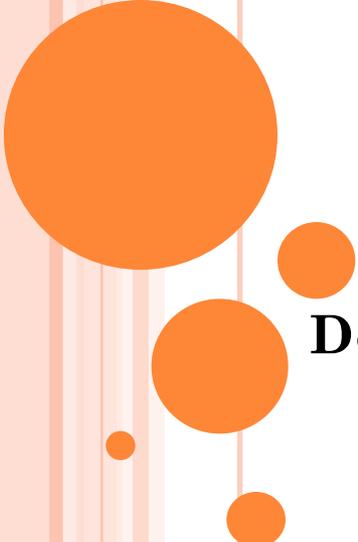


FERTILIZER SUPPLY CHAIN IN NIGERIA



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INTRODUCTION

○ **Context**

- Increases in agricultural productivity is linked with significant increase in inorganic fertilizer use.
- This is not the case for many developing countries including Nigeria where low agricultural productivity/yields have been attributed to the low fertilizer application rates (Morris et al. 2007).
- Despite the low rate of fertilizer consumption (about 7.7 kilogram per hectare [kg/ha] in 2008 (World Bank, 2008), Nigeria alone accounted for 23 percent of the entire fertilizer consumption in Sub-Saharan Africa in 2008/2009 (IFDC 2009).

OVERVIEW OF NIGERIA'S FERTILIZER MARKET

- It is the largest in the West Africa region, consuming approximately 600,000 to 800,000 product tons per year and accounting for more than 60 percent of the West African market (Bumb et al. 2012).
- The most common types of fertilizers purchased by states are nitrogen, phosphorus, and potassium (NPK) 20-10-10 and NPK solutions, urea, single super phosphate (SSP), and calcium ammonium nitrate (CAN).
- The involvement of the Nigerian government in procurement and distribution of fertilizer dates back to the 1970s where fertilizers were provided at subsidized rates as high as 95% (Nagy and Edun, 2002).



- By the late 1990s, the government-led procurement and distribution of subsidized fertilizer were highly inefficient, was riddled with corrupt practices such as late delivery of fertilizer with significant diversion of fertilizer from intended beneficiaries (Nagy and Edun 2002).
- Leakages of subsidized fertilizer into the regular market were common, leading to market price distortions as well as providing arbitrage opportunities.
- In 1997, the fertilizer sector was abruptly liberalized (Nagy and Edun, 2002).



- However, the private sector was neither experienced nor developed enough to respond to the government's sudden exit from the sector, and fertilizer use fell from a peak of 1.2 million metric tons in 1992 to 56,700 metric tons (mt) in 1997 (Banful and Olayide 2010, IFDC 2010).
 - To address this decline, the federal government resumed fertilizer subsidy at 25 percent of cost in 1999 under the Federal Market Stabilization Program (FMSP), with further subsidy added by many state governments.
 - This led to varied fertilizer prices across Nigerian states, with a wide range in the extent of subsidies.
- 

- Rent-seeking is not uncommon in the process, but most disturbing is that a significant proportion of subsidized fertilizer comes to the open market (round-tripping) and is sold at below the market price.
- This creates unfair competition in the market, leading to uncertainty and losses for the market players and discouraging private-sector investment in the development of agrodealer networks.



- These challenges encouraged the promotion of fertilizer vouchers in Nigeria in 2004 with a pilot in two states (Kano and Taraba) in 2004 and again between 2008 and 2010. However, in 2009, the voucher program was administered across the entire state in the federation.
- Following the voucher program, the Agricultural Transformation Agenda (ATA) was initiated in 2011 and implemented in 2012 to provide a unique connecting link as it targets the farmers directly with critically needed modern farm inputs on real-time basis.

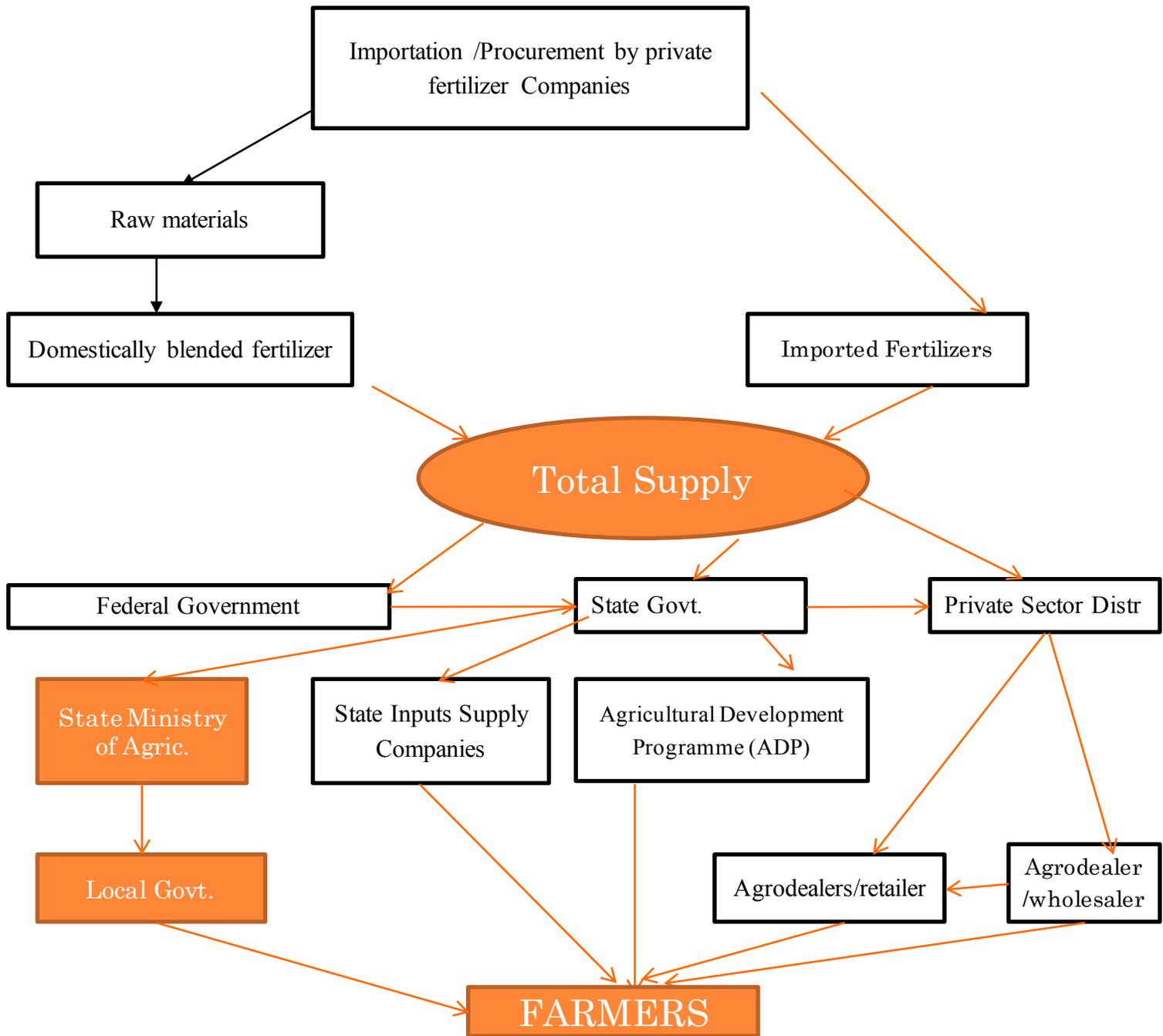


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Fertilizer Supply Chain

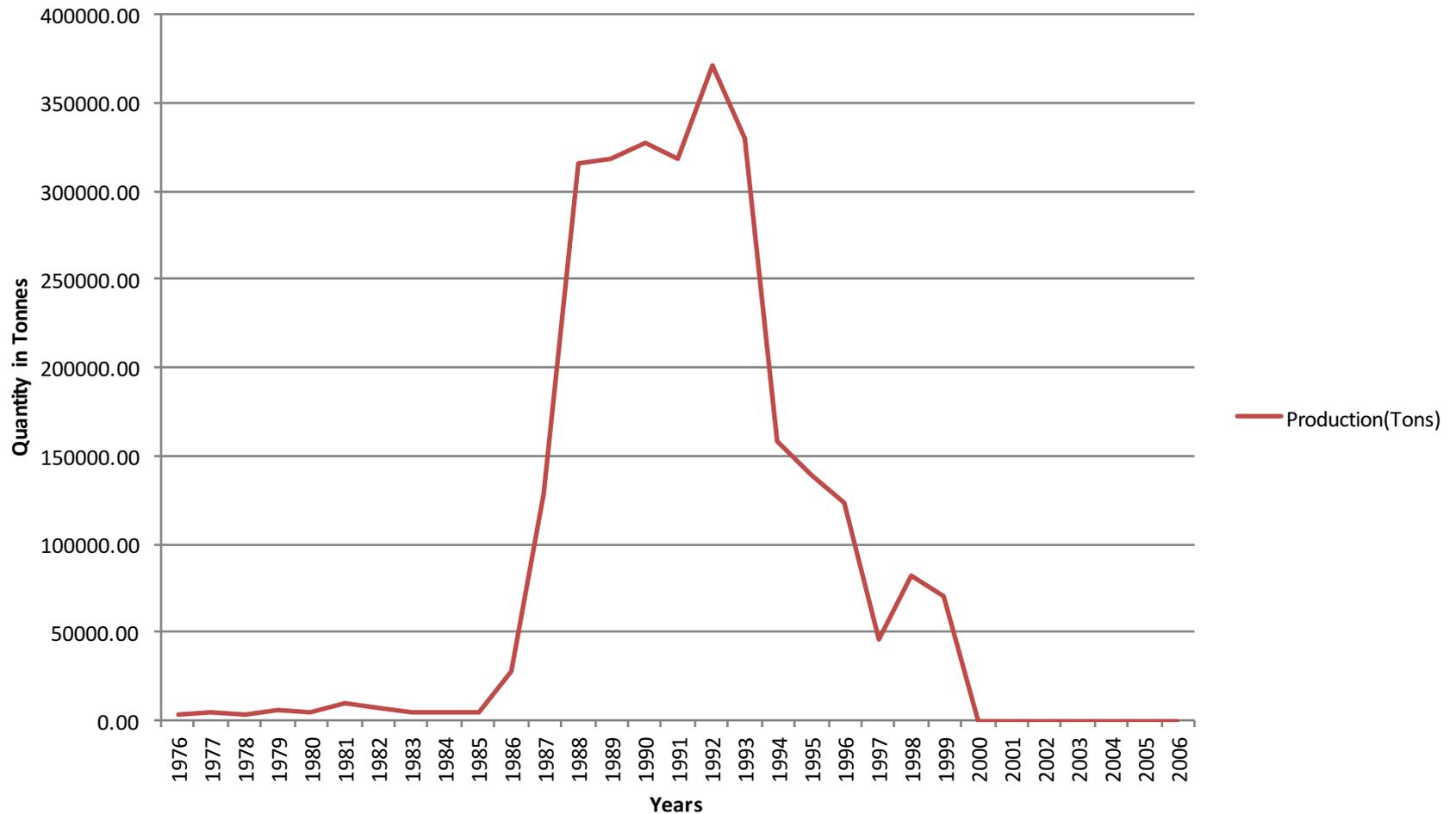


NUMBER OF FERTILIZER IMPORTERS AND MANUFACTURERS

STATES	IMPORTERS	MANUFACTURER
Lagos	12	8
Abuja	8	4
Niger		1
Kaduna	4	5
Kano	3	2
Katsina	2	2
Zamfara		1
Sokoto		1
Gombe	1	1
Plateau	1	
Benue		1
Edo		1
Rivers	1	



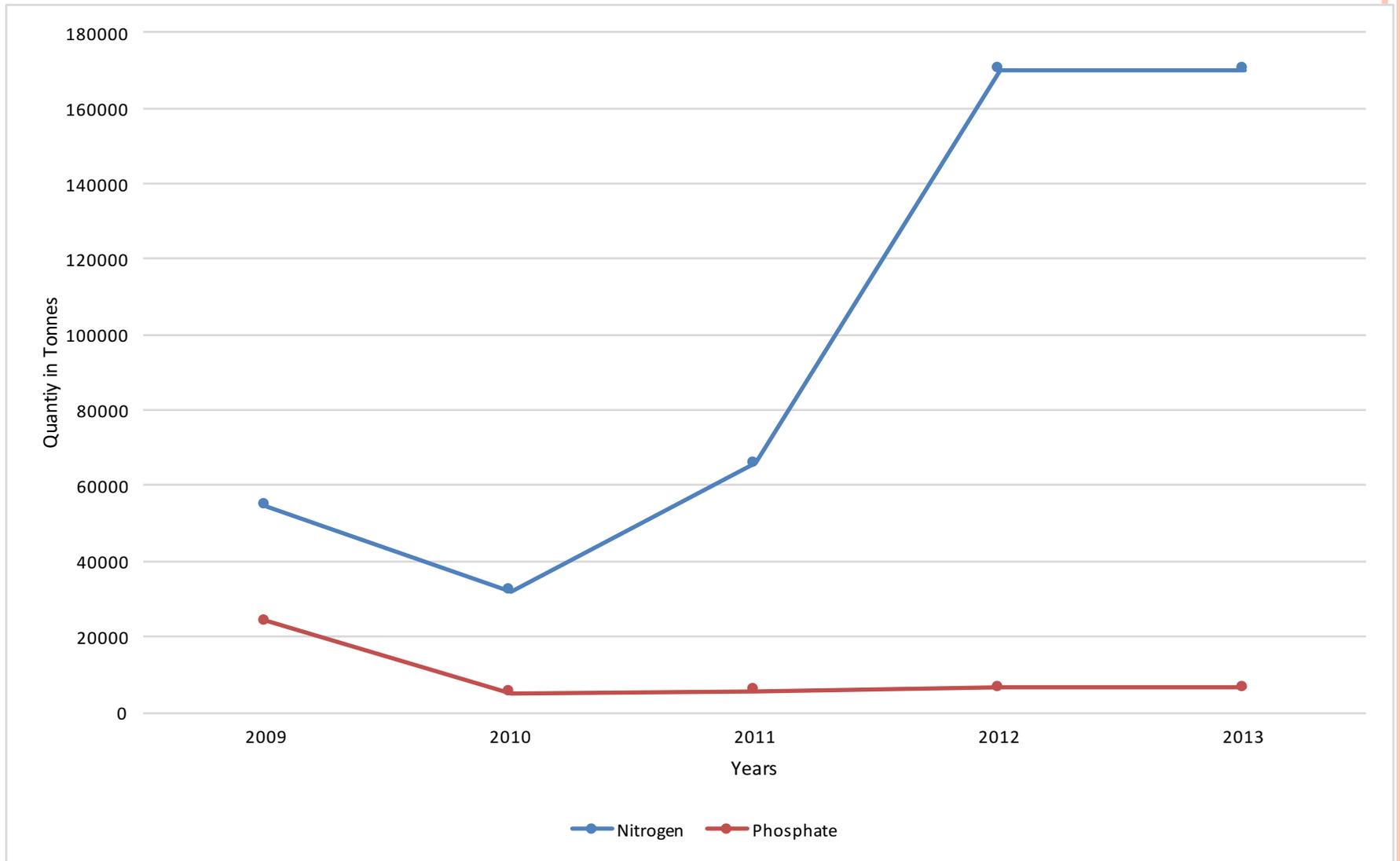
FERTILIZER PRODUCTION



Source: FAOSTAT online database

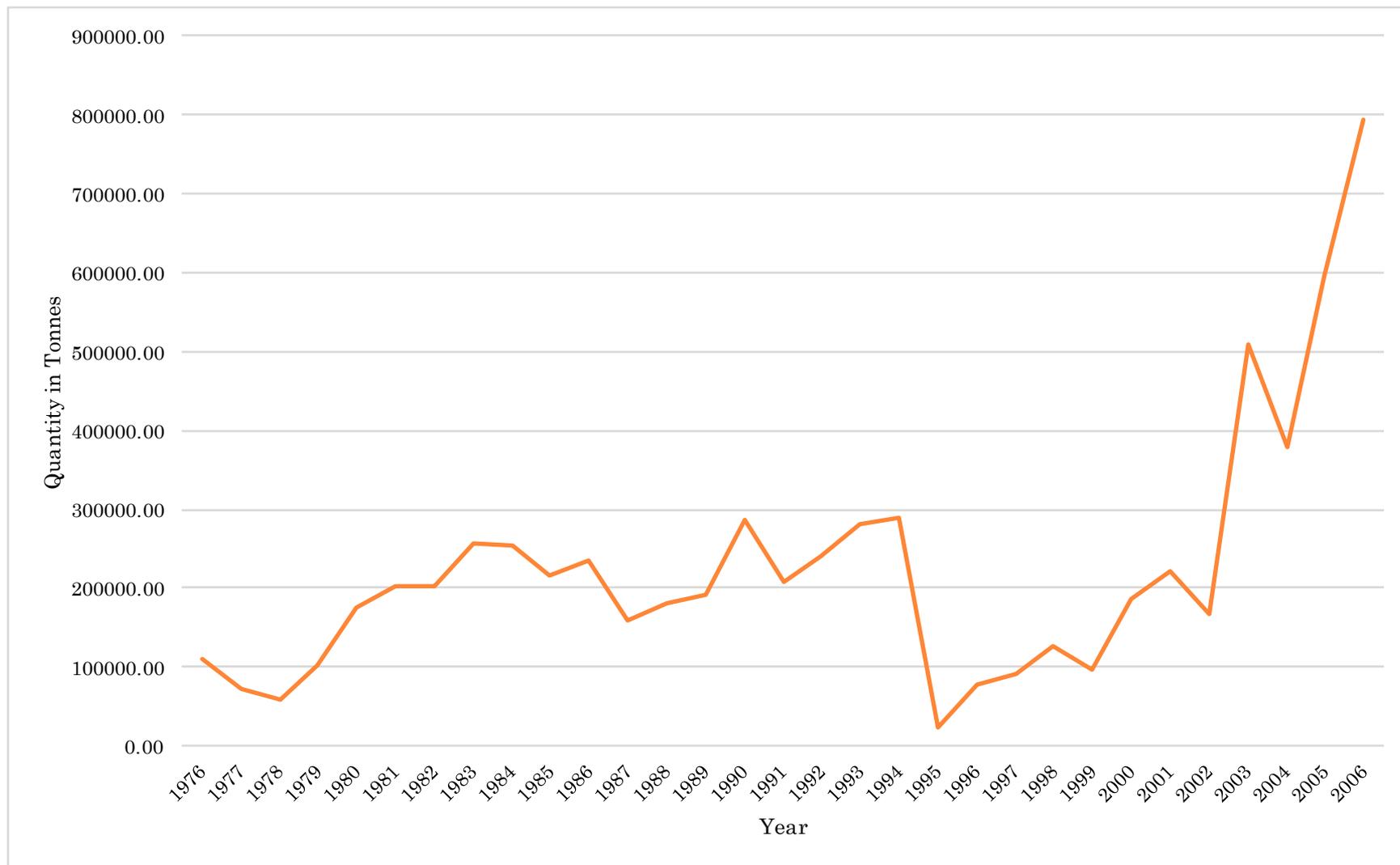


FERTILIZER PRODUCTION BY MACRO-NUTRIENTS



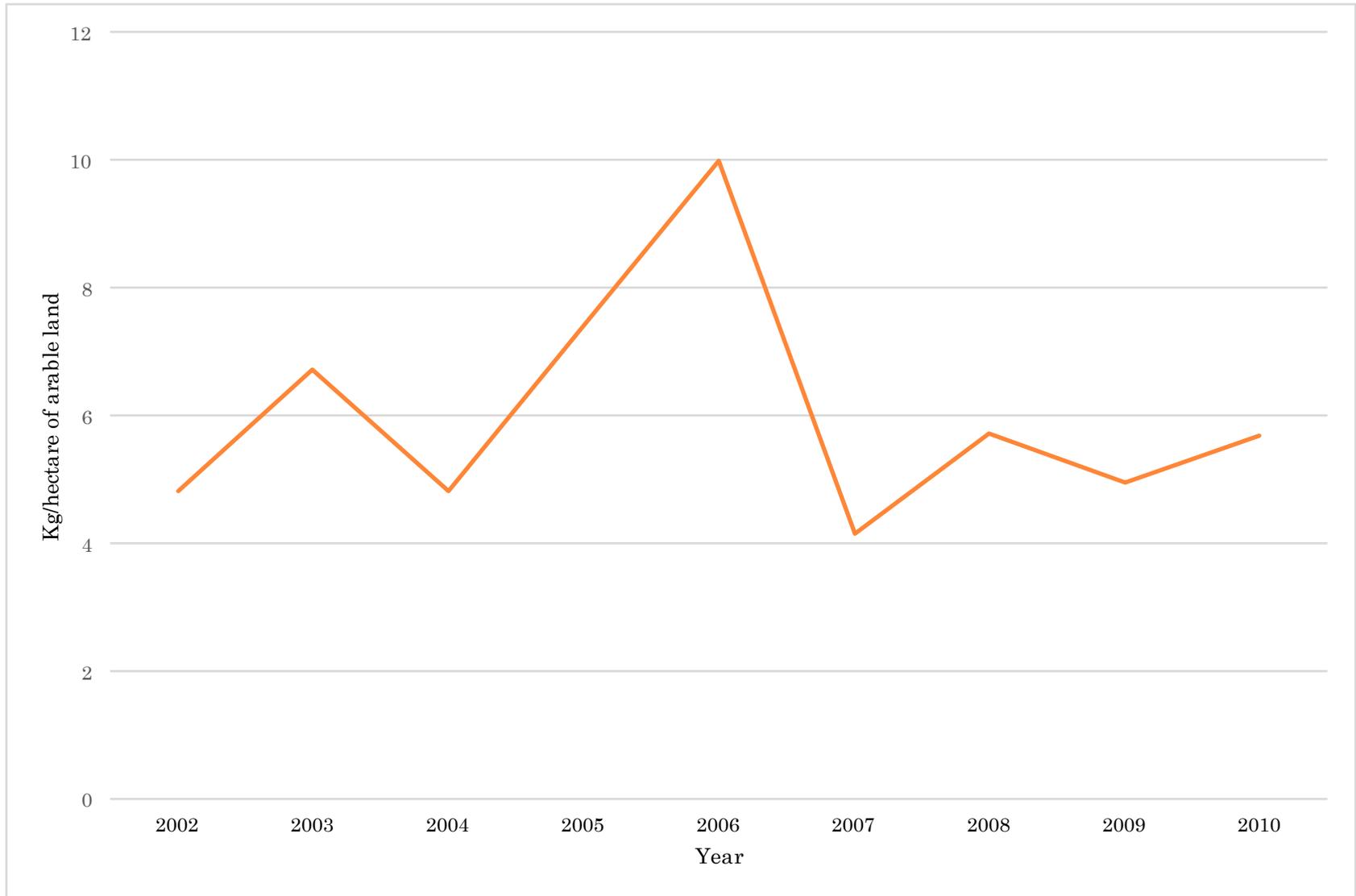
Source: FAOSTAT online database

FERTILIZER IMPORT (TONNES)



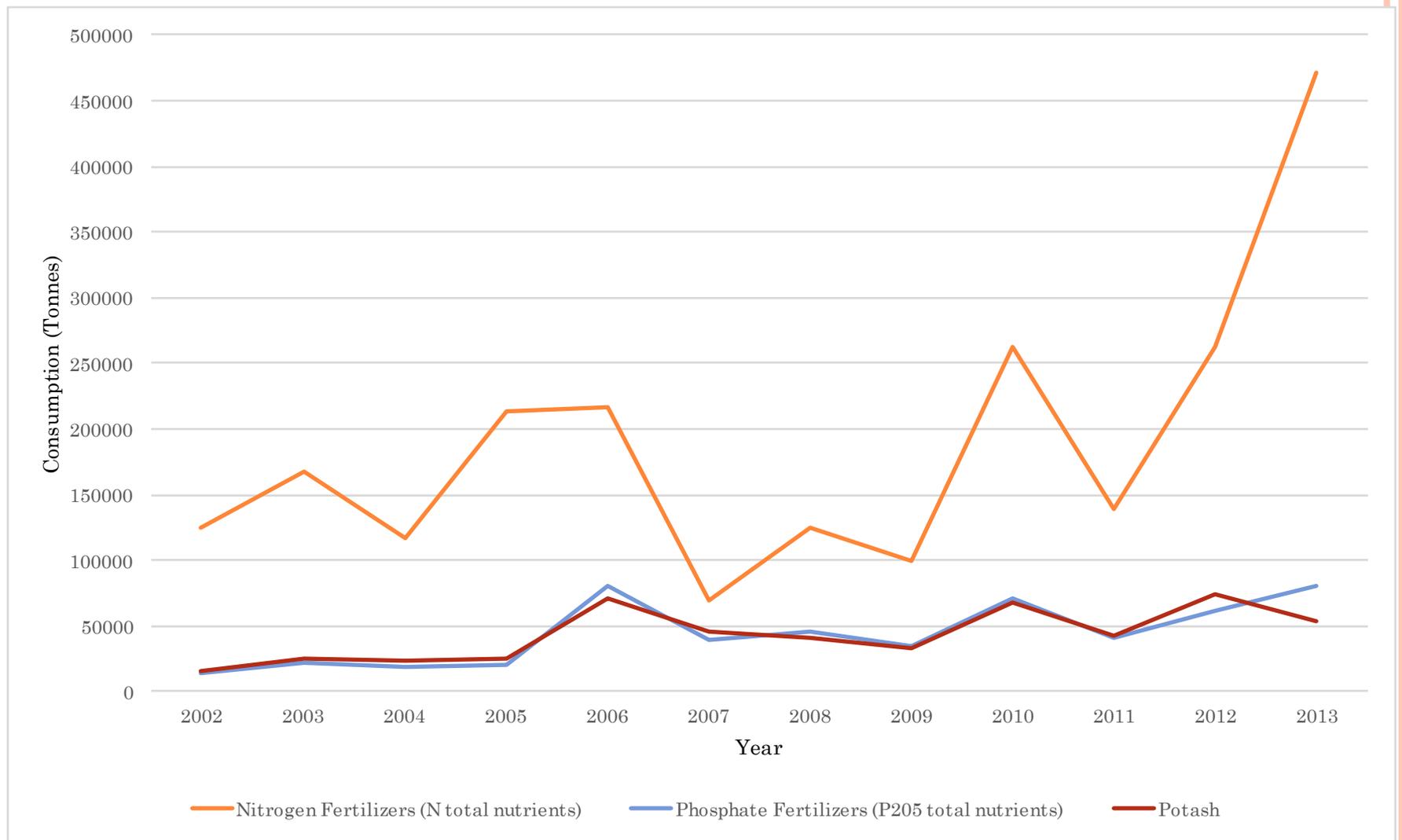
Source: FAOSTAT online database

FERTILIZER CONSUMPTION (KG/HECTARE OF ARABLE LAND



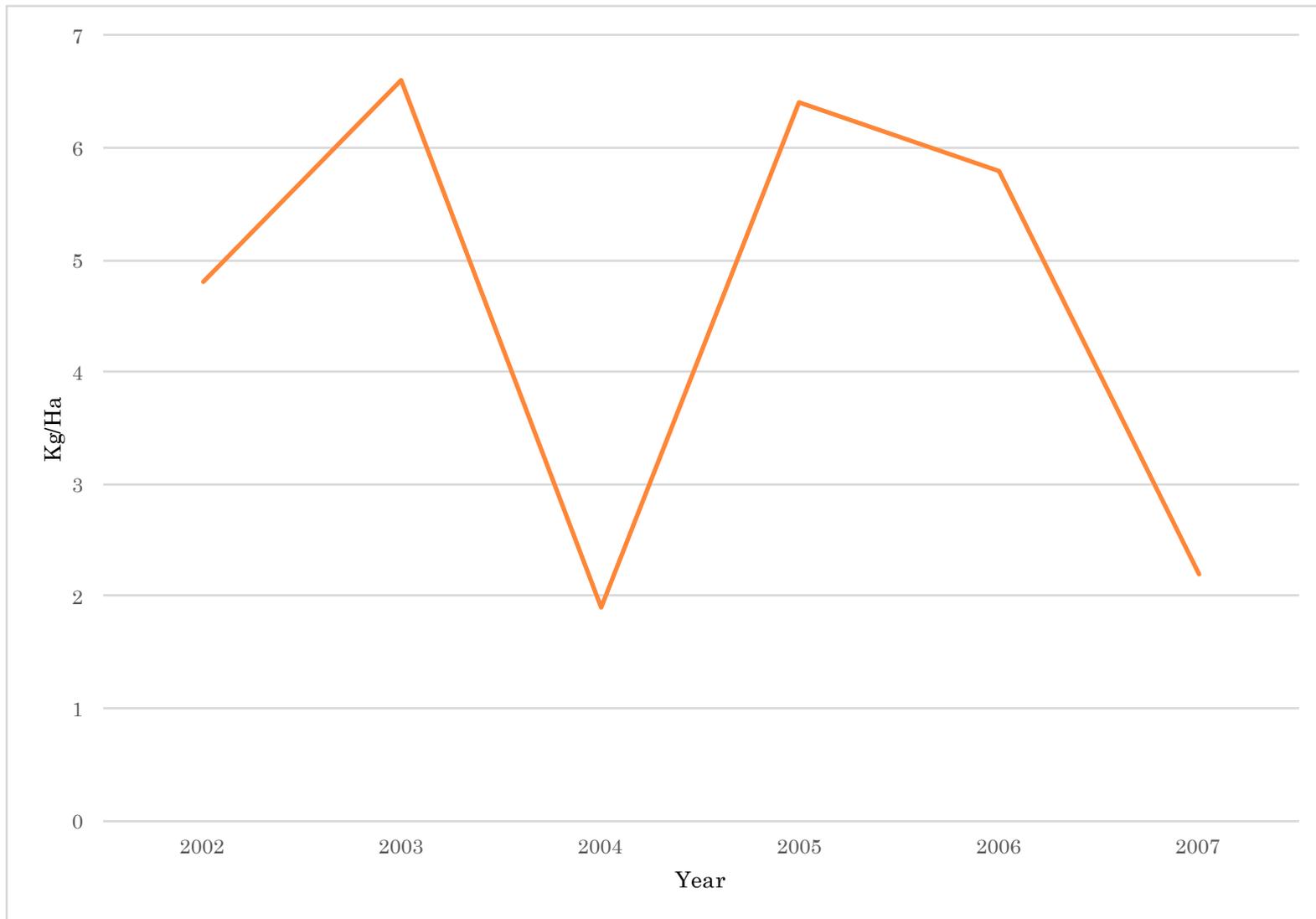
Source: WDI, 2014

CONSUMPTION OF FERTILIZER BY MACRO-NUTRIENTS (2002-2013)



Source: FAOSTAT Online database

FERTILIZER-USE INTENSITY

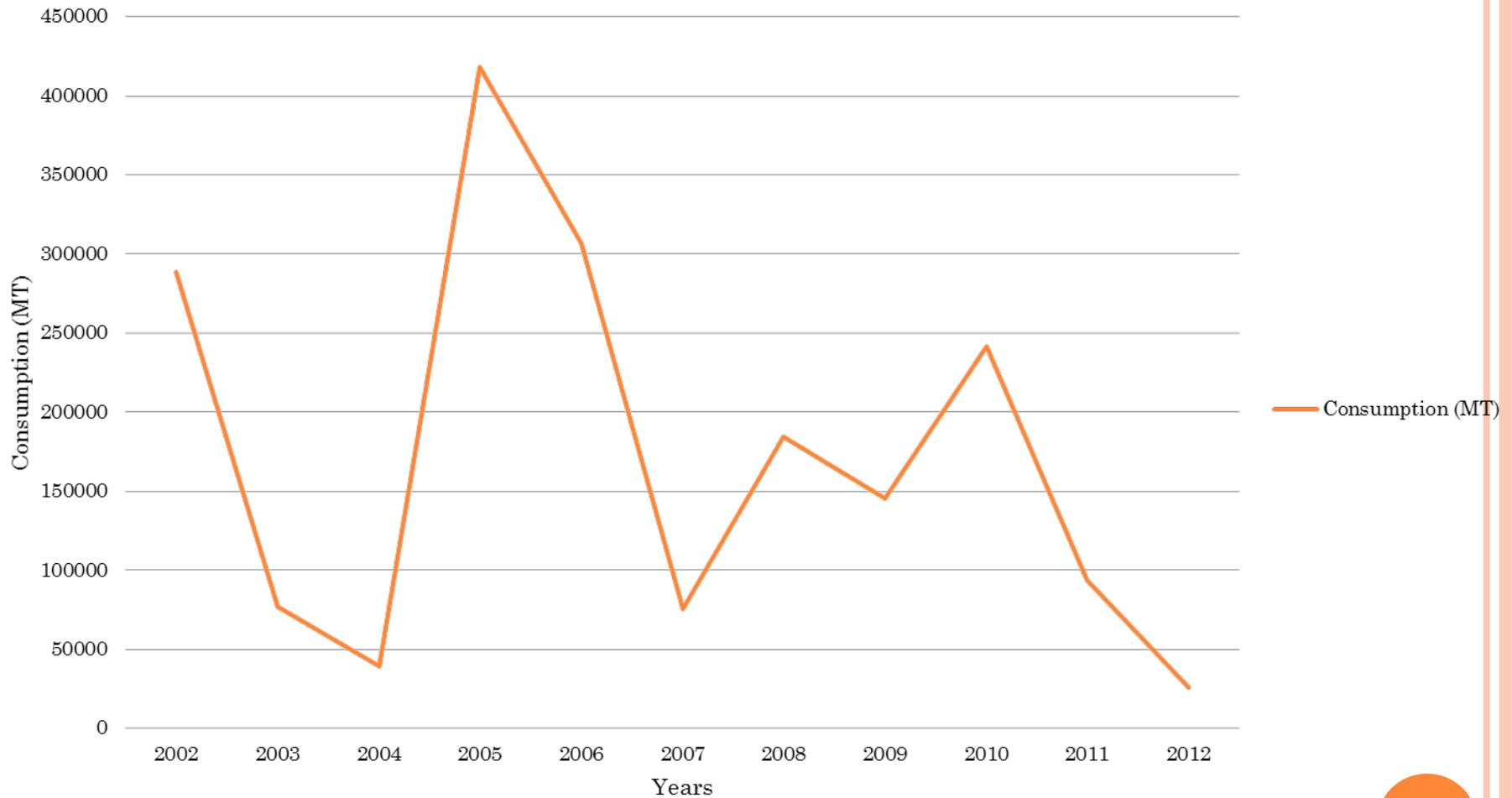


Source: World Resources Institute



UREA CONSUMPTION IN NIGERIA

Urea Consumption (MT)

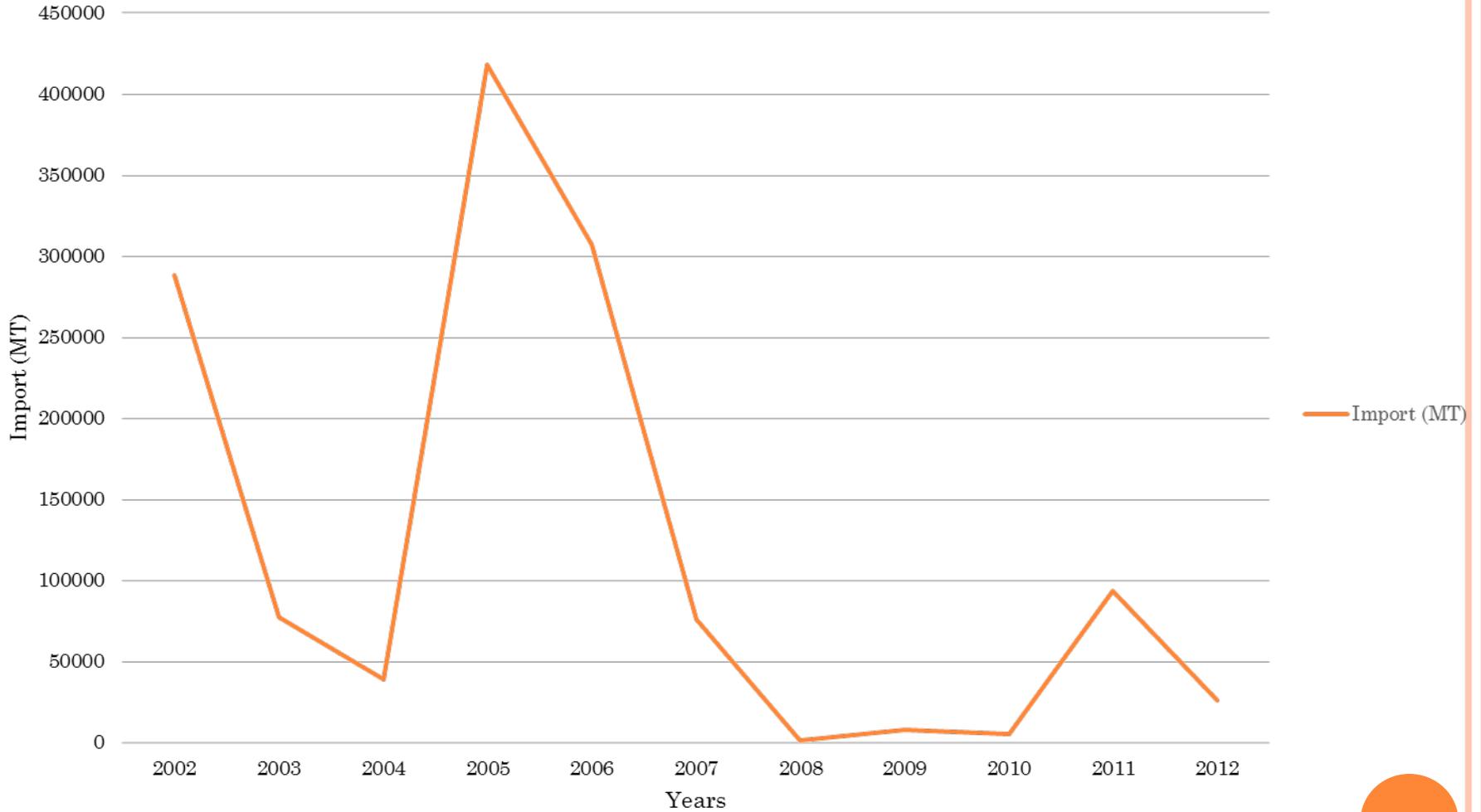


Source: FAOSTAT online database



UREA IMPORT

Urea Import (MT)



Source: FAOSTAT online database



METHODOLOGY

- **Scope of study:** The scope of study is the whole country and it has been divided into the five agroecological zones namely:
 - Sahel savannah
 - Sudan savannah
 - Guinea savannah
 - Derived savannah
 - Rain Forest
- **Sampling Technique:** In all zones, there are various actors along the fertilizer supply chain. Since it is impossible to go round all the zones, zones will be sampled based on the number of actors in the zone. Two zones will be sampled; one in the north and one in the south.
- In each selected zones, all the actors along the chain will be sampled
- **Data:** Both secondary and primary data will be used. The detailed description on the type of data to be collected is presented in the tables below. The secondary data will be collected from the Federal Ministry of Agriculture, FEPSAN, National Bureau of Statistics, Agrodealers Association, FAOSTAT, IFDC and African Fertilizers.
- **Method of analysis:** Descriptive statistics including
 - frequency,
 - mean,
 - percentagesAlso, charts, trend analysis and narratives will be used.



Aggregate Indicators	What we have and source	What we need and prospective source
Production	-2001-2010 -Disaggregated by states	-1970-2000 and 2011-2015 -Disaggregated by states
Import	-1970-2008	-2009-2015 -NBS
Consumption	-1994-2010 -Disaggregated by states	-1970-1993 and 2011-2015 - Disaggregated by states
Intensity of use	FAO 2002-2007	-1970-2001 and 2008-2015 We need the area of cropland cultivated by states from 1970 to 2000 and 2011 to 2015.
Fertilizer supply to states	-2001-2010 -Disaggregated by states	-1970-2000 and 2011-2015 -Disaggregated by states
Prices along the supply chain	-1994-2006 -Disaggregated by states -Units in Million naira -Type of fertilizer not specified From African Fertilizer -Oct. 2013-Feb 2016 -Market name specified -Type of fertilizer (Urea, SSP,NPK(15:15:15, 20:10:10 and 27:13:13)	-1970-1993 and 2007-2015 -Disaggregated by states -Specification on type of fertilizer



	Dealers	<p>From African Fertilizer</p> <ul style="list-style-type: none"> -Name of company -Location of operation -Services rendered <ul style="list-style-type: none"> Production (Blending and granulation) Logistics (transport and warehouse) Distribution (wholesalers and retailers) 	<p>FEPSAN, FFD</p> <ul style="list-style-type: none"> -Disaggregated by states -Capacity of production -Type of ownership -Main fertilizer sold -Quantity of fertilizer sold 	
	Main markets		List of the main markets in all the states for fertilizer	
	Farmers		List of farmers that are on e- wallet in all the states Farmer characteristics, quantity of fertilizer sold by agrodealer, price of fertilizer before and after the program, distance farmer to nearest agrodealer, distance to market, fertilizer use intensity	

Supply Chain	Actor	Questions	Others
Production	Manufacturers	Name and Location Type of fertilizer Quantity produced Quantity sold Sale price Date produced Annual capacity	Age, education and gender Year of establishment Production capacity Number of workers Access to and type of credit Own a bank account Cost of production sales credit or price subsidy Transport cost
Importers	Companies	Name and Location Type of fertilizer Quantity imported Purchase price (FOB) Quantity sold Sale price Country from which it is imported Date imported	Age, education and gender Year of establishment Number of workers Access to and type of credit Own a bank account Import credit and import subsidy sales credit or price subsidy Transport cost
Wholesalers	-Private sector distributors -Min. of Agric./LGA -State Input Supply Companies -Agricultural Development Projects(ADP) -Agro dealers	Name and Location Type of fertilizer Quantity purchased Purchase price Quantity sold Sale price Source of purchase Date of purchase	Age, education and gender Year of establishment Number of workers Access to and type of credit Own a bank account Purchase credit and purchase subsidy sales credit or sales subsidy Price subsidy Transport cost
Retailers	Agrodealers Main Market centers	Name and Location Type of fertilizer Quantity purchased Purchase price Quantity sold Sale price Source of purchase Date of purchase	Age, education and gender Year of establishment Number of workers Access to and type of credit Own a bank account Purchase credit and purchase subsidy sales credit or sales subsidy Price subsidy



THANK YOU FOR LISTENING

