

Status of Paraquat in Nigeria: Why a Ban is Necessary

BY
UDENSI EKEA UDENSI, PhD

WEED SCIENTIST/AGRONOMIST

DEPARTMENT OF CROP & SOIL SCIENCE, UNIVERSITY
OF PORT HARCOURT

PARAQUAT

A POTENT WEED KILLER IS KILLING PEOPLE

BY ANDREW C. KEFKIN

A farmer says the job is done. The weeds are gone. But he is not smiling. He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

The weeds of the job's getting is finished, says the farmer. But the weeds are still growing. He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

It has been a week since the farmer has seen the weeds. He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

The farmer says the job is done. The weeds are gone. But he is not smiling. He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

The farmer says the job is done. The weeds are gone. But he is not smiling. He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

He is looking at the ground. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing. He is looking at the weeds that are still growing.

Outline of presentation

- Introduction
 - ✓ Preamble
 - ✓ Global concern
 - ✓ How PQ affects humans
 - ✓ Nigeria concern
- Status of use and perception of PQ in Nigeria
- Status and perception of PQ in Nigeria
- Conclusion

Preamble:

PARAQUAT(PQ)

- Chemical name: 1,1'-dimethyl-4,4'-bipyridinium dichloride
- It contains 200 g per litre paraquat ion (dichloride)
- Nonselective contact broad-spectrum herbicide

Status as: a herbicide

- Synthesis spans 14 decades ago but reckoning and commercialization was just 6 decades ago made popular by ICI-1962
- Marketed in > 100 countries
- Target: Small- and Large-scale farmers
- Use Spans-Agricultural Lands, non-agricultural, estates and amenity weed control
- Have brands and variety of names in various countries
- Availability triggered minimum/conservational tillage

Global Concern

- Threat as highly acute toxic herbicide marketed in commercial quantity in the last 65 years
- An active ingredient in any pesticide substance responsible for more fatal poisoning than any other (PAN, 2017)
- Alarming rates of occupational hazard in the use of PQ
- Exposure level (especially in LDCs)
- Self-intentional Poisoning with PQ- developing countries

How paraquat affects humans



Tan et al. (2014). The internet J. of Toxicology, 11 (1)



Qian et al (2013).
<https://doi.org/10.3892/etm.2013.1320>

- Damage to the eyes: keratitis, conjunctivitis, destruction of the ocular surface
- Damage to the skin: ranging from reddening and blistering to severe burns. Dermatitis. In the worst cases, the absorption of paraquat into the body through damaged skin can lead to death
- Damage to the lungs: chronic lung damage
- Brain diseases: it is suspected that the risk of Parkinson's disease is increased by long-term exposure to paraquat.

POISON POT:

Even your dealer doesn't know for sure.



Michael Chance (1978):
<https://thegreenpulpit.com/2015/01/05/abnorml-the-paraquat-panic-of-1978/>



shutterstock.com • 1321672172
<https://www.shutterstock.com/search/paraquat>

How paraquat affects humans Cnt'.

- Damage to fingernails and toenails: from discoloration to detachment
- Respiratory arrest: Ingestion of paraquat leads to lung fibrosis and death due to respiratory failure
- Damage to the liver, kidneys, the gastrointestinal tract and the cardiovascular system are also possible

Reported Concerns & Issues with PQ in Nigeria

- Threat to aquatic life and its ecosystem services
(aquatic life food chain, Fishes and stability of the system Shalangwa and Auta, 2008; Ajani et al., 2007; Kori-Siakpere et al., 2007; Omitoyin et al., 2006; Babatunde et al., 2001)
- Residues implicated in vegetables and Common crops-
(Akinloye et al., 2011)
- Public health concern and a case of acute kidney injury from exposure of two females (16 & 23years old)
(Gushit et al., 2013; Adejumo et al., 2016)
- A fatal case of paraquat poisoning in an adolescent girl is reported. Death resulted from respiratory failure because of extensive interstitial and intra-alveolar fibrosis
(Akang et al. 1994)

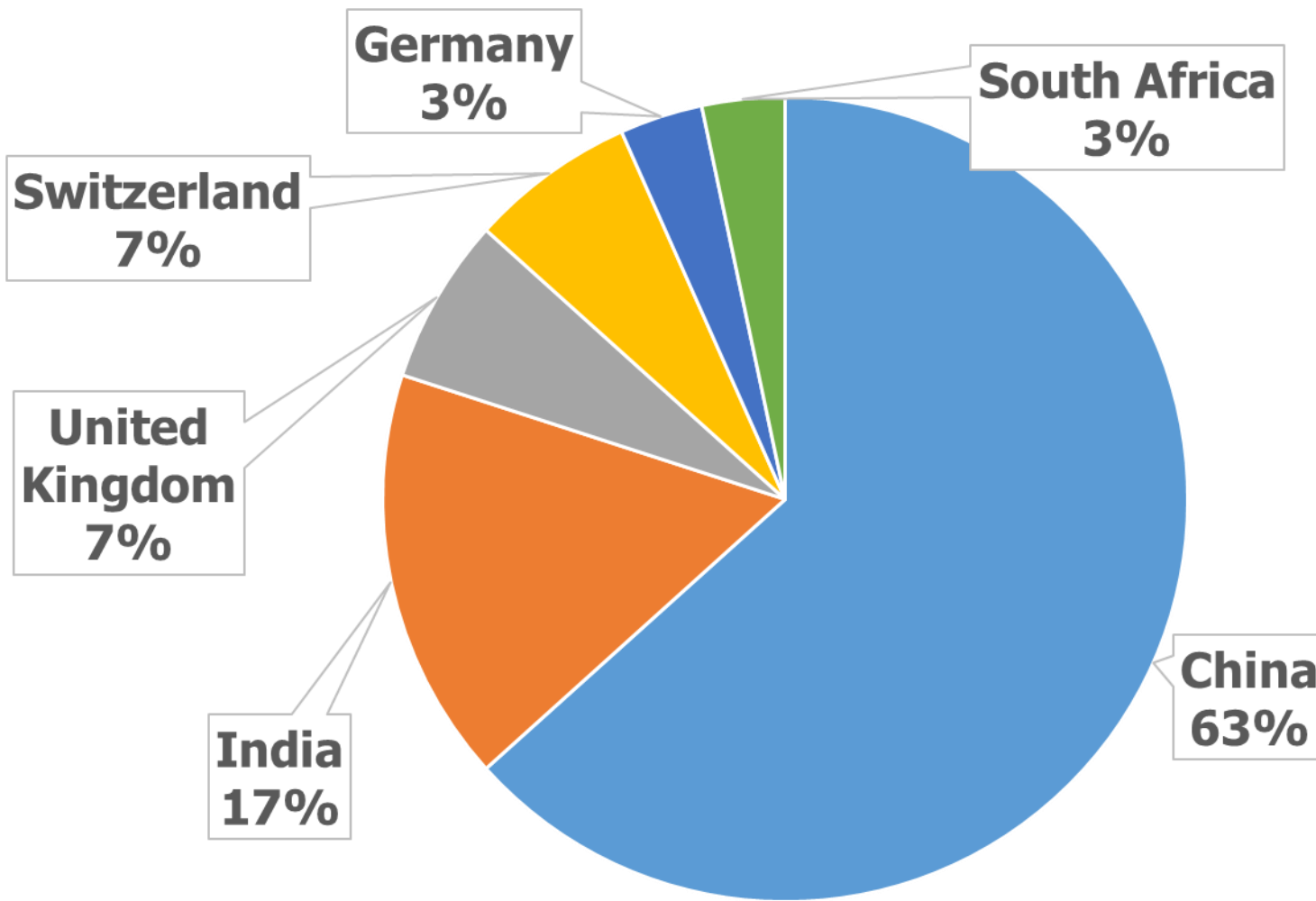
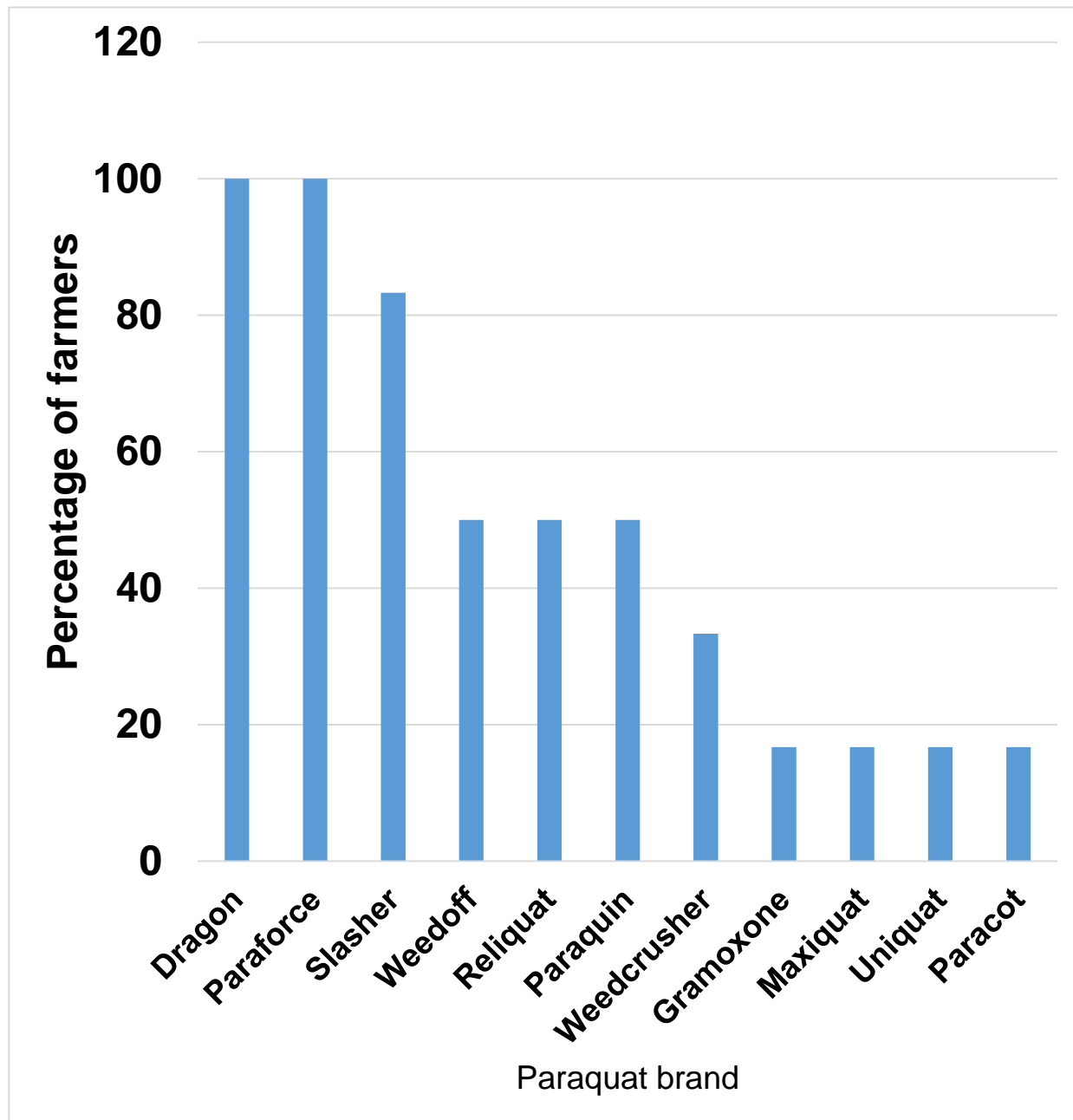


Figure 1: SOURCE OF PQ PRODUCTS SOLD IN NIGERIA

Percentage of farmers surveyed using a brand of Paraquat across Abia, Benue, Enugu, Ogun, Oyo and Rivers in cropped and non-cropped fields



Alternatives

- Glufosinate-ammonium
 - ✓ Lifeline [UPL]
 - ✓ Basata [BASAF]
 - ✓ Facinate [UPL]

Conclusion

- China accounting for about 80% of the world total is now prepared to prohibit or ban use and sales of any paraquat formulation in China by September 2020(<http://www.cnchemicals.com/Press/89866->)
- About 32 countries including 27 countries of the European Union(Watt, 2011; PANAP, 2011; www.panap.net) and one in West Africa (See No.1, Table x)
- Close to 5,000 persons have signed a petition to ban paraquat in Cayman Island (www.cayman.com/2013/01/09/Renwed-push-to-ban-paraquat) due to the numerous hazards and death occasioned by its use
- Long-term health effect that may lead to Parkinson's disease, acute renal injury and failure and death have been reported elsewhere and in Nigeria (*Weaseling et al., 2001 ; Andreas-Soloukides et al., 2007; Gushit et al., 2013; Adejumo et al., 2016; Akang*)
- Most rural farmers that use PQ are unaware of or do not recognize the symptoms until it is too late to manage. This is because some of the symptoms are not totally or completely different from every day work-life stress (e.g. headache, abdominal pain and vomiting).
- In the context of 36 States, and the rural farmers that use PQ, the data (About 56% have been unduly exposed to PQ; 33% confirmed symptoms; 37% link intoxication exposure) reported here is a vista to what is out there not captured
- There is global online stop press on Paraquat ban by many concern groups- due to the alarming death rate (Occupationally associated and intentional mediated suicide)
- Nigeria must JOIN THE COMMITTEE OF NATIONS AND BAN THE IMPORTATION AND USE OF PARAQUAT NOW.

Whatever the
circumstances
are right now

- **A STITCH IN TIME
SAVES NINE**

Thank you

