

A CASE FOR CONFIRMATION THE IDENTITY OF AFRICAN VETIVER *CHRYSOPOGON NIGRITANA* IN WEST AFRICA

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Dr Criss Juliard, a TVNI director who worked in Senegal and Mali for many years reported that rural people traditionally use vetiver shoot biomass (*C. nigriflora*, CN) for thatching and handicrafts, vetiver root powder for healing wounds, reducing swelling as an antiseptic. But the most common use of CN in Mali and Senegal is as a "water purifier," a disinfectant and antiseptic. It apparently helps eliminate pathogenic bacteria, but not for erosion control!!

CN is widespread in both countries, grow naturally in the arid zone and establishes by seeds, so it is fertile. ***But most importantly Chris did not mentioned that it is grazed by stock***



Wild vetiver shoots harvested for thatching and handicraft

In a study on the potentials of CN in cleaning wastewater as compare with *C. zizanioides* (CZ), Dr Effiom Oku and Dr Catherine Nnamani from the University of Abuja, Nigeria, were particularly interested in the hypothesis that CN seed is viable. Dr. Catherine Nnamani is a Botanist specializing in Plant Taxonomy, she compared the viability of both CN and CZ seeds and found that CN seeds from plants grown in Nigeria is not fertile and the vetiver plant is quite different from the vetiver in Senegal referred to as CN. This study includes a detailed anatomical description of both CZ and CN native to Nigeria. The CZ were from stock Dr. Dale Rachmeler introduced earlier to farmers in Northern part of Ghana who said it is not invasive.

The following photos show the distinct difference between CN from Senegal and Northern Ghana, which have viable seeds, and the sterile native vetiver in Nigeria.



The CN from Senegal and in Northern Ghana



The native CN vetiver in Nigeria, which looks very similar to CZ

It is well-known that CZ is very palatable to livestock, particularly horses. As the native CN vetiver in Nigeria looks very similar to CZ, to make sure that the native Nigerian CN is not a CZ, Dr Oku carried out a **Horse Test**.

Vetiver is one of the preferred fodder of horses, in South America and Australia



Horses eat C. zizanioides at the University of Abuja farm



But they don't touch native C. nigritana. An indication that these two species are different



In Ibadan western Nigeria, Dr Babalola planted and worked with CZ since 2001/2002. To date, there is no volunteer vetiver stand within the field or anywhere within the University of Ibadan indicating that its seed is sterile and it is non-invasive.

In the high rainfall southern part of Nigeria, Dr Oku planted and multiplied the same species of wild native vetiver. From 2003 till to date there is no volunteer stand of vetiver in the field suggesting it is not grown from seed. Aside the tillering which is characteristics of vetiver, there is no evidence of invasiveness.

Dr Oku thinks that the so called vetiver in Senegal and Northern Ghana, is not a typical CN, but it is a different species.

To ascertain the difference between the sterile Nigerian Vetiver and the fertile Vetiver in Senegal and northern Ghana, I think there is a good a case for confirmation the identity of African vetiver *C. nigritana* in West Africa by some DNA typing. As there is no facility to do this test in Nigeria, it has to be done overseas, preferably in Africa to avoid sample phyto-sanitation problem

