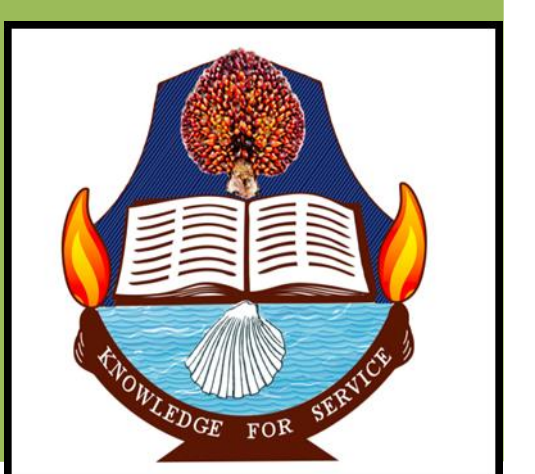


Weather and climate information use and needs for rice production, Cross River State, Nigeria

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Introduction

- Agriculture in developing countries is climate dependent.
- Climate and weather forecasts have the potential to assist small scale farmers make informed decisions that will boost the quantity and quality of crops produced.
- However, climate/weather information disseminated are often in forms that are ill-suited for use by small scale farmers.



Swamp rice field in Ikom Agricultural zone



Land preparation for upland rice cultivation

Methods

- The study employed a survey design.
- Multistage sampling procedure was used to select 125 small scale rice farmers in two rice producing agricultural zones of the state (Ogoja, and Ikom).
- Binary logistic regression tested the relationship between rice farmers' selected socio-economic characteristics and use of weather/climate information

Results

- Major types of weather/climate information used for rice production were: onset/length of rainy season (86.4 %), sunshine duration (84.8 %), end of rainy season (83.2 %), daily temperatures (81.6 %), and wind direction (80.8 %).
- Information that aided farmers' decision making were: information on onset and end of rainy season ($\bar{x}=4.34$), forecasts on extreme weather events like floods and/or droughts ($\bar{x}=4.33$) and chances of wet spells ($\bar{x}= 4.14$). (Table 1)

Table 1: Weather/climate information that aided decision making in rice production

Weather/climate information	\bar{x}	SD	Rank
Information on onset and end of rainy season	4.34	0.14	1st
Total Rainfall Forecast and its Intra-seasonal Distribution	3.98	0.1	4th
Humidity	3.56	0.09	7th
Forecasts on extreme weather events such as floods and/or droughts	4.33	0.10	2nd
Sky Cover	3.09	0.09	10th
Soil Temperature	3.42	0.09	8th
Wind direction forecasts	3.88	0.1	5th
Wind speed	3.43	0.09	8th
Chances of Wet Spells	4.14	0.10	3rd
Daily Temperature forecasts	3.70	0.1	6th

Conclusion

- Rice farmers are exposed to different weather and climate information that aid farmers' decision making for rice production
- However, information available is at variance with what farmers actual need.
- Also Access to and use of information provided is hampered by several constraints.
- Climate information service providers should target farmers' information needs

- Farmers' major weather information needs were: information on how to cope with risk and uncertainty (95.2%), information on water management during dry season (92.8%) and soil nutrient management information (92.8%) (Fig.1).

- Inadequate access to climate information ($\bar{x}=4.43$), inadequate money to buy ICT tools like radio, television, cell phones, batteries, ($\bar{x}=4.36$), and absence/unreliable power supply ($\bar{x}=4.34$) were 3 key constraints identified (Table 2).

- Binary logistic regression analysis showed that educational level ($p=0.033$) and farming experience ($p=0.043$) had significant positive effects on the use of weather and climate information at $p=0.05$.

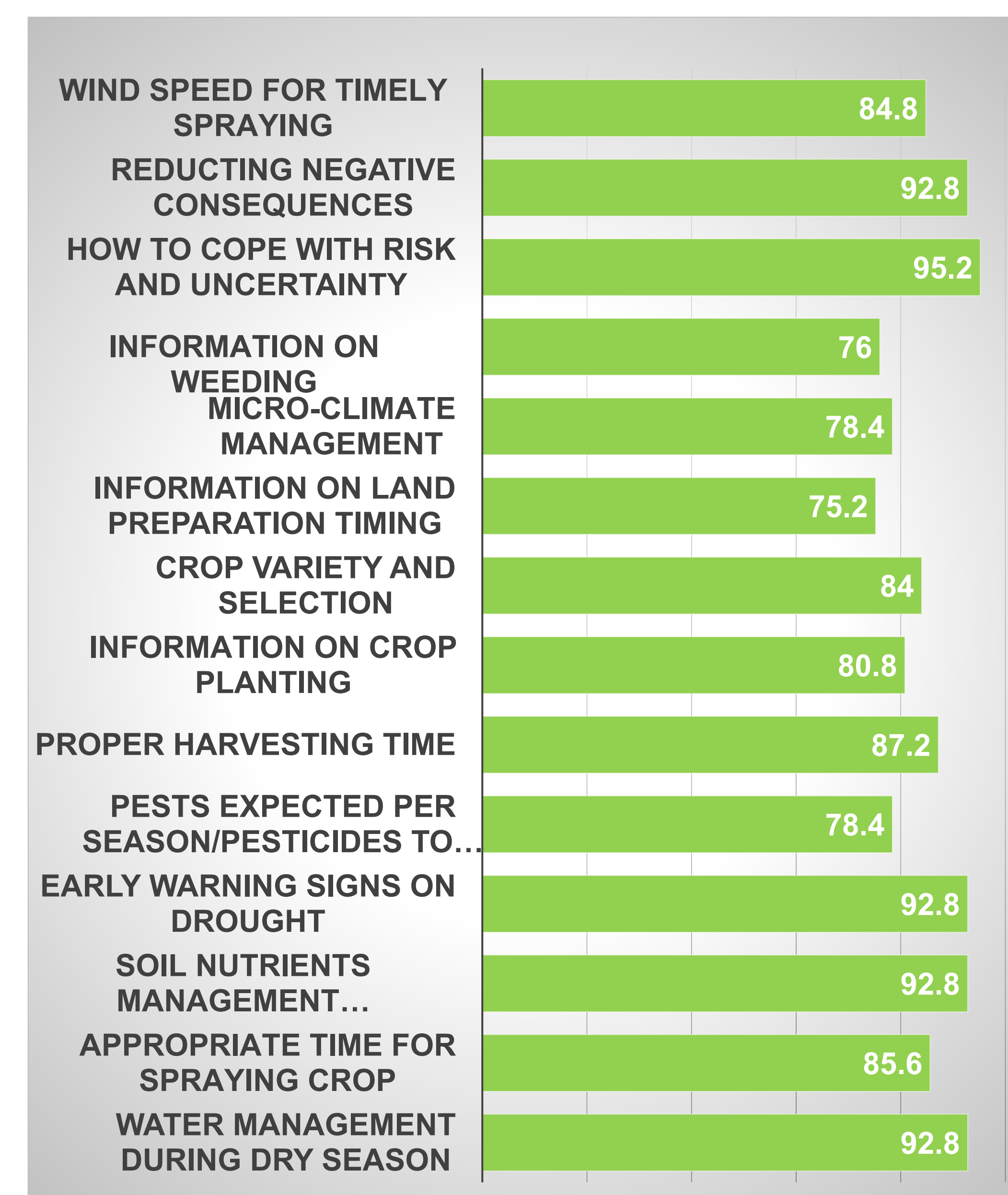


Fig 1: Rice farmers' weather information needs

Table 2: Constraints to use of weather/climate information

Constraints	\bar{x}	Rank
Inadequate access to climate information	4.43	1st
Forecasts reach farmers too late	4.02	9th
Communication of favourable forecasts while neglecting adverse conditions	4.26	7th
Incorrect predictions of events	3.22	16th
Inadequate weather/climate parameters	4.02	9th
Geographical areas covered are too large to be locally relevant	3.26	15th
Information not communicated in local language	4.34	4th
Excessive reliance on scientific terms/graphs	3.08	17th
Poor literacy or educational levels	4.3	6th
Previous negative experiences with predictive information	3.92	11th
Information conflicts traditional predications	3.70	14th
Inadequate coverage of LGAs by signals	3.91	12th
Inadequate money to buy ICT tools	4.36	3rd
Absence/unreliable power supply	4.34	4th
Conflicts within/across communities hindering circulation of information	3.72	13th
Lack of money or access to credit	4.43	1st
Lack of trust in scientific information	4.16	8th

