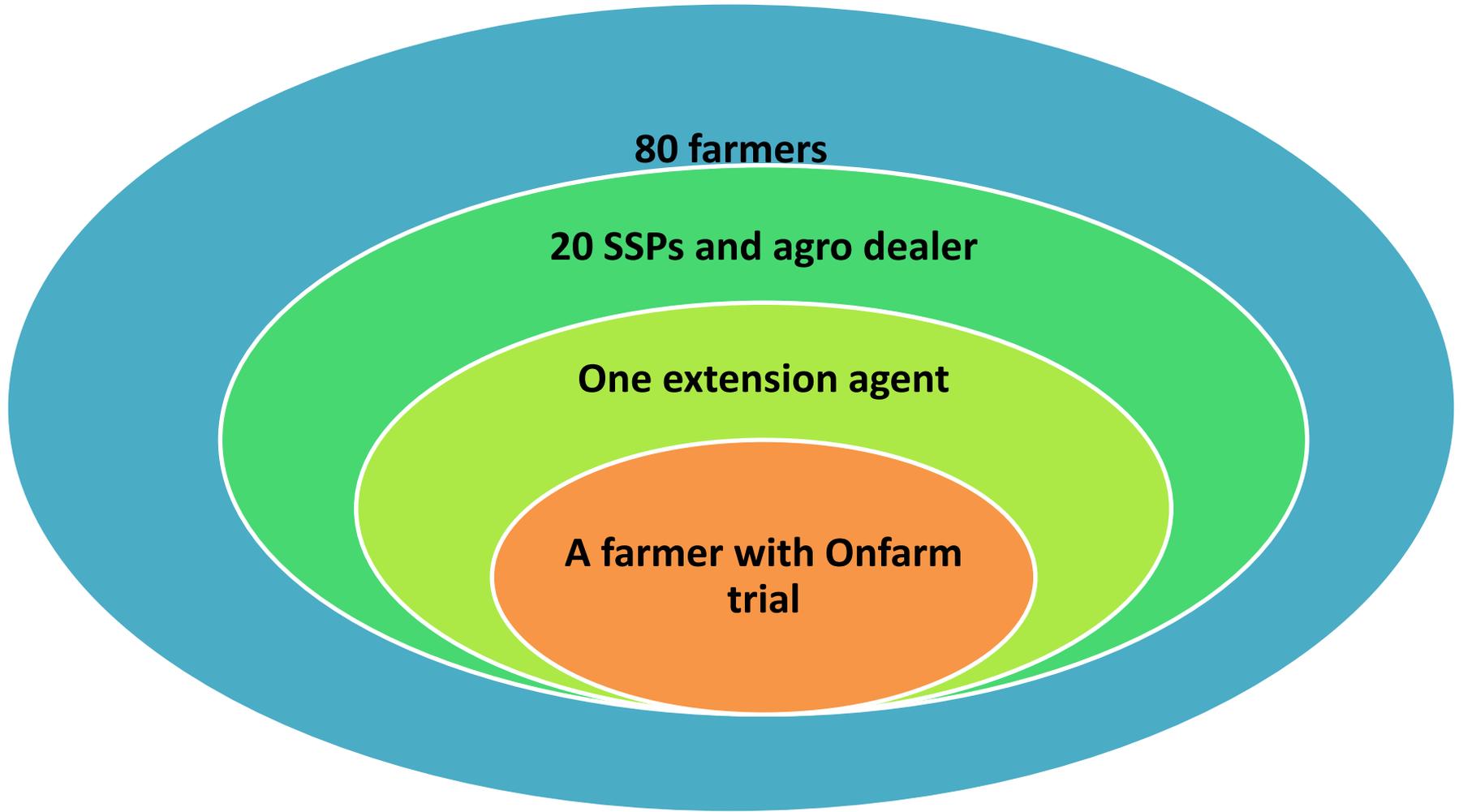


- **Objective 4.**
- **4.1 Involve farmers and other stakeholders in the research to develop improved weed management practices in cassava and**
- **4.2 Empower extension services, primarily the ADPs but also NGOs, agro-dealers, and spray service providers, to provide farmers with the knowledge they need to improve weed management practices.**



By

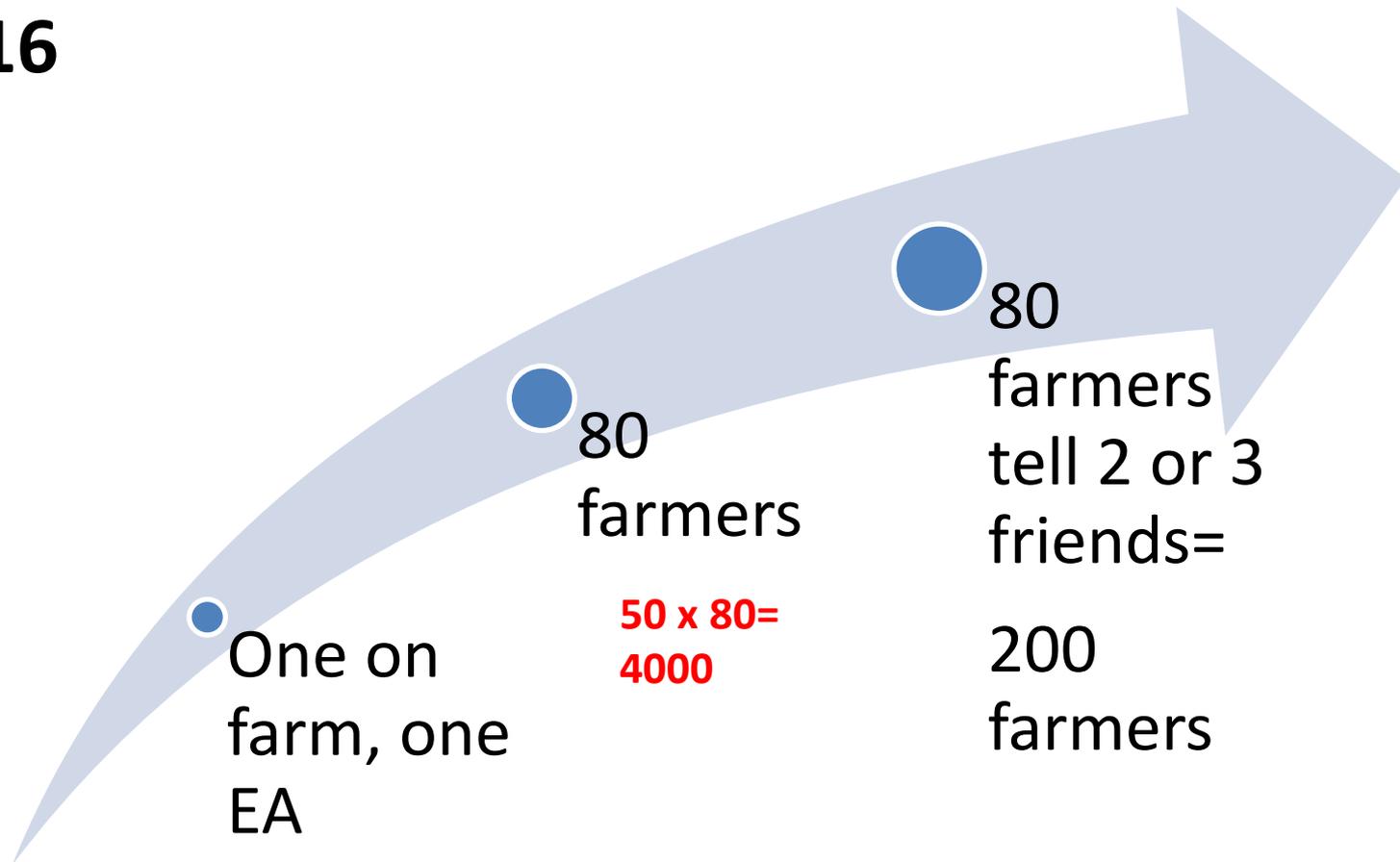
**Godwin Atser, Mary Agada, Moses Okwusi, Grace Sokoya
and Toye Ayankanmi**



Onfarm model



Projected reach per site on onfarm trials in 2016

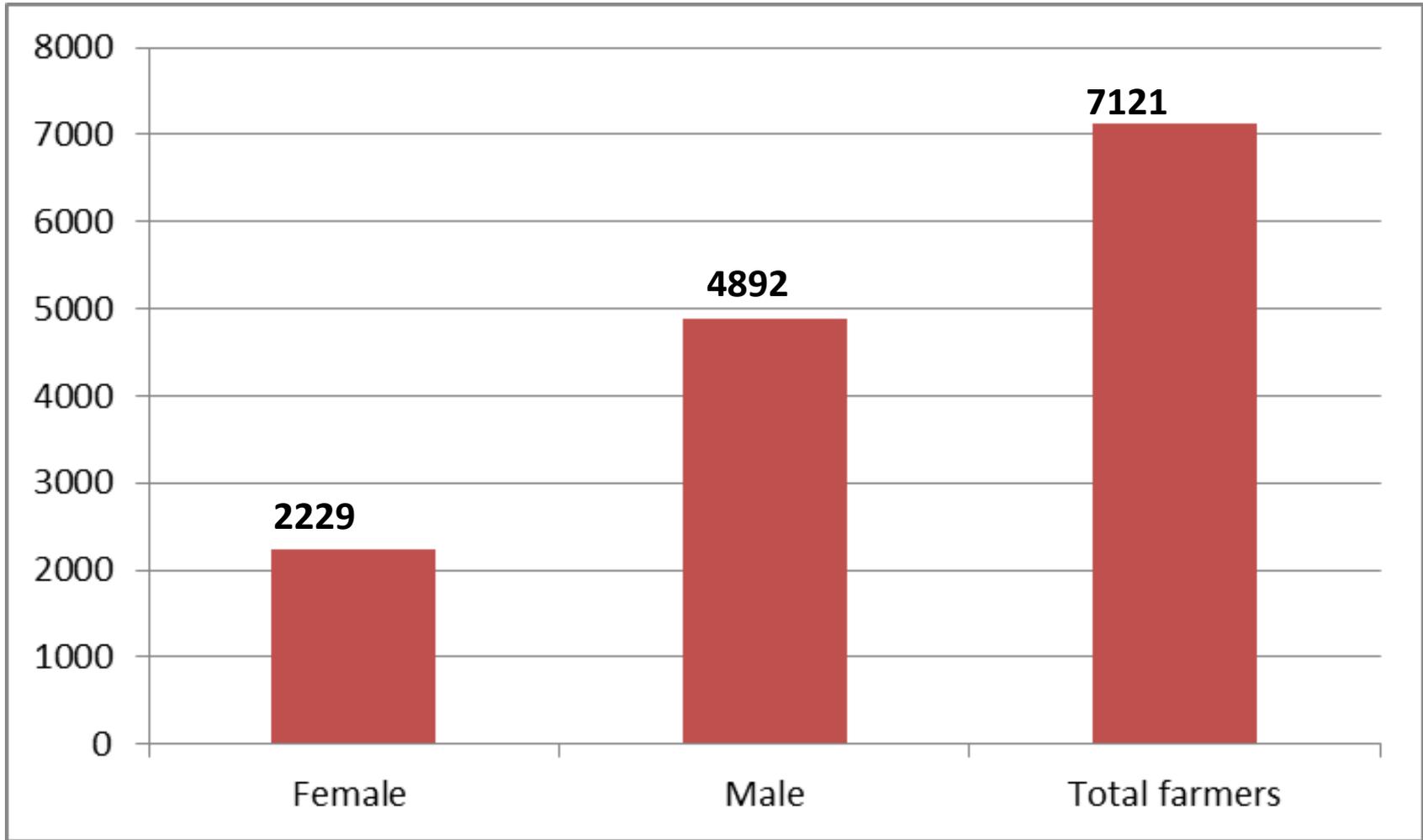


50 sites X 200 farmers = 10,000 farmers



PLATFORMS	TOTAL PERSONS REACHED
Flickr	193
LinkedIn	1565
Facebook	1805
Twitter	84601
Pinterest	5725
Slideshare	8103
Website	1851
Whatsapp	256
Newspapers – (Journalists)	208
YouTube	760
Cassava matters newsletter	3005
Total	108072
Total farmers reached through onfarm and field activities	7121
Grand total	115193

Farmers reached through onfarm field activities by sex in 2016



Sites Selection



Bende



Isuikwuato





Community Entrance

Village head of Irawo



Opinion Leader in Agunrege

Community Entrance



Visit to the palace of HRH Eze Valentine C. Ohunta, Traditional Ruler of Umuokeigbo Umuigu Autonomous Community in Ikwuano LGA



Visit to the Palace of HRH Eze Ogo Agwu Uka Traditional ruler of Ndiememe Abam Autonomous Community in Arochuchwu LGA



Kickoff of activities



Kickoff at Ariam

Kickoff at Ugwueke



Farmer participation is key



Ozu abam

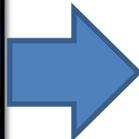


Ndiememe



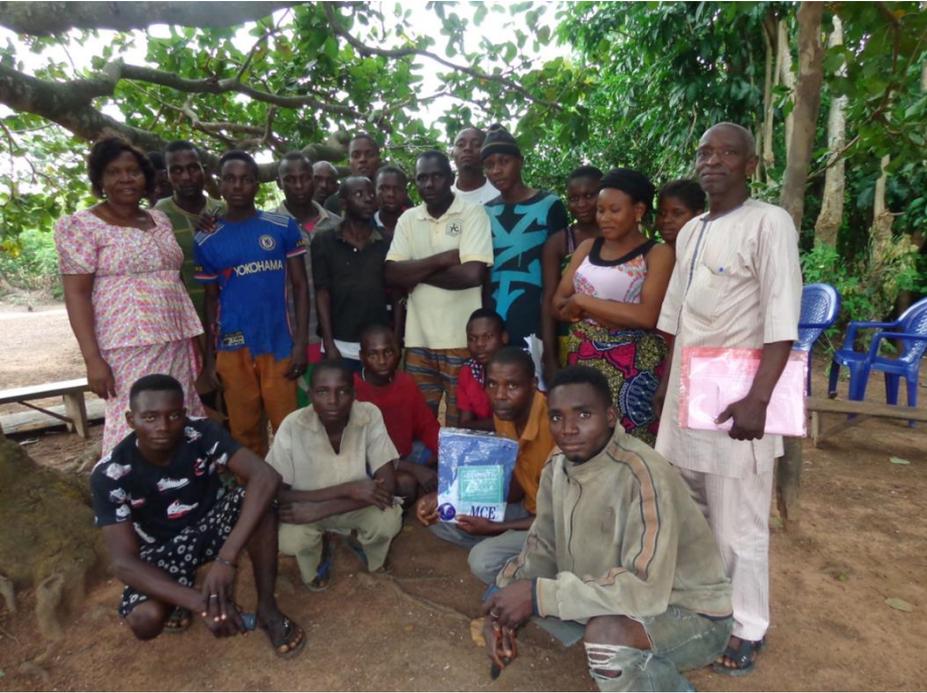
Spray Service Providers

Apir Youths



Mbagwaza





Spray Service Providers



Mbayom



Mu





Training of extension service providers

IITA Ibadan

Bayer supported training



Implementing partners

Oke-Ipin onfarm trial site



Weed control in cassava maize intercrop: Treated vs Untreated at Iporin



Untreated



Treated

Farmer field days



Umuigu



Agunrege





Team building and continuous meeting with extension service providers

NRCRI Abia

Abia



Implementing partners

Deepening of public/ private sector engagement with Syngenta and Monsanto



Syngenta



Monsanto



The Minister of Agriculture and Rural Development, Chief Audu Ogbe (Left) being briefed on Cassava Weed Management Project

**WCRTC
National Cassava Summit
Africa RISING
Weed Society of Nigeria etc**



CWMP with Oyo Commissioner for Agric on TV talking weed science and food security



Implementing partners

Farmers' evaluation of field trials

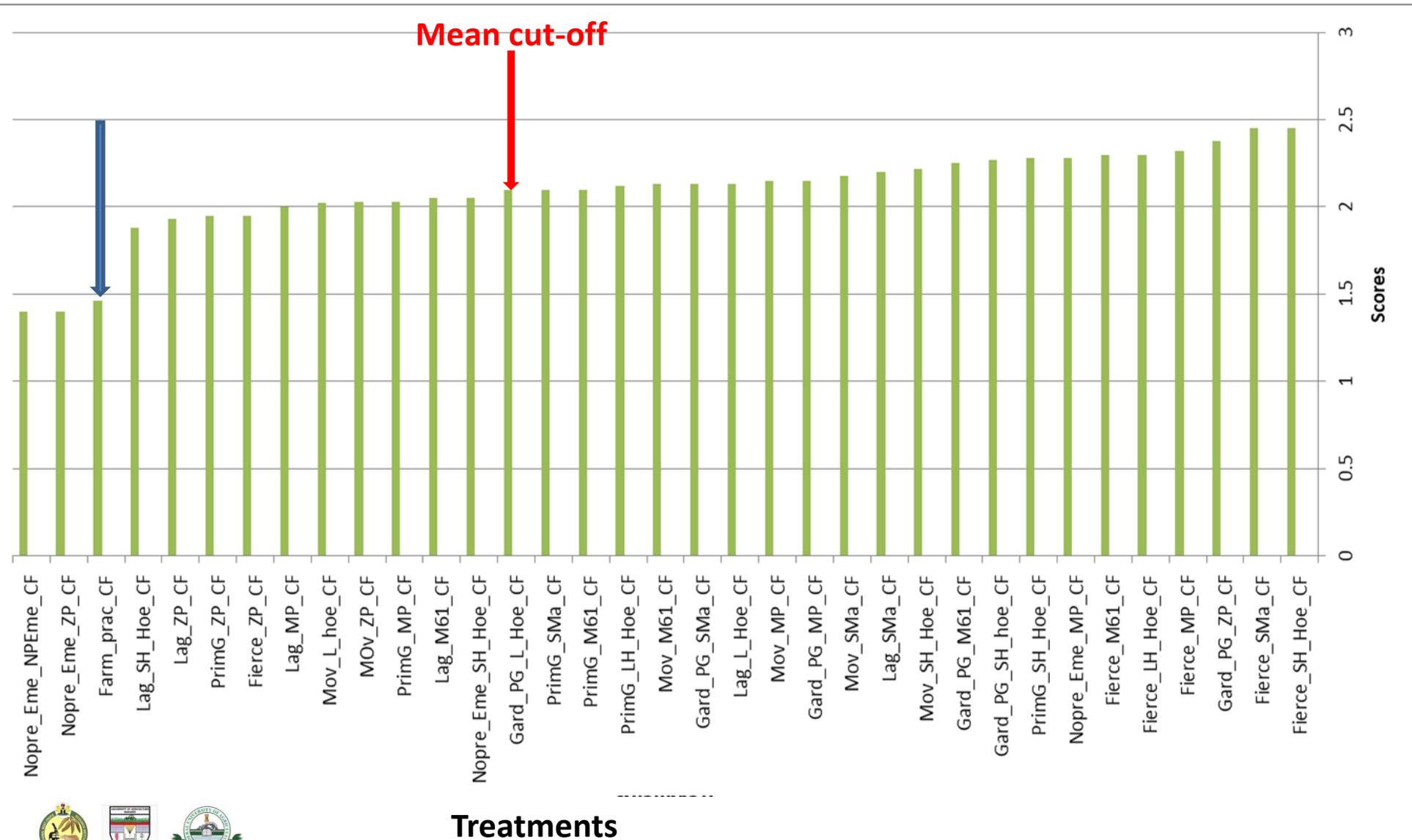


Idi-Ata

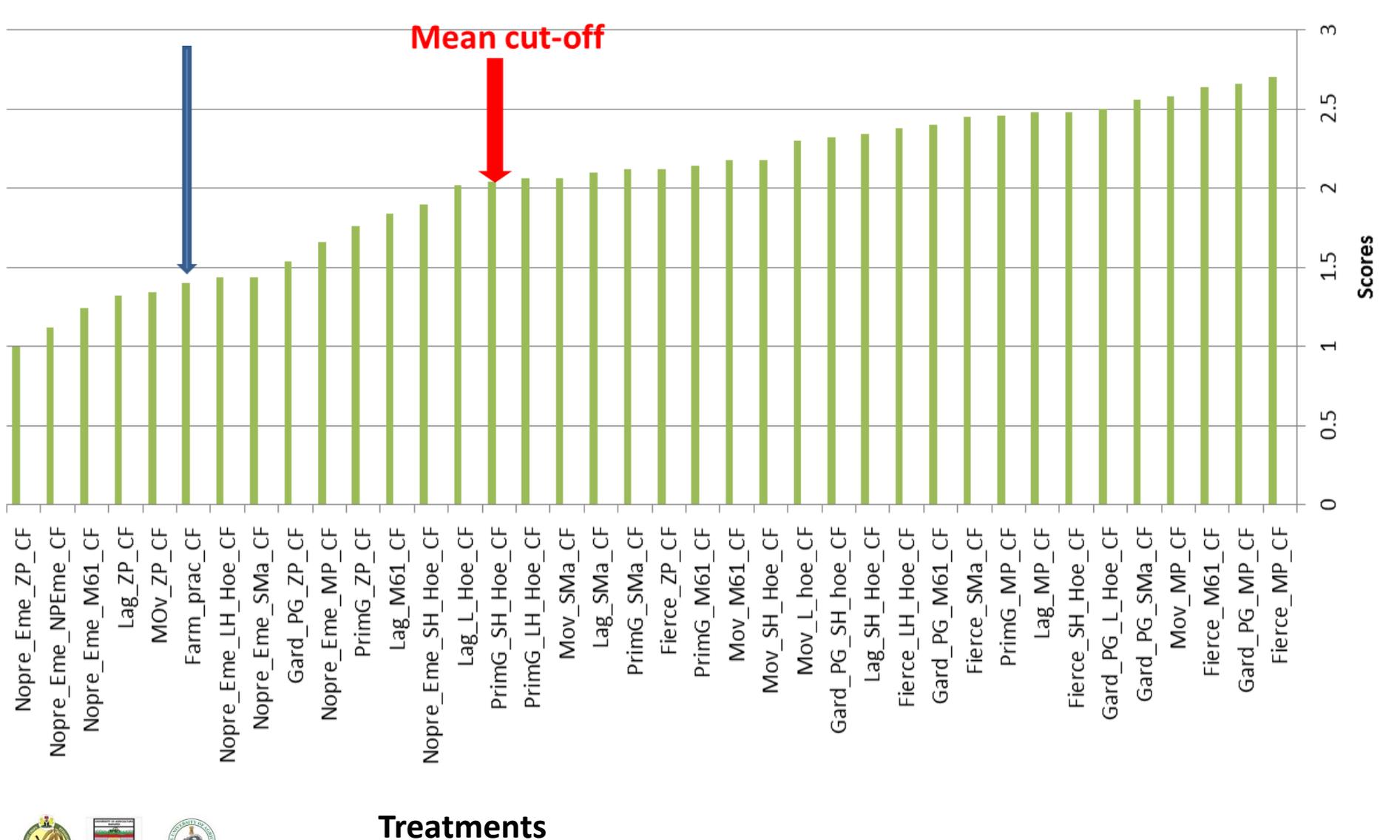


Iporin

Abia: Cassava-Maize– Cleanliness of field



Benue: Cassava-maize– Cleanliness of field

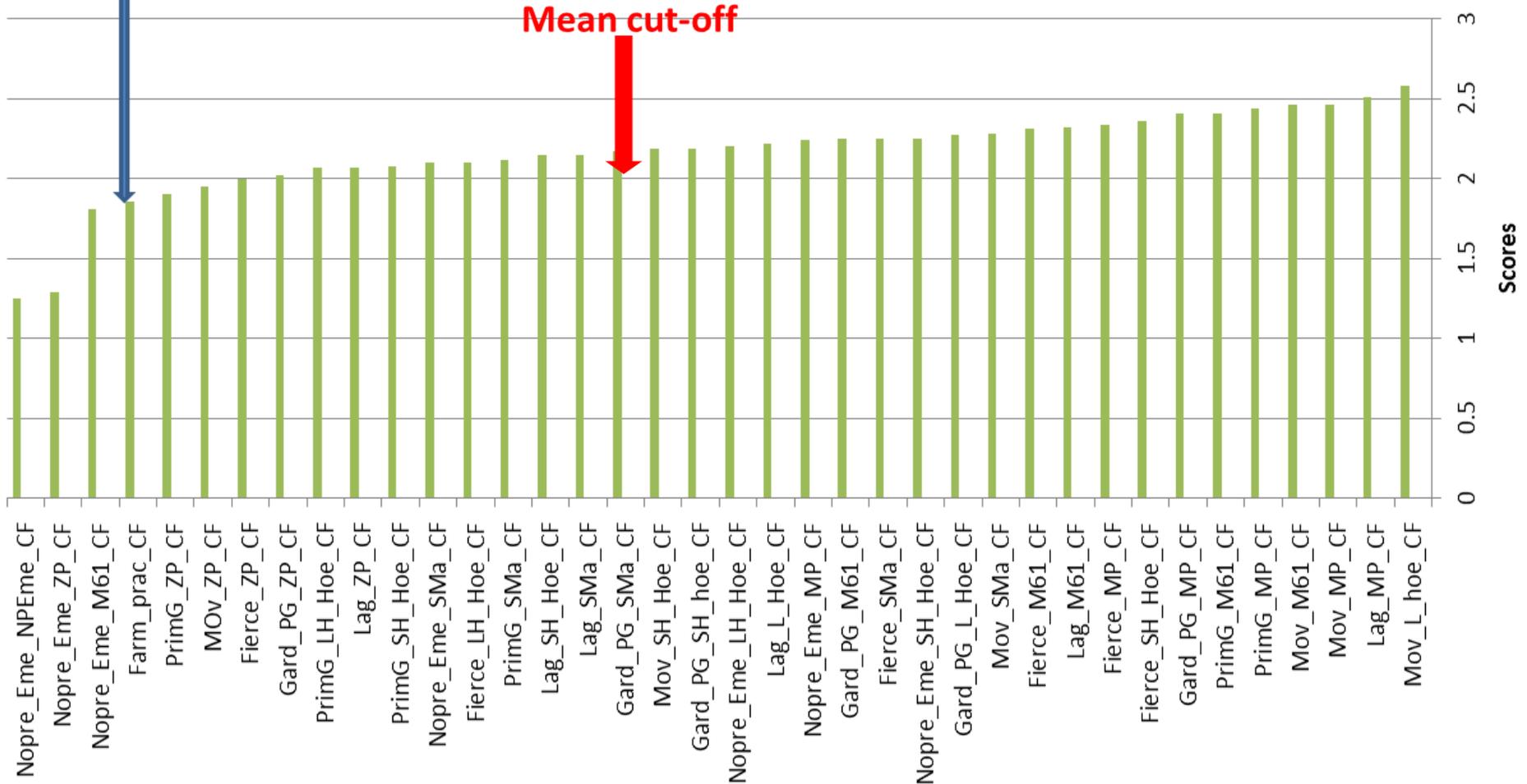


Treatments



Implementing partners

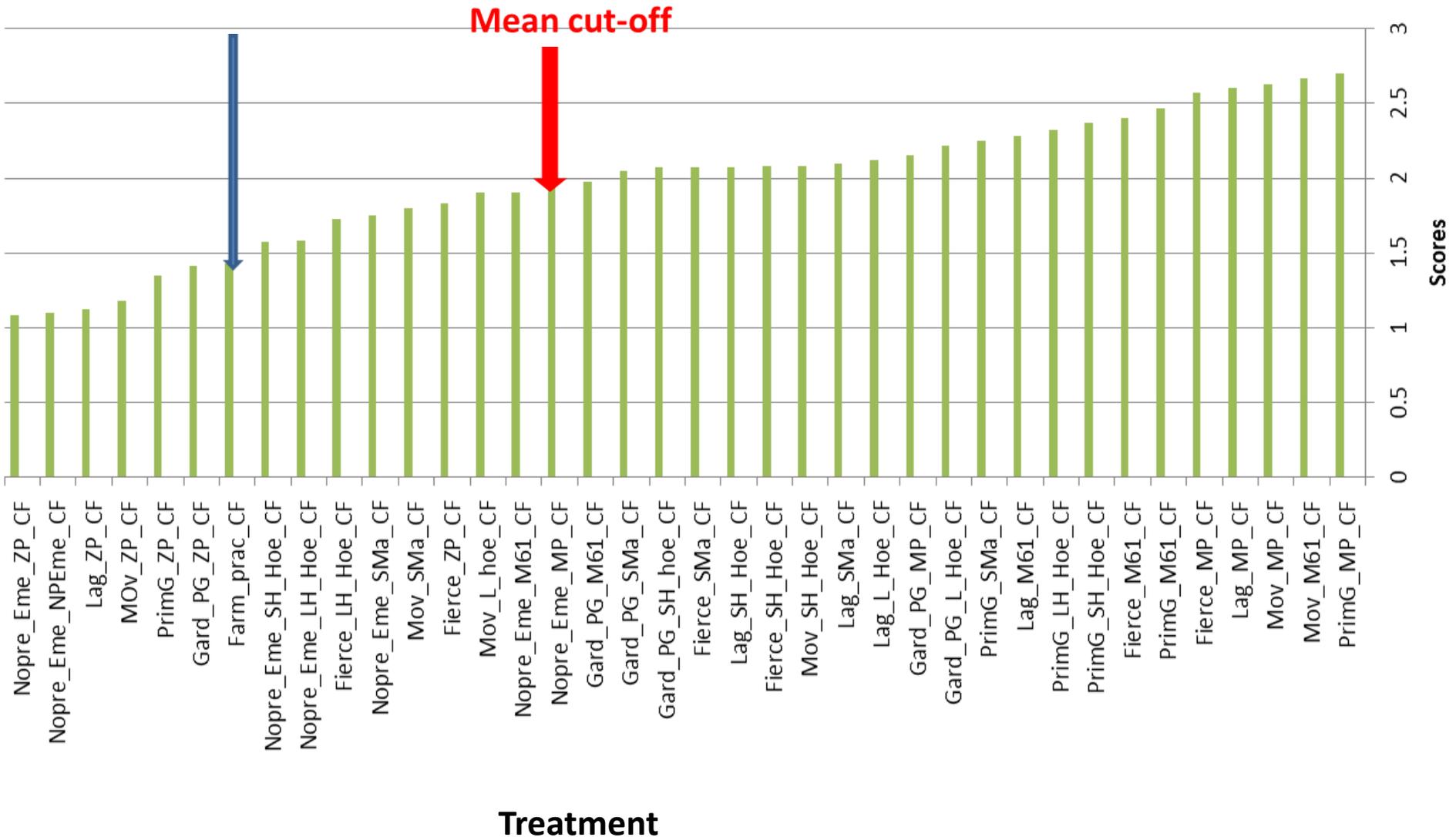
Ogun: Cassava-Maize- Cleanliness of field



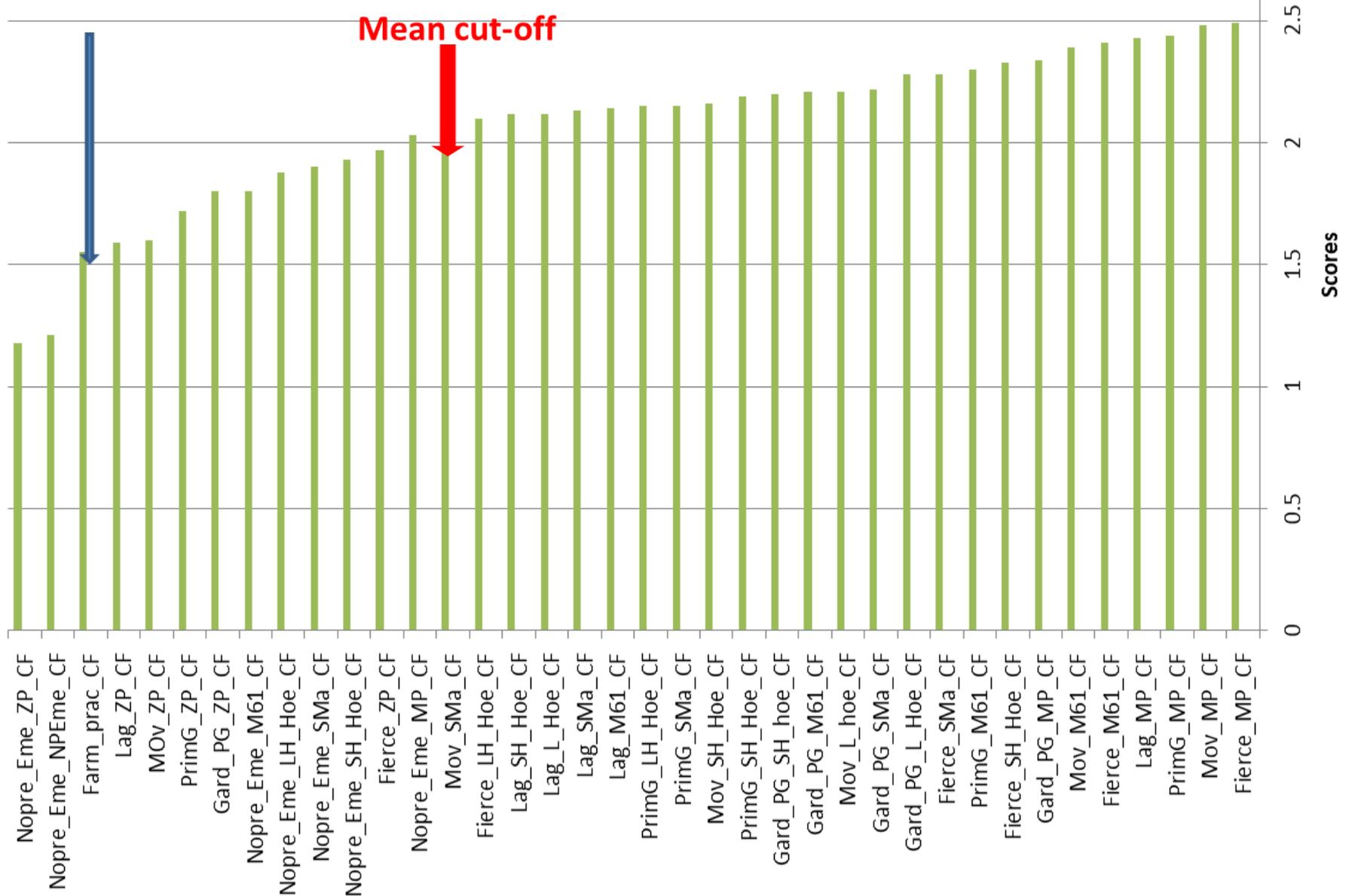
Treatments



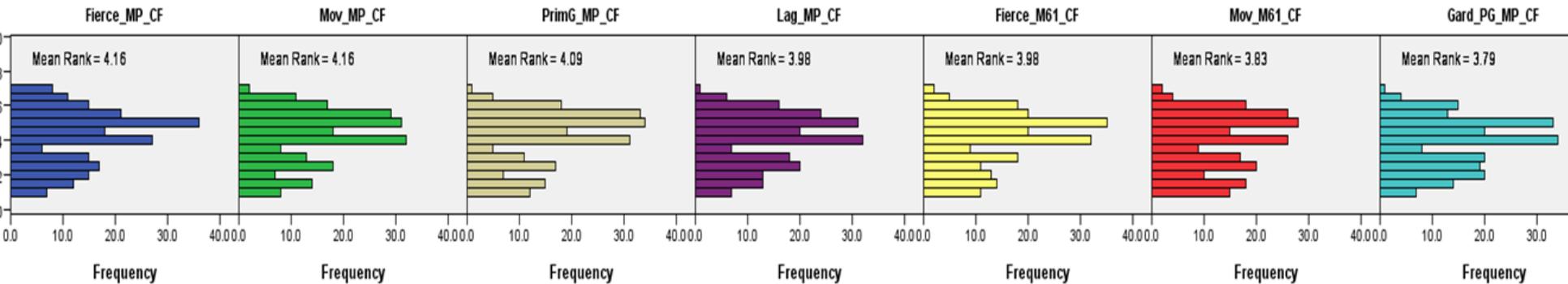
Oyo Cassava-Maize- Cleanliness of field



Cleanliness of field in cassava-maize across the four states



Related-Samples Friedman's Two-Way Analysis of Variance by Ranks



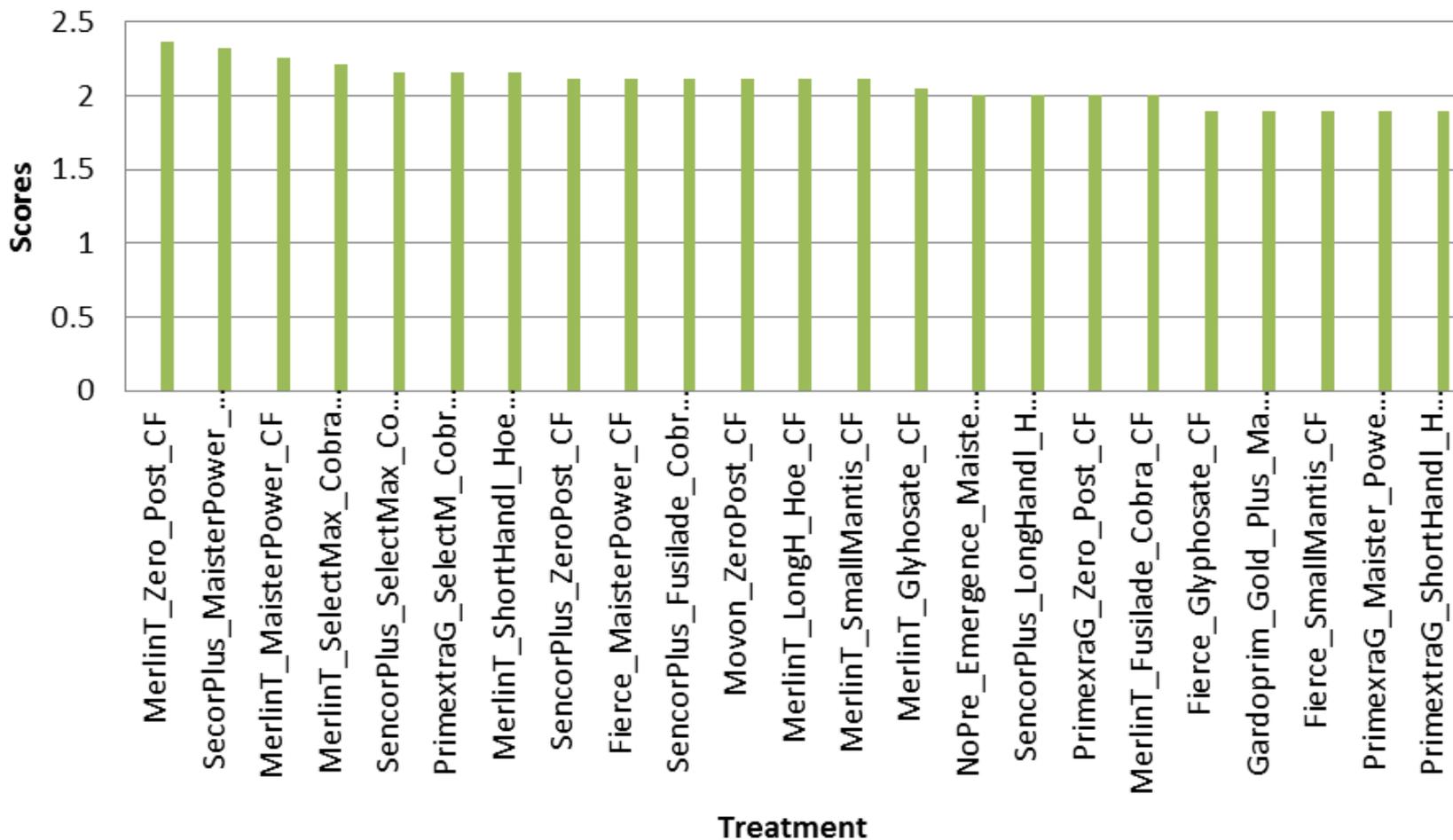
Total N	208
Test Statistic	9.751
Degrees of Freedom	6
Asymptotic Sig. (2-sided test)	.136

1. Multiple comparisons are not performed because the overall test retained the null hypothesis of no differences.

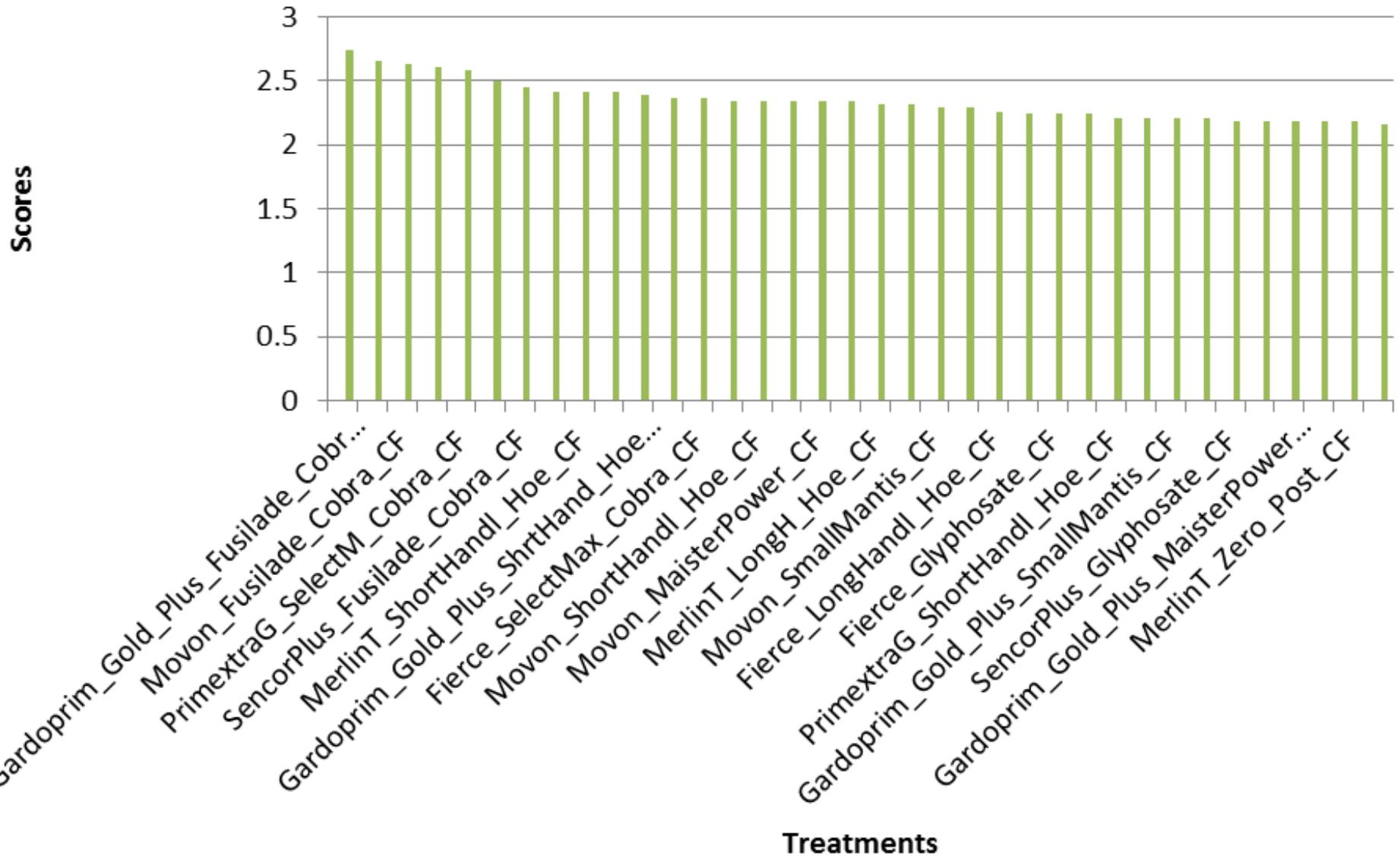


Implementing partners

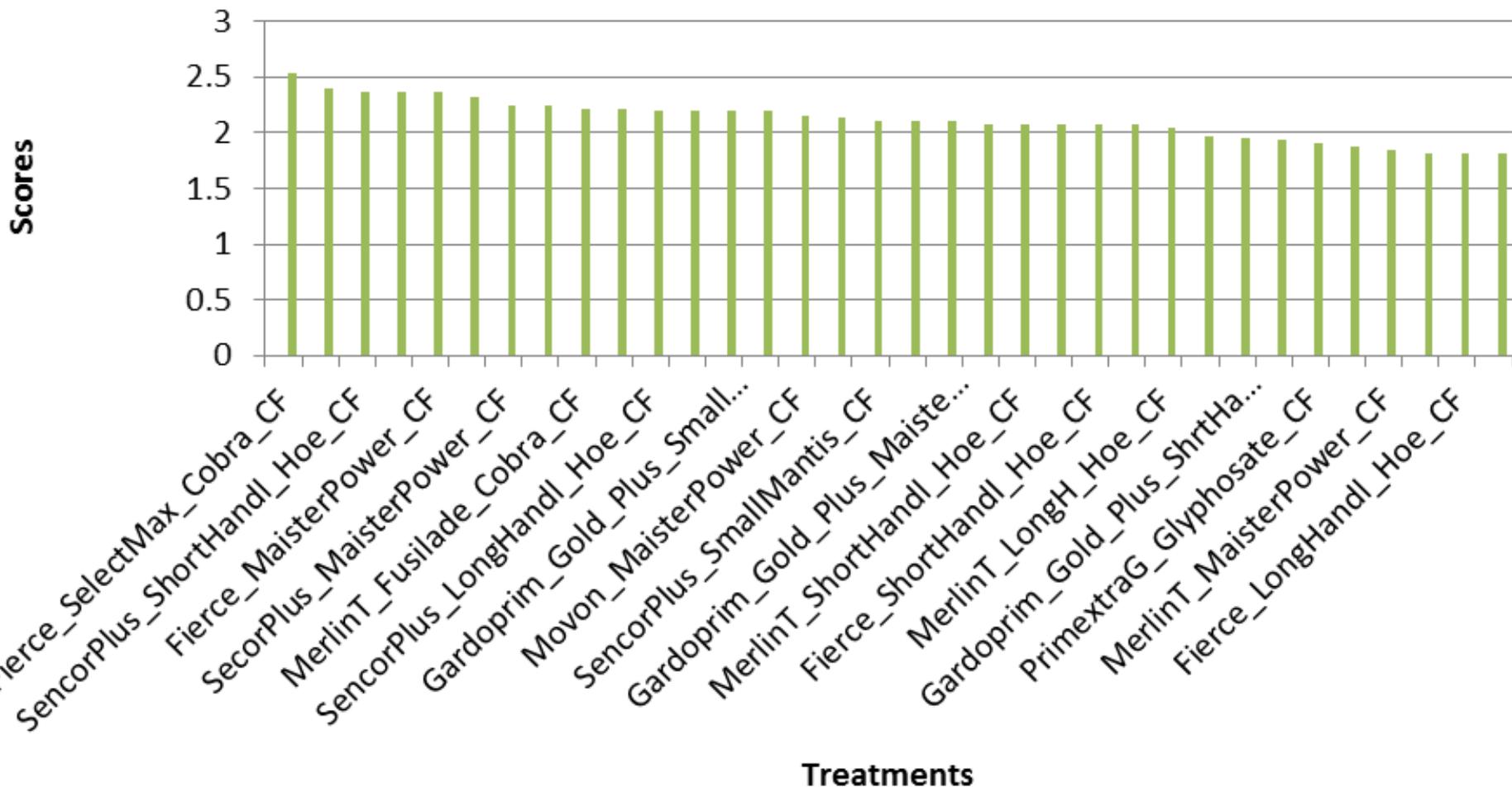
Abia: Cleanliness of field in casava mono

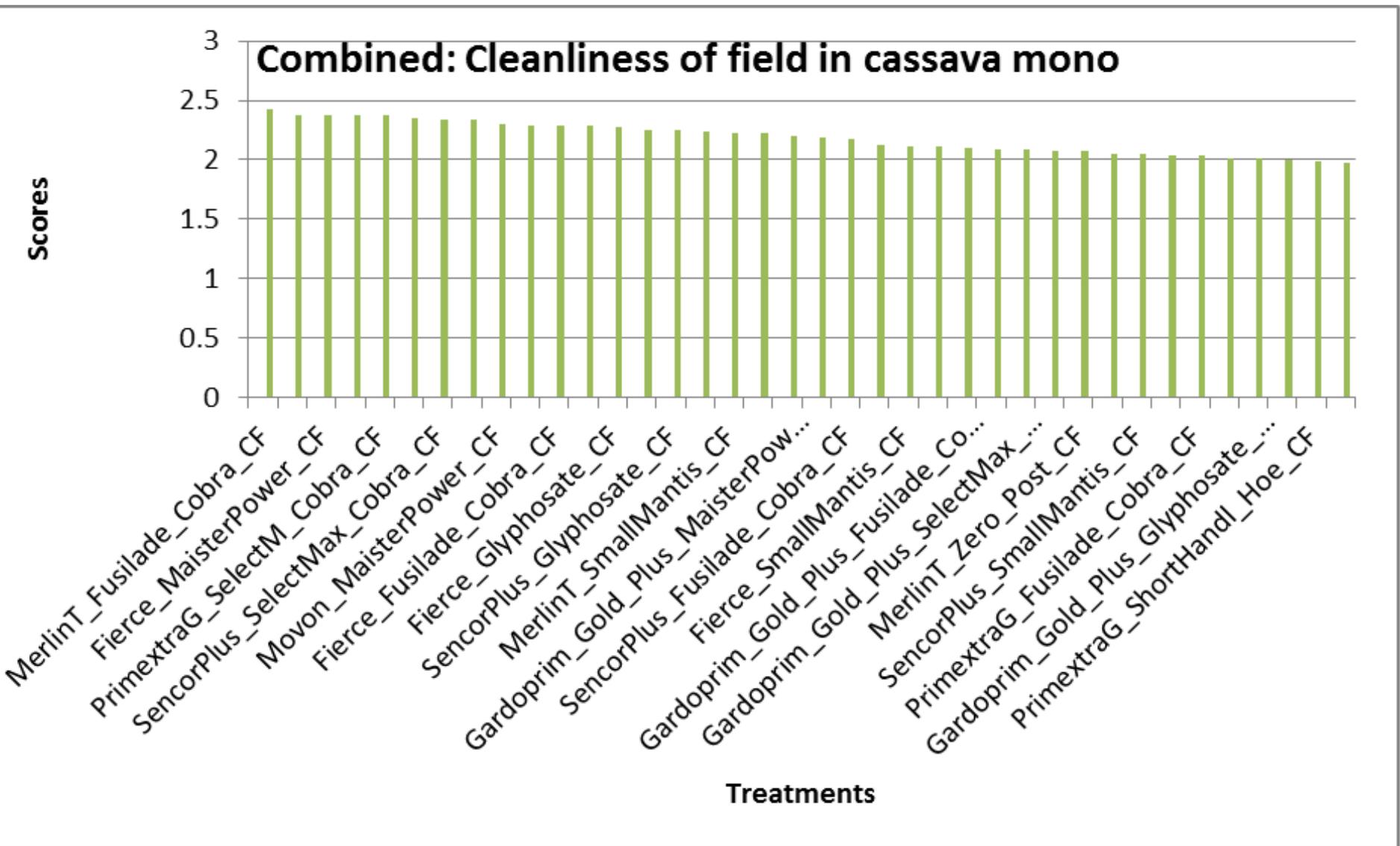


Benue: Cleanliness of field in cassava mono

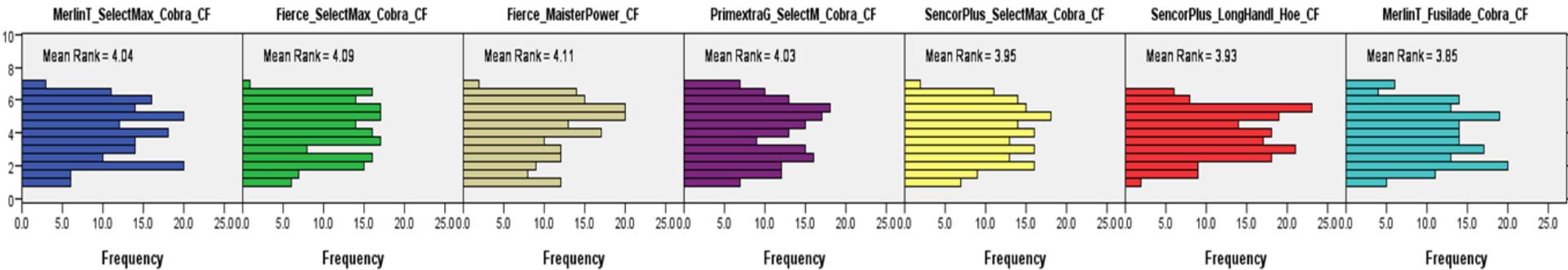


Oyo: Cleanliness of field in casava mono





Related-Samples Friedman's Two-Way Analysis of Variance by Ranks



Total N	164
Test Statistic	2.866
Degrees of Freedom	6
Asymptotic Sig. (2-sided test)	.826

1. Multiple comparisons are not performed because the overall test retained the null hypothesis of no differences.



Table 8 h: Farmers distribution based on use of preemergence herbicides

Preemergence

State		Frequency	Percent
Abia	No	133	84.2
	Yes	25	15.8
	Total	158	100.0
	NR	22	
Total		180	
Benue	No	131	64.2
	Yes	73	35.8
	Total	204	100.0
	NR	6	
Total		210	
Ogun	No	35	27.6
	Yes	92	72.4
	Total	127	100.0
	NR	82	
Total		209	
Oyo	No	23	9.0
	Yes	233	91.0
	Total	256	100.0
	NR	14	
Total		270	

NR: No Response

Table 8 i: Farmers distribution based on use of postemergence herbicides

Postemergence

State		Frequency	Percent
Abia	No	132	85.2
	Yes	23	14.8
	Total	155	100.0
	NR	25	
Total		180	
Benue	No	54	26.2
	Yes	152	73.8
	Total	206	100.0
	NR	4	
Total		210	
Ogun	No	38	29.9
	Yes	89	70.1
	Total	127	100.0
	NR	82	
Total		209	
Oyo	No	43	17.2
	Yes	207	82.8
	Total	250	100.0
	NR	20	
Total		270	

NR: No Response



Agrodealer shops in Benue



**Gang sprayers
in Oyo**

IITA Cassava Weed Management Project

Facts about weeds and cassava in Nigeria



- Weeds are a major constraint to cassava productivity in Nigeria
- Weeds cause yield losses of 50-90% in cassava
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IITA AWARD 2016



Reaching farmers with weed management technologies: Approaches that work

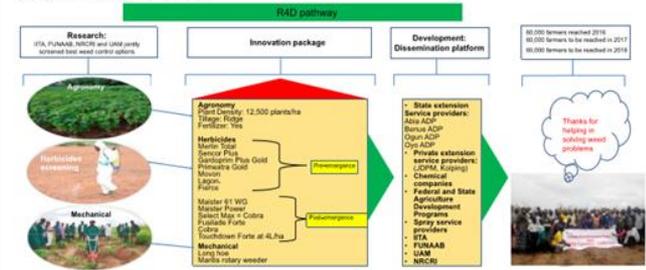


Introduction

Weeds are major constraints to cassava productivity, contributing to 50-90% in yield losses (Chikoye et al., 2004). In Nigeria and elsewhere in Africa, yields of cassava have been hamstrung to a low of 12-13 tons per ha as opposed to more than 20 tons being obtained in Asia. Besides undermining yields, weed control takes 50-80 percent of labor budget, and women account for about 90 percent of hand and hoe weeding labor. In some cases, children are withdrawn from school to support weeding. One way to control weeds and reduce the drudgery associated with manual weeding is the use of integrated weed management which includes the application of safe and environmentally friendly herbicides that have proven to be more efficient and cost effective than hand and hoe weeding.

Materials and methods

The IITA-Cassava Weed Management Project screened 22 pre- and 19 post-emergence herbicides in 2014 for effectiveness in weed control in cassava. Seven pre- and 6 post-emergence herbicides were finally selected for on-farm demonstration in 2016. The agronomy of cassava was also examined with respect to tillage, cassava variety, plant population, fertilization and intercrop. The Project also screened several mechanical weeding equipment and selected a motorized weeder, and long handle hoe. The best options from the herbicide, agronomy and mechanical weeding tools have been put into an integrated package that is being tested on 50 sites in four states in Nigeria (Ekeleme et al., 2016).



Results

Across the 50 sites, four thousand farmers are mobilized to visit the sites and gain knowledge on weed control. Also in each of the 50 sites, spray service providers are being formed in groups of 20 each. Each of those SSPs will reach 50 farmers per year with improved weed management control. This approach depends less on traditional extension system and is less expensive as the SSPs are eager to use the knowledge gained to solve the weed problems in their communities and also make money. Through this model, the Cassava Weed Management Project will reach 150,000 farmers in the next three years thereby exceeding the target of 125,000 set by the project document.

Conclusion

The use of multi-partners such as the spray service providers to complement traditional extension system is a game changer that should be explored by projects for sustainable out scaling. This is because of their ability to reach a large number of farmers at lower cost.

References

Sustainable Weed Management Technologies for Cassava Systems in Nigeria: A proposal submitted to the Bill and Melinda Gates Foundation on August 2013. Chikoye, D., Suruly, S. and Ekeleme, F. 2004. Evaluation of integrated weed management practices for maize in the northern Guinea savanna of Nigeria. Crop Protection, 23, pp 895-900. Ekeleme, F., Hauser, S., Hauser, G., Chikoye, A., Hailu, S., Olorunmaiye, P., Usman, M., Olojede, A., Chikoye, D. (2016) Weed Management in cassava in Africa: Challenges and opportunities. Outlook on Pest Management, 21(5), pp 299-312

- G. Atser
- A. Dixon
- F. Ekeleme
- S. Hauser
- T. Ayankanni
- A. Olojede
- M. Okwusi
- H. Usman
- M. Agada
- P. Olorunmaiye
- G. Sokoya
- D. Chikoye
- and
- K. Dashiell

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Oyo Road,
Ibadan, Nigeria

IITA Cassava Weed Management Project

Project brief



Quick Start
This project is a multi-year initiative to improve cassava productivity in Nigeria by addressing the major constraint of weeds. The project will focus on the development and dissemination of integrated weed management technologies, including herbicides, mechanical weeding equipment, and agronomy practices. The project will reach 150,000 farmers in the next three years.

Introduction
Weeds are a major constraint to cassava productivity in Nigeria, causing yield losses of 50-90%. Weeds also cause yield losses of 50-90% in cassava. Weeds are a major constraint to cassava productivity in Nigeria, causing yield losses of 50-90%. Weeds also cause yield losses of 50-90% in cassava.

Objectives
The project will focus on the development and dissemination of integrated weed management technologies, including herbicides, mechanical weeding equipment, and agronomy practices. The project will reach 150,000 farmers in the next three years.

Impact on farm families
The project will improve the productivity of cassava, leading to increased income and food security for farm families. The project will also improve the productivity of cassava, leading to increased income and food security for farm families.

Our contribution
The project will contribute to the development of sustainable weed management technologies for cassava systems in Nigeria. The project will also contribute to the development of sustainable weed management technologies for cassava systems in Nigeria.

IITA Cassava Weed Management Project

Driving adoption with multi-media platforms: Cassava projects' winning strategy



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Research, Innovation provider
IITA, FUNAB, INRRI and local experts screened best weed control options.

Channels
State extension service providers, Private extension service providers, Chemical companies, Federal and State Agriculture Development Programs, Spray service providers, IITA, FUNAB, UAM, INRRI.

Statistics of persons reached
80,000 farmers reached in 2016, 80,000 farmers to be reached in 2017.

References
Chikoye, D., Suruly, S. and Ekeleme, F. 2004. Evaluation of integrated weed management practices for maize in the northern Guinea savanna of Nigeria. Crop Protection, 23, pp 895-900. Ekeleme, F., Hauser, S., Hauser, G., Chikoye, A., Hailu, S., Olorunmaiye, P., Usman, M., Olojede, A., Chikoye, D. (2016) Weed Management in cassava in Africa: Challenges and opportunities. Outlook on Pest Management, 21(5), pp 299-312

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Implementing partners

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www.iita.org

www.cassavaweed.org

www.cassavaweed.org

Acknowledgement

Principal Investigator:



Implementing Partners:



Abia ADP
BNARDA
OGADEP
OYSADEP

JDPM Oyo

JDPM Abeokuta

KOLPING

FMARD

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GATES foundation



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