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Effect of weed control methods on the performance of upland rice at Kafanchan, Kaduna State, Nigeria

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A field experiment was conducted in the wet season of 2015 to study the effect of some weed control methods on the performance of upland rice at Kafanchan, Kaduna State, in the Southern Guinea Savanna of Nigeria. There were eight treatments as follows: 1) 3.0 kg ai/ha glyphosate followed by 3.0 kg ai/ha propanil +0.6 kg ai/ha trichlopir, 2) 3.0 kg ai/ha propanil + 1.6 kg ai/ha 2,4-D at 3 weeks after sowing (WAS), 3) 3.0 kg ai/ha propanil + 1.6 kg ai/ha 2,4-D at 3 and 6 WAS, 4) 3.0 kg ai/ha propanil + 0.6 kg ai/ha trichlopir at 3 WAS, 5) 3.0 kg ai/ha propanil + 0.6 kg ai/ha trichlopir at 3 and 6 WAS, 6) hoe weeding at 3 and 6 WAS, 7) hoe weeding at 3, 6, and 9 WAS and 8) a weedy check. The treatments were laid out in a randomized complete block design (RCBD) and replicated three times. Grasses especially *Cynodon dactylon* (L) Pers, *Dactyloctenium aegyptium* (L) Wild, *Digitaria ciliaris* (Retz.) Koel, *Echinochloa colona* (L) Link, *Ischaemum rugosum* Salisb and *Panicum repens* L constituted 73% of weed infestation in the study area. Sedges (*Fimbristylis miliacea* (L) Vahl, *Fimbristylis dichotoma* (L) Vahl, *Cyperus rotundus* L and *Cyperus iria* L constituted 18% while the broad leaves *Polygonum hydropiper* L and *Alternanthera sessilis* (L.) R. Br. ex DC constituted 9% of weed infestation. All the herbicides were similar in their effects on the grain yield and were comparable with the hoe weeding treatments and significantly higher than the weedy check. There is, however, the need for gross margin and cost-benefit analysis to determine the profitability of each of the weed control treatments.

Biography

Ibrahim Abbas Sodangi has done Ph. D. in Crop Production/Weed Science (Maiduguri) 2010; MBA Finance (Maiduguri) 1998. Associate Professor and Dean, Faculty of Agriculture, Kaduna State University, Nigeria. He is co-author of The Place of Cooperatives in Nigeria's Economic and Agricultural Development (2009); Rural, Agricultural and Environmental Sociology in Nigeria (2011); Farmers' Guide to Production of Drought Tolerant Maize in Borno State, Nigeria (2014) and How to produce certified seeds of drought tolerant maize in Borno State, Nigeria (2014), and of several articles in local and international journals. Dr. Sodangi was born on 1st June, 1964. He graduated from the Ahmadu Bello University in 1988 and worked with the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) (1990 – 1992) and Afriland Nig. Plc (1992 -2006) before joining the University system. He is a member of several professional and administrative bodies including Weed Science Society of Nigeria, Organic Agriculture Project in Tertiary Institutions in Nigeria, Research and Development Network, and Association of Deans of Agriculture in Nigerian Universities. An awardee of Science and Technology Education Post Basic (STEP-B) Project (Innovators of Tomorrow Component) Award, Dr. Sodangi insists that agriculture should be seen as a business. He brings this passion to bear in his several teachings on cooperative endeavor, entrepreneurship and economic empowerment.

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