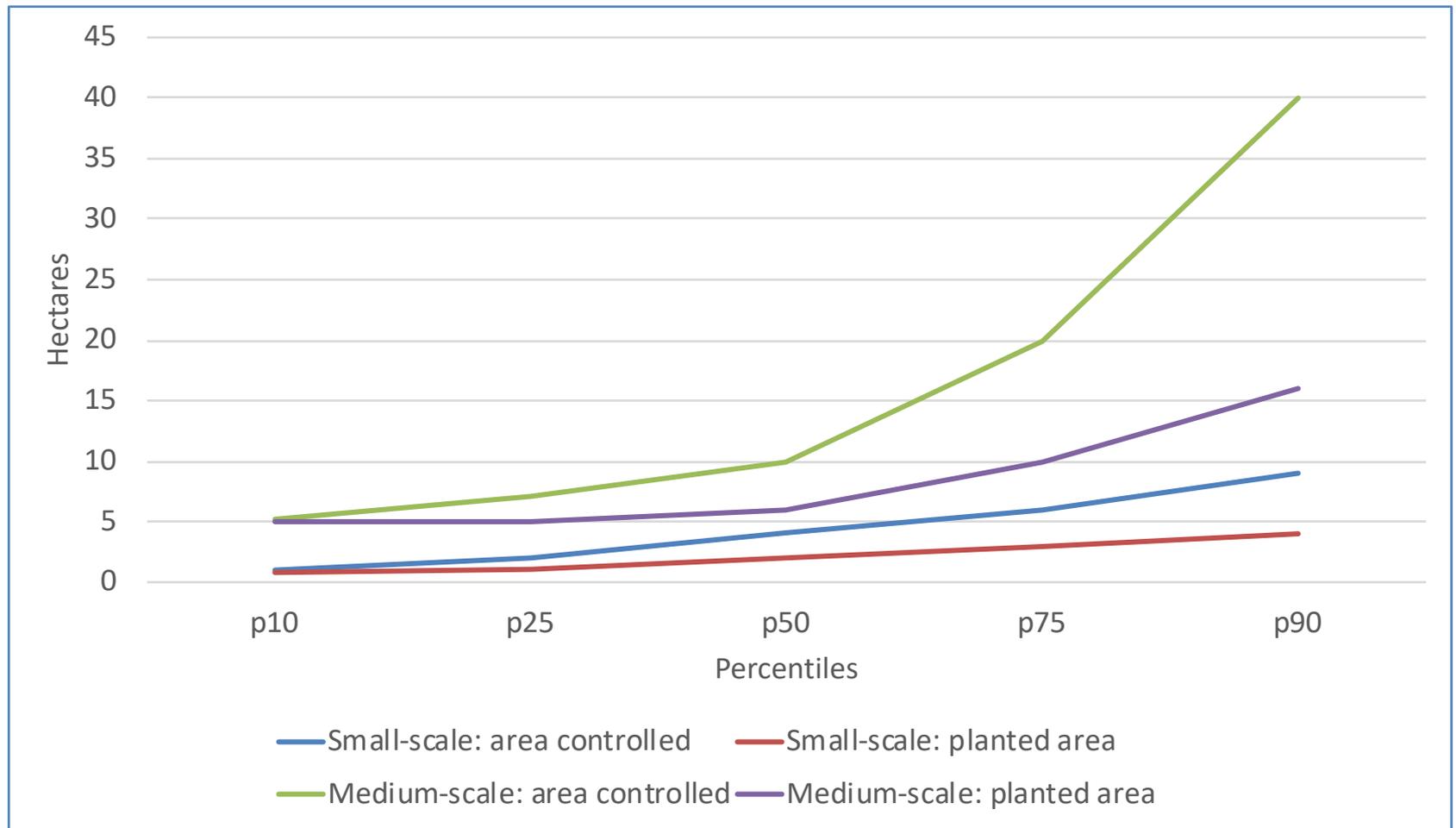
## Table 6b: Land access in Ogun State

LGA	Farm type	N	% of total farms	Total area controlled (ha)	% of total area owned	Total area planted (ha)	% of total area planted
Imeko – Afon	Small-scale	2687	35	14,585	21	5,582	17
	Medium-scale	839	11	20,537	30	9,923	31
Ijebu East	Small-scale	1271	17	6,161	9	2,603	8
	Medium-scale	761	10	11,566	17	6,803	21
Obafemi Owondo	Small-scale	1684	22	8,713	13	3,496	11
	Medium-scale	452	6	6,842	10	3,548	11
<b>OGUN</b>	Small-scale	5642	73	29,459	43	11,681	37
	Medium-scale	2052	27	38,945	57	20,273	63
	Total	7694	100	68,404	100	31,955	100

## Table 6c: Farm Structure in 12 wards of Ogun State

Farm size category	Number of farms	% of farms to total	Total land controlled (ha)	% land controlled	Area planted (ha)	% area planted
below 2ha	2265	29	6,948	10	2,148	7
2-5 ha	3377	44	22,511	33	9,534	30
5-10 ha	1463	19	17,502	26	8,901	28
10-20 ha	415	5	10,010	15	4,957	16
20 ha and over	174	2	11,433	17	6,415	20
<b>Total</b>	<b>7694</b>	<b>100</b>	<b>68,404</b>	<b>100</b>	<b>31,955</b>	<b>100</b>

## Figure 2: Landholding in Ogun State



# Findings

Descriptive Statistics

Survey Data

# Table 7a: Pathways into medium-scale farming

	Farm scale when household started farming	
Current farm scale	Small-scale	Medium-scale
Small-scale	66793	1800
%	97.40%	<b>2.60%</b>
Medium-scale	4117	4586
%	<b>47.30%</b>	52.70%

## Table 7b: Pathways into medium-scale farming by State

		Farm scale when household started farming	
State	Current farm scale	small-scale	medium-scale
Ogun	small scale	13786	192
	%	98.60%	1.40%
	medium scale	1066	895
	%	<b>54.40%</b>	45.60%
Kaduna	small scale	53007	1608
	%	97.10%	2.90%
	medium scale	3051	3691
	%	<b>45.30%</b>	54.70%

# Table 7c: Period when household became medium-scale

	period when household became medium-scale	Ogun		Kaduna	
		N	%	N	%
<b>Formerly small-scale</b>	Prior to 2000	251	25%	446	20%
	2000-2004	156	16%	246	11%
	2005-2009	200	20%	617	28%
	2010-2014	249	25%	624	28%
	Post 2015	136	14%	282	13%
<b>Consistently medium-scale</b>	Prior to 2000	419	48%	1424	43%
	2000-2004	101	12%	595	18%
	2005-2009	134	15%	529	16%
	2010-2014	163	19%	528	16%
	Post 2015	52	6%	268	8%

## Table 8: Most important factors enabling small-scale farmers to transition to medium-scale

	N	%
Land availability (already had more than five hectares of land and was able to start operating more than 5 ha)	1503	47%
Land availability (acquired additional land under my ownership that brought my operated farm size to > 5 ha)	760	24%
Land accessibility (rented and/or borrowed enough land to operate > 5 ha of land)	357	11%
Able to secure enough labor among family members to operate > 5 ha	89	3%
Able to secure enough hired labor to operate > 5 ha	146	5%
Purchased mechanization equipment which allowed me to cultivate more land > 5 ha	13	0%
Rented mechanization equipment which allowed me to cultivate > five ha	13	0%
Purchased irrigation equipment which allowed me to profitably operate > 5 ha of land	203	6%
Other	104	3%
<b>Total</b>	<b>3188</b>	<b>100%</b>

# Table 9: Farm-scale by main occupation of the head

Current farm scale	Farm scale when household started farming	Previous/current main occupation of hh head	
		non-agriculture	agriculture
Small-scale	Small-scale	92	66701
	%	0%	100%
	Medium-scale	11	1789
	%	1%	99%
Medium-scale	Small-scale	730	3387
	%	<b>18%</b>	82%
	Medium-scale	811	3776
	%	<b>18%</b>	82%

# Table 10a: Farm scale by current residence of the head

State	Current farm scale	Current residence of household head	
		outside community	within community
Ogun	small scale	38	13940
	%	0.30%	99.70%
	medium scale	245	1716
	%	<b>12.50%</b>	87.50%
Kaduna	small scale	0	54616
	%	0.00%	100.00%
	medium scale	101	6641
	%	<b>1.50%</b>	98.50%

## Table 10b: Landholding by farm scale and current residence of the head

	Current farm scale			
	Small-scale		Medium-scale	
	Current residency of hh head		Current residency of hh head	
	outside community	within community	outside community	within community
N	38	68555	347	8357
<b>Started farming:</b>				
Land operated (ha)	1.78	2.19	4.80	5.63
Land controlled (ha)	2.43	2.67	11.47	7.07
Area operated/owned (%)	73.23	81.81	41.82	79.57
<b>Current:</b>				
Land operated (ha)	2.44	2.46	8.37	10.10
Land controlled (ha)	4.03	2.66	15.87	10.82
Area operated/owned (%)	60.49	92.59	52.75	93.40
<b>Area expansion (%)</b>				
Operated land	37.11	12.63	74.48	79.60
Controlled land	65.98	(0.49)	38.34	53.01

# Table 11a: Landholding by pathway into MSF

	Current farm scale			
	Small-scale		Medium-scale	
	Farm category when household started farming		Farm category when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
N	66793	1800	4117	4586
<b>Started farming:</b>				
Land operated (ha)	1.96	10.70	2.34	8.52
Land controlled (ha)	2.53	7.85	<b>4.15</b>	10.02
Area operated/owned (%)	77.25	136.43	56.23	84.99
<b>Current:</b>				
Land operated (ha)	2.45	3.04	9.40	10.60
Land controlled (ha)	2.55	6.97	9.77	12.13
Area operated/owned (%)	96.17	43.66	96.22	87.34
<b>Area expansion (%)</b>				
Operated land	25.05	(71.57)	302.67	24.45
Controlled land	0.44	(11.15)	135.30	21.10

# Table 11b: Landholding by state

	Ogun		Kaduna	
	Current farm scale		Current farm scale	
	Small-scale	Medium-scale	Small-scale	Medium-scale
N	13978	1961	54616	6742
<b>Started farming:</b>				
Land operated (ha)	1.80	5.50	2.29	5.62
Land controlled (ha)	3.38	9.87	2.49	6.48
Area operated/owned (%)	53.34	55.67	91.69	86.73
<b>Current:</b>				
Land operated (ha)	2.27	11.62	2.51	9.57
Land controlled (ha)	2.81	14.36	2.62	10.05
Area operated/owned (%)	80.62	80.91	95.83	95.29
<b>Area expansion (%)</b>				
Operated land	25.66	111.34	10.00	70.33
Controlled land	(16.86)	45.41	5.25	55.03

# Table 12a: Family historical background

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
N	66793	1800	4117	4586
head has secondary occupation besides agriculture	50%	55%	62%	64%
head related to headman	16%	35%	23%	25%
head spouse related to headman	10%	34%	14%	15%
head related to chief	34%	65%	57%	48%
land owned by father to household head- ha	10.51	26.20	23.80	33.76
years since household was started	17.86	23.68	22.64	21.00
years since household started farming	16.07	22.77	19.98	19.29
land inherited from parents- ha	3.91	10.94	7.25	10.69

## Table 12b: Family historical background by State

	Current farm scale			
	Small-scale		Medium-scale	
	State		State	
	Ogun	Kaduna	Ogun	Kaduna
N	13978	54616	1961	6742
household head has secondary occupation	40%	53%	42%	69%
head related to headman	10%	18%	17%	26%
head spouse related to headman	3%	12%	11%	15%
head related to chief	24%	38%	29%	59%
land owned by father to household head- ha	11.76	10.70	33.77	27.67
years since household was started	21.97	17.00	24.71	20.92
years since household started farming	19.24	15.48	21.14	19.17
land inherited from parents -ha	4.96	3.88	12.89	7.95

## Table 13: Source of land acquisition (%)

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
<b>N</b>	66793	1800	4117	4586
<b>purchased land</b>	5.10	10.89	23.91	13.49
<b>inherited land</b>	69.45	80.83	49.75	67.12
<b>rented land</b>	5.99	3.83	9.17	4.01
<b>allocated land</b>	3.93	0.30	7.50	3.97
<b>borrowed land</b>	1.26	0.72	0.87	1.07
<b>family land</b>	10.96	1.93	6.48	7.92
<b>other land source</b>	3.31	1.49	2.31	2.41
<b>Total</b>	100.00	100.00	100.00	100.00

# Table 14: Land use

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
<b>N</b>	66793	1800	4117	4586
<b>crop farming</b>	87.26	87.49	84.05	84.22
<b>mixed farming</b>	1.28	0.35	1.65	3.10
<b>rented out</b>	3.77	10.70	3.76	1.80
<b>fallowed land</b>	3.86	0.54	4.18	2.93
<b>virgin land</b>	3.81	0.91	5.84	5.00
<b>other land use</b>	0.02	0.00	0.51	2.94
<b>Total</b>	100.00	100.00	100.00	100.00

## Table 15: Land tenure- largest plot

		Ogun		Kaduna	
Current farm scale	Land tenure	N	%	N	%
Small-scale	owned with title deed	4	0%	844	2%
	owned without title	10338	74%	43403	80%
	not owned-family land	1019	7%	5589	10%
	not owned-leased-rented	2376	17%	2189	4%
	not owned- other land	240	2%	2590	5%
	<b>Total: scale-scale</b>	<b>13977</b>	<b>100%</b>	<b>54615</b>	<b>100%</b>
Medium-scale	owned with title deed	80	4%	461	7%
	owned without title	1362	70%	5616	83%
	not owned-family land	22	1%	257	4%
	not owned-leased-rented	380	19%	222	3%
	not owned- other land	117	6%	177	3%
	<b>Total: medium-scale</b>	<b>1961</b>	<b>100%</b>	<b>6733</b>	<b>100%</b>

# Table 16: Household demographics

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
N	66793	1800	4117	4586
Household size	6.24	8.65	8.22	7.25
Gender of household head (% male)	94.21%	95.89%	96.92%	98.04%
Age of the household head (years)	42.74	46.30	47.21	45.43
Number of months household head lived in the household	11.87	11.76	11.91	11.82
Education attainment of household head (years)	7.01	4.87	7.02	8.02

# Table 17: Youth and young adults in agriculture

Farm scale	Age of the household head	Ogun		Kaduna	
		N	%	N	%
small-scale	15-24 years	152	1%	1547	3%
	25-34 years	1432	10%	17343	31%
	35-49 years	5245	38%	21764	39%
	50-64 years	4897	35%	11498	21%
	65 and over	2191	16%	3410	6%
	Total	13917	100%	55562	100%
medium-scale	15-24 years	5	0%	26	0%
	25-34 years	160	8%	835	14%
	35-49 years	854	42%	2858	49%
	50-64 years	657	33%	1573	27%
	65 and over	347	17%	504	9%
	Total	2023	100%	5796	100%

## Table 18: Services from MSF to smallholders

Services	Formerly small-scale, now MS		Consistently medium-scale	
	%	N	%	N
rents out tractor to smallholders (those who own tractors)	2%	1240	6%	2097
rents out other farm machinery service to smallholders	11%	3259	4%	4374
purchase farm inputs together with smallholder	20%	3259	27%	4374
sold farm inputs to smallholders	29%	3259	32%	4374
smallholder sought extension service from medium-scale farm	49%	3259	43%	4374
provided extension service to smallholder	46%	3259	41%	4374

## Table 19: Services from MSF to smallholders by State

Services	Formerly small-scale, now MS				Consistently medium-scale			
	State				State			
	Ogun		Kaduna		Ogun		Kaduna	
	%	N	%	N	%	N	%	N
rents out tractor to smallholders (those who own tractors)	6%	283	1%	957	9%	290	6%	1807
rents out other farm machinery service to smallholders	1%	1011	15%	2248	2%	895	4%	3479
purchase farm inputs together with smallholder	17%	1011	22%	2248	28%	895	26%	3479
sold farm inputs to smallholders	17%	1011	35%	2248	31%	895	32%	3479
smallholder sought extension service from medium-scale farm	43%	1011	52%	2248	60%	895	38%	3479
provided extension service to smallholder	41%	1011	48%	2248	55%	895	38%	3479

# Findings

## Indicators

### Survey Data

## Table 20a: Incomes and commercialisation index

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
N	66785	1800	4117	4586
Crop income per ha planted '000N	294.87	231.26	210.96	230.19
Crop income per adult person '000N	251.78	172.61	513.18	773.57
Crop income per day spent in the farm '000N	33.56	29.28	68.43	75.03
Crop income per adult equivalent '000N	172.96	127.28	364.74	491.03
Net income per adult equivalent '000N	235.07	184.40	433.92	542.80
Household commercialization index	62.78	62.71	<b>71.92</b>	61.07

## Table 20b: Incomes and commercialisation index by State

	Current farm scale			
	Small-scale		Medium-scale	
	State		State	
	Ogun	Kaduna	Ogun	Kaduna
N	13969	54616	1961	6742
Crop income per ha planted '000N	351.20	278.37	302.98	197.27
Crop income per adult person '000N	311.41	234.05	1,165.42	502.31
Crop income per day spent in the farm '000N	37.47	32.48	111.23	63.25
Crop income per adult equivalent '000N	229.65	156.95	867.91	304.30
Net income per adult equivalent '000N	301.19	216.48	970.35	351.96
Household commercialization index	89.81	55.87	91.36	58.89

## Table 21a: Kaduna- Output, land and labour ratios

Farm category	N	Y1	L2	A	Y1/L2	Y1/A	L2/A
below 2ha	12675	334,880.11	20.80	1.12	67,309.16	295,920.55	19.17
2-5 ha	41941	813,731.43	31.89	2.93	135,029.09	273,064.29	11.25
5-10 ha	4952	1,308,319.59	39.17	6.40	251,543.63	204,977.87	6.37
10-20 ha	1198	2,492,229.37	62.98	13.01	276,793.45	187,230.49	4.88
20 ha and over	593	5,225,683.10	69.85	28.85	1,589,853.52	153,201.63	2.53

## Table 21b: Ogun- Output, land and labour ratios

Farm category	N	Y1	L2	A	Y1/L2	Y1/A	L2/A
below 2ha	4533	329,259.77	23.98	1.01	82,556.84	332,566.92	32.70
2-5 ha	9445	1,033,734.59	31.42	2.85	292,695.51	360,125.63	11.16
5-10 ha	1175	2,171,924.60	60.55	6.54	779,288.98	329,690.54	9.93
10-20 ha	556	3,512,816.23	122.33	12.65	1,661,344.23	281,033.98	11.03
20 ha and over	230	7,982,868.40	63.92	34.05	3,864,375.46	219,516.25	2.47

## Table 22a: Assets values

	Current farm scale			
	Small-scale		Medium-scale	
	Farm scale when household started farming		Farm scale when household started farming	
	Small-scale	Medium-scale	Small-scale	Medium-scale
<b>N</b>	66793	1800	4117	4586
<b>Animal owned ('000N)</b>	432.30	1,135.95	272.01	315.08
<b>Total asset ('000N)</b>	14.71	28.10	20.73	75.20
<b>Total durables ('000N)</b>	173.50	180.52	508.64	292.84
<b>Value assets, durables and animals owned ('000N)</b>	620.51	1,344.56	801.37	683.11

## Table 22b: Assets values by States

	Current farm scale			
	Small-scale		Medium-scale	
	State		State	
	Ogun	Kaduna	Ogun	Kaduna
<b>N</b>	13978	54616	1961	6742
<b>Animal owned ('000N)</b>	82.56	545.00	152.48	336.07
<b>Total asset ('000N)</b>	11.25	16.04	105.01	33.26
<b>Total durables ('000N)</b>	117.47	188.08	692.66	308.33
<b>Value assets, durables and animals owned ('000N)</b>	211.28	749.11	950.15	677.66

# Results: summary

- Medium-scale controlling and farming disproportionately more farms compared to smallholder farmers- Ogun State
- 47% of the medium-scale farms started as smallholder farms
  - Land availability facilitated the transitions
- 18% of the medium-scale were headed by persons who were either currently/previousy in non-farm employment
- Only about 13% (Ogun) and 2% (Kaduna) of the medium-scale farmers reside outside their communities

# Next Steps

- Finalize data cleaning
- Undertake rigorous econometrics analysis
- Prepare a working paper and policy brief

# The Team

Team Member	Organisational Affiliation	Area of Responsibility
Thomas S Jayne	Michigan State University	Lead principal investigator
Milu Muyanga	Michigan State University	Investigator/data
Saweda Liverpool-Tasie	Michigan State University	Investigator/analysis
Titus Awokuse	Michigan State University	Investigator
Adebayo Aromolaran	Adekunle Ajasin University	Investigator/local collaborator