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INTRODUCTION

Cassava is a major staple in Africa for food and nutrition security and improved livelihood. Fresh root yield, dry matter and starch yields constitute major determinants of demand by end-users. Increased demand for seed of improved varieties will facilitate development of a sustainable seed system translating into higher yield per unit area thus generating more income. The need therefore to continuously evaluate among elite varieties for industrial suitability and food uses to identify market demand and recommend suitable cultivars for specific uses.

PURPOSE

A participatory demand creation trial (DCT) was established to evaluate cassava varieties with farmers and processors using large plots utilizing best practices. Seven released varieties and one candidate variety were grown in three locations to compare varieties with farmers and processor and identify varieties most suitable for commercial seed production.

METHODOLOGY

The DCTs were conducted in Ikenne, Ago-Owu and Ilorin Nigeria during the 2016-2017 cropping season. Two of the locations had two replications and one had a single replication. Varieties were randomized within reps with plot size of 128m² with 1 m ridges and 0.8 m between plants within ridges. Data were collected on total root number, marketable root number, fresh root yield, shoot weight, harvest index, % dry matter content and dry yield. Data were analysed SAS .

RESULTS AND DISCUSSION

Results from ANOVA showed that genotype (G), environment (E) and GXE interaction effects were significant ($P < 0.01$) for fresh yield and dry matter content (Table 1). TMEB419 gave the highest fresh and dry root yields of 28.2 t/ha and 10.6 t/ha, respectively. This was followed by IBA961632 with 25.3 t/ha and 9.9t/ha for fresh and dry yield, respectively. Genotype IBA961632 performed better than all other clones for dry matter content with CR36-5 and TMEB419 also showing excellent DM (Table 2).

ACKNOWLEDGEMENT



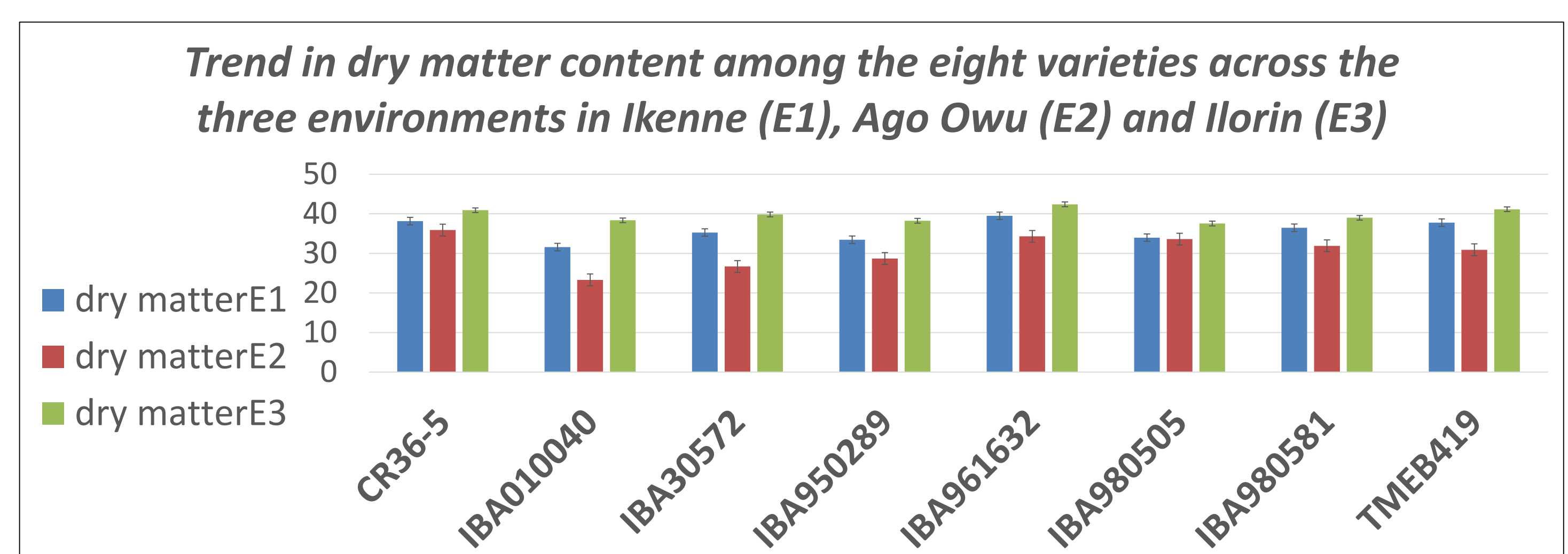
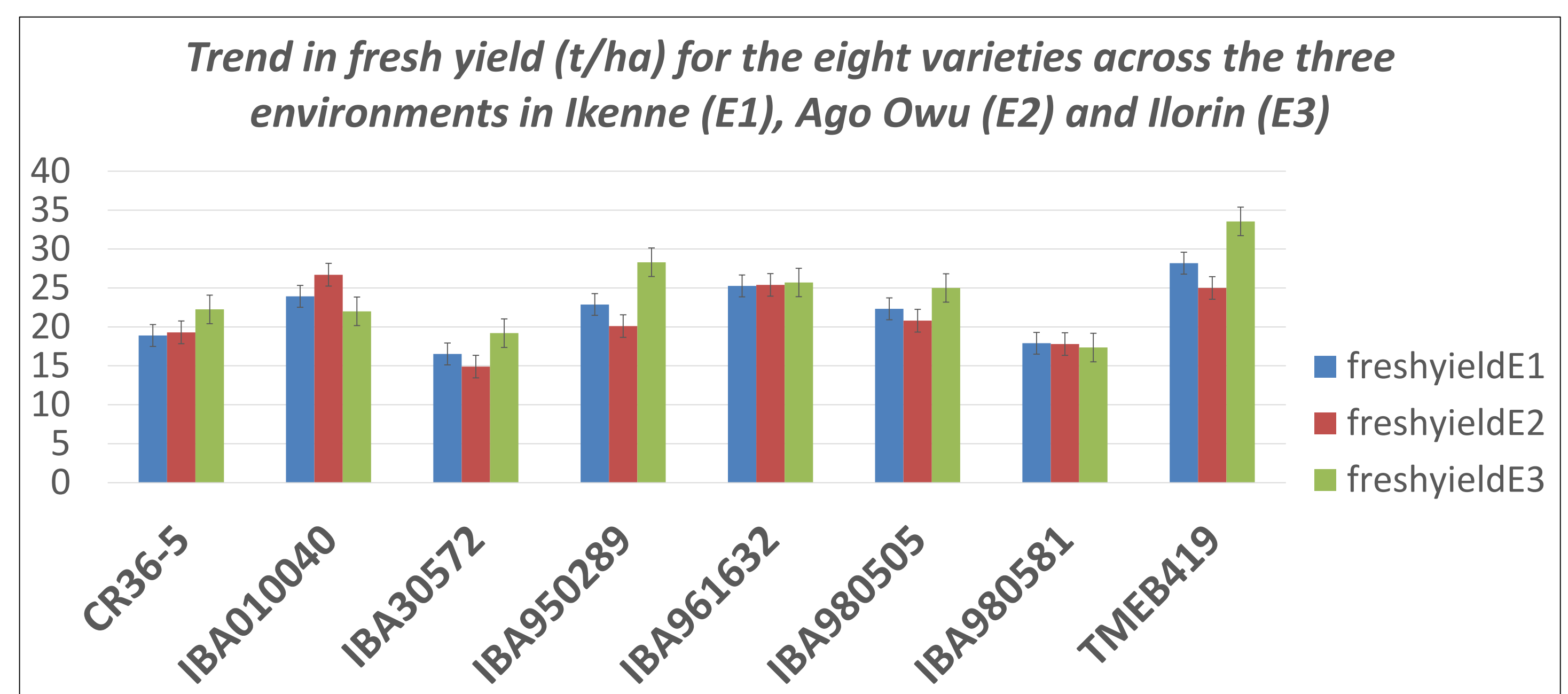
Table 1. Combined ANOVA and contributions to the sum of squares for agronomy traits of eight clones tested in a demand creation trial in three locations (2016-2017)

SV	DF	Root number	Fresh yield	Dry matter	Garri
Replicate	1	25764.5ns	2.88ns	0.04ns	0.70ns
Environment	2	18407.72*	67.96*	218.30*	15.33ns
Clone	7	734.0ns	21.98*	35.77*	22.43ns
Env*Clone	14	38070.0ns	12.54*	7.76*	7.55ns
Error	24	24836	21.6	0.93	7.69
CV%		21.47	21.16	2.7	12.3

* ** significant; ns= not significant

Table 2. Means of agronomic traits for eight clones evaluated in a demand creation trials during the 2016/2017 cropping seasons in Nigeria

Clone	mean CMD severity	root number	fresh yield t/ha	dry yield t/ha	harvest index	% dry matter	% garri yield
TMEB419	1.3	732	28.2	10.6	0.5	37.8	23.7
IITA-TMS-IBA961632	1.0	816	25.3	9.9	0.6	39.5	24.3
IBA950289	1.2	750	22.9	7.8	0.4	33.5	20.9
IITA-TMS-IBA980505	1.0	862	22.3	7.5	0.5	34.0	21.7
IITA-MS-IBA010040	1.0	682	23.9	7.6	0.5	31.6	20.9
CR36-5	1.2	696	18.9	7.2	0.6	38.1	23.1
IITA-TMS-IBA980581	1.0	722	17.9	6.5	0.4	36.5	22.0
IITA-TMS-IBA30572	2.4	612	16.5	5.8	0.4	35.3	22.9
MEAN	1.3	559	21.9	7.9	10.4	35.8	22.4
CV	18.8	24	21.1	8.6	0.8	2.7	12.4
SE	0.23	134	4.7	3.0	0.1	1.0	2.8



CONCLUSION

This study identified varieties three promising high starch varieties for cassava processor demand in Southwest Nigeria, IITA-TMS-IBA961632, TMEB419 and CR36-5. These have high yield potential that satisfy demands for farmers and industrial uses. Increased usage of these genotypes would promote scale out of quality seeds for improved output. Six DCTs have will be harvest in 2018 for additional participatory assessment by farmers and processors.