Weed control: What can WCAC's learn from the increased use of herbicides by cotton growers in northern Cameroon, and what about other countries in Africa?

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In Northern Cameroon, family farming shapes landscapes where rain-fed food crops are rotated with cotton. **Herbicides have been playing a key role** for more than 3 decades, while average individual area under cotton has doubled, reaching 1.2 ha, and the family labor force has been reduced as a result of increased enrollment of children in schools, as well as the departure of young people to take jobs in other areas of interest.

All crop calendars depend on weed control operations at farm levels. Priority food crops such as sorghum and groundnuts are sown as soon as possible after the first rains and weeded prior to the sowing of potential cash crops such as cotton or maize. Low doses of NPK fertilizers and urea intended for cotton are, in fact, commonly used for both cotton and maize crops. The timing of their applications is dependent upon prior weeding.

Setting a precedent in French-speaking Africa, Sodécoton, the Cameroonian cotton corporation, introduced herbicides for cotton and maize in 1976, but **with eventually adverse effects on soils**. One example is a development project which installed migrant farmers in an area of high rainfall, where they were provided with light motorization assistance for soil preparation (tillage and harrowing) and crop maintenance (ridging). Harrowing aimed to maximize the effectiveness of the pre-emergence herbicides and additionally "raked" any large weeds not buried by late tillage. The destruction of surface roughness by harrowing dramatically accelerated soil degradation (runoff and erosion).

Introduction of non-selective herbicides (paraquat in 1987 and glyphosate in 1996) jointly with concentrated, low cost formulations of atrazine and diuron used at low doses since 1992, made it possible to **avoid harrowing and even tillage to a large extent, promoting a proxy of conservation agriculture (without cover-crops),** resulting in less adverse (if not beneficial) effects on soils, earlier sowing dates, and higher yields, a success story, as noted at the International Weed Science Congress in 2000.

Selective post-emergent herbicides have been very successfully introduced in recent years. Nevertheless, although they may be partially substituted, **animal-drawn ridging and chemical weed control remain as complementary measures to ensure and boost the efficiency of side-dressed urea**. Starring in this saga since the first season when it appeared is a portable Handy sprayer (20 l/ha flow, with a spinning disc powered by large round batteries).

Is the current massive adoption of herbicides by family agriculture in northern Cameroon representative of a general trend in WCACs (West and Central African countries)? Is it compatible with the international incentives advocating for more agroecological approaches for weed control? What lessons can WCACs learn from the Cameroonian cotton growers' reliance on herbicides? Let us amicably address these questions regarding the cotton industry and family agriculture in Africa to those with extensive experience in the field, but also to anyone who wishes to join in the conversation, via the ICRA platform Gossyforum/Weed control/WCA http://forum.icracotton.org/t/west-central-africa-148 .

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