

# HIT JOURNAL OF BIOTECHNOLOGY

## An International Peer Reviewed Journal of Biotechnology

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The Harare Institute of Technology (HIT) Journal of Biotechnology is a bi-annual print peer-reviewed *journal* that publishes high quality original research papers, short communications, case studies and review articles on biotechnology and related issues. The journal focuses on all aspects of traditional and modern biotechnology with the objective of contributing to solutions which address global challenges.

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2. Marine
3. Industrial
4. Agricultural
5. Environmental
6. Commercialisation and marketing of Biotechnology derived products and services
7. Innovation in Biotechnology

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Notification to authors: *15 February, 2018*

Journal publication: *30 March, 2018*

Deadline for submission of manuscripts for the second issue: *27 July, 2018*

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Manuscript should contain appropriate titles:

1. Abstract with five to seven key words
2. Introduction
3. Materials and Methods
4. Results and Discussion
5. Recommendations or Conclusion

6. Acknowledgements
7. and References.

Manuscripts should be typed in Times New Roman of 12 pt., 1.5 spacing, with justified margins. The length of paper including text, tables and figures should not exceed 15 pages. Tables and figures may not be placed within the text. A template has been attached at the end of this section for guidance.

### **1. Title**

The title phrase should be brief. Under the title, a list containing the following must be included;

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Words with abbreviations must be written in full on first mention and may only be used for terms that are either unusually long or non-standard.

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Results and discussion may be combined into a single section or separately when necessary. This section must be comprehensively written.

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**Template – January 2017.**

Source; Dhliwayo-Chiunzi, P.D., Matimati, I., Kachigunda, L., and Hove, L., 2014. Collection and Evaluation of Superior Phenotypes of *Uapaca kirkiana* an indigenous fruit tree of Zimbabwe. *International Science and Technology Journal of Namibia (ISTJN)*, 4(1), pp7-22.

**Identification and Selection of Superior Phenotypes of *Uapaca Kirkiana* Muell Arg. (Euphorbiaceae), A Priority Indigenous Fruit Tree of Zimbabwe [Times New Roman, size 12, Bold]**

**Patient D. Dhliwayo-Chiunzi<sup>1</sup>, Ignatious Matimati<sup>2</sup> and Barbara Kachigunda<sup>3</sup>**

**[Times New Roman, Size 12, Bold]**

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**Abstract [Times New Roman, Size 12, Bold, 1.5 spacing]**



The International Centre for Research in Agroforestry (ICRAF now known as the World Agroforestry Centre) initiated research and development work on at least 20 priority indigenous fruit trees in 5 countries in Southern Africa including Zimbabwe. The long term objective of this work was to improve food security and income generating capacities of local communities through domestication, marketing and commercialisation of indigenous fruit trees. Country specific priority species were identified based on consultations with a wide range of users. [Times New Roman, Size 12, 1.5 spacing]

### **Introduction [Times New Roman, Size 12, Bold 1.5 spacing]**

*Uapaca kirkiana* Muell Arg. (Euphorbiaceae) is one of the most important fruit trees native to the Miombo ecological zone of Southern Africa (Ngulube, et al., 1995). The tree is reported as a priority species in Zimbabwe, Zambia, Malawi and Tanzania. *U. kirkiana* is a small to medium sized tree of up to 5 – 12m height. It has a characteristic rounded crown and mainly occurs at medium altitudes in open woodland. It is dominant on gravely soils. The stem bears short and thick branches with simple alternating leaves arranged in clusters. *U. kirkiana* is a dioecious that bears male and female flowers on separate plants. The male and female flowers are yellow green in colour and globose in shape (Ramadhani, 2002; Ngulube, et al., 1997). The fruits of *U. kirkiana* known as mazhanje or mashuku in Shona are spherical in shape with a rather hard skin surrounding an edible pulp. Flowers and fruits are set during the rainy season, and fruits mature from September to December (FAO, 1986). Fruits are collected for utilisation around the month of October to around February. [Times New Roman, Size 12, 1.5 spacing]

### **Methodology**

#### **Identification of *U. kirkiana* growing areas [Times New Roman, Size 12, 1.5 spacing]**

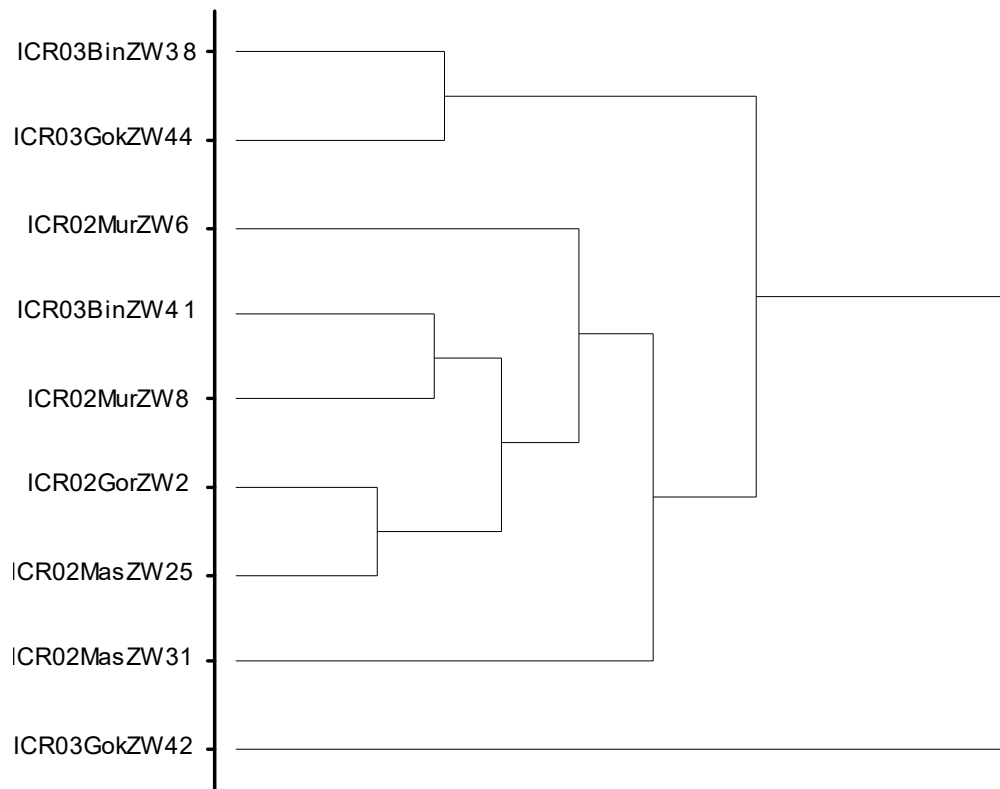
In order to identify major *U. kirkiana* natural stands, consultations were held with extension workers, Forestry Commission, farmer key informants, school children, vendors and traders. Information about source areas and desirable traits for fresh consumption and for processing into various products were collected from workshop participants using a checklist and a structured survey questionnaire administered during village workshops and interviews held in the respective areas.

## References

The Harvard system of referencing shall be used.

**Table 5. Characteristics of the trees selected for multiple criteria [Times New Roman, Size 12, Bold, 1.5 spacing]**

District	Tree ID	Village	Fresh weight (g)	Pulp content (%)	TSS (% brix)
Bindura	ICR03BinZW38	Nyava	25.0	41.8	22.8
Bindura	ICR03BinZW41	Nyava	29.8	52.9	22.5
Goromonzi	ICR02GorZW2	Ngazimbi	28.6	53.6	21.6
Gokwe	ICR03GokZW42	Mafa	24.9	59.9	20.0
Gokwe	ICR03GokZW44	Mafa	21.3	45.9	21.9
Masvingo	ICR02MasZW25	Chikume	26.0	56.3	22.5
Masvingo	ICR020MasZW31	Uranda	20.9	54.4	24.9
Murehwa	ICR02MurZW6	Chadenga	23.5	55.0	22.8
Murehwa	ICR02MurZW8	Chimani	33.0	52.9	24.0
<b>Mean</b>			<b>25.89</b>	<b>52.52</b>	<b>22.56</b>
<b>Variance</b>			<b>15.83</b>	<b>29.83</b>	<b>1.95</b>
<b>cv%</b>			<b>15.369</b>	<b>10.399</b>	<b>6.188</b>



**Figure 3: Dendrogram of the cluster analysis of superior phenotypes. [Times New Roman, Size 12, 1.5 spacing]**

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6.	Date sent to reviewer	
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1.	Abstract	
2.	Introduction / Background	
3.	Methodology	
4.	Results	
5.	Discussion	
6.	Recommendations	
7.	Conclusion	
8.	References	
9.	Tables, figures, graphs	
10.	Others	
11.	Decision / Overall Comment	

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**Give your recommendations on the following issues**

1.	Is the title of the manuscript appropriate?	
2.	Is the experimental design appropriate and adequate?	
3.	Are the results and the data presented authentic and repeatable?	
4.	Do the results adequately support the conclusions of the study described?	
5.	Are the references appropriately cited?	
6.	Does the manuscript require further proofreading and correction of grammatical errors?	

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1.	Originality	Poor	Fair	Good	Excellent
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3.	Relevance to field				
4.	Depth of research				
5.	Logical flow				
6.	Soundness of language				
7.	Clarity of presentation				

**Part E**

**Recommendations**

1.	Accept as is	
2.	Requires minor revision	
3.	Requires moderate revision	
4.	Requires major revision	
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6.	Reject on these grounds (specify)	

**Part F**

Additional comments / suggestions

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