TOWARDS A LOCAL BRAND
TOBACCO VARIETY
DEVELOPMENT IN
ZIMBABWE

E. MUDZENGERERE
TOBACCO RESEARCH BOARD
OUTLINE

- INTRODUCTION
  - World tobacco growing regions
  - The natural environment
  - Historical background to variety use.
- VARIETY DEVELOPMENT
  - The variety development and release focus
  - Achievements
  - The Kutsaga tobacco variety brand (FC & BU)
  - International collaboration
- Conclusion
RELIEF MAP OF AFRICA
Zimbabwe physical environment
Rainfall Distribution and Tobacco Belts
NATURAL ENVIRONMENTAL FEATURERS OF THE TOBACCO BELT

- **SOILS**- PREDOMINANTLY GRANITE SANDS
- **TEMPERATURE**- WARM to HOT
- **RAINFALL**- 600mm to 1000mm
# ZIMBABWE TOBACCO REGIONS

<table>
<thead>
<tr>
<th>Ecological Region</th>
<th>Agro – Ecological Characteristics</th>
<th>Nature of Season(w.a.p)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FAST</strong>&lt;br&gt;Low&lt;1000m</td>
<td>High&lt;br&gt;medium/high (&lt;600mm)</td>
<td>Short (13)</td>
</tr>
<tr>
<td><strong>MEDIUM</strong>&lt;br&gt;Medium 1000m&gt;</td>
<td>Medium&lt;br&gt;medium/ high (600-800mm)</td>
<td>Medium(17)</td>
</tr>
<tr>
<td><strong>SLOW</strong>&lt;br&gt;High 1200m&gt;</td>
<td>Low&lt;br&gt;High (Above 800mm)</td>
<td>Long(22)</td>
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</tbody>
</table>
VARIETY USE HISTORY

- Early varieties imported
- Attempts at acclimatisation/adaptation
- Realization of shortcomings of imported varieties
- Early attempts at variety improvement
SHORTCOMINGS OF IMPORTED VARIETIES

- Susceptible to many diseases
- Consequently, low yielding
- Low quality
- General failure to adapt to local environment
THE NEED FOR LOCAL VARIETY DEVELOPMENT

- Incorporation of multiple disease resistance
- Yield improvement
- Morphological acceptability
- Quality/style acceptability
BREEDING FOR DISEASE RESISTANCE AND YIELD

Some major tobacco diseases
ROOTKNOT NEMATODES
ALTERNARIA
BLACK SHANK
BACTERIAL WILT
ANGULAR LEAF SPOT
WHITE MOULD
VARIETY DEVELOPMENT ACHIEVEMENTS

THE “KUTSAGA” BRAND”
<table>
<thead>
<tr>
<th>Variety</th>
<th>No. of Diseases</th>
<th>Resistance to Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE1</td>
<td>1</td>
<td>WM</td>
</tr>
<tr>
<td>K RK1</td>
<td>2</td>
<td>WM, RK</td>
</tr>
<tr>
<td>KM 10</td>
<td>3</td>
<td>WM, WF-0, TMV</td>
</tr>
<tr>
<td>K RK8</td>
<td>4</td>
<td>WM, RK, WF-0, TMV</td>
</tr>
<tr>
<td>K RK23</td>
<td>4</td>
<td>WM, RK, WF-0, TMV</td>
</tr>
<tr>
<td>K 30R</td>
<td>4</td>
<td>WM, RK, WF-0, TMV, ALT, GW</td>
</tr>
<tr>
<td>K RK6</td>
<td>6</td>
<td>WM, RK, WF-0, WF-1, ANG-1, BS</td>
</tr>
<tr>
<td>T 29</td>
<td>6</td>
<td>RK, WF-0, WF-1, ALT, ANG-1, BS</td>
</tr>
<tr>
<td>K RK27</td>
<td>6</td>
<td>WM, RK, WF-0, WF-1, ANG-1, BS</td>
</tr>
<tr>
<td>K 35R</td>
<td>6</td>
<td>WM, WF-0, WF-1, TMV, ANG-1, BS</td>
</tr>
<tr>
<td>T 60</td>
<td>6</td>
<td>WM, RK, WF-0, WF-1, ANG-1, BS</td>
</tr>
<tr>
<td>T 61</td>
<td>6</td>
<td>RK, WF-0, WF-1, TMV, ANG-1, BS</td>
</tr>
<tr>
<td>K RK22</td>
<td>7</td>
<td>WM, RK, WF-0, WF-1, TMV, ANG-1, BS</td>
</tr>
<tr>
<td>K RK26</td>
<td>7</td>
<td>WM, RK, WF-0, WF-1, ANG-1, GW, BS</td>
</tr>
<tr>
<td>K RK28</td>
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<td>WM, RK, WF-0, WF-1, ALT, ANG-1, BS</td>
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<tr>
<td>T 62</td>
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<td>WM, RK, WF-0, WF-1, TMV, ANG-1, BS</td>
</tr>
<tr>
<td>T 64</td>
<td>7</td>
<td>WM, RK, WF-0, WF-1, ALT, ANG-1, BS</td>
</tr>
<tr>
<td>T 65</td>
<td>7</td>
<td>WM, RK, WF-0, WF-1, ALT, ANG-1, BS</td>
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<tr>
<td>T 66</td>
<td>9</td>
<td>WM, RK, WF-0, WF-1, TMV, ALT, ANG-1, GW, BS</td>
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</table>
GAINS IN DISEASE RESISTANCE AND YIELD
K RK26 (Locally Developed)
K RK66 (Locally Developed latest Release)
T 72 (New-On Limited Release)
### Attributes of Popular Varieties

<table>
<thead>
<tr>
<th>Variety</th>
<th>Description</th>
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| KRK 26  | • Relatively fast  
          • Wide/Broad adaptation  
          • Easy to manage agronomically  
          • Easy to cure  
          • Good for beginners  
          • Suitable for medium and slow growing areas |
| T66     | • Medium to slow ripening  
          • Suitable for fast and medium growing areas  
          • Needs proper fertilization  
          • Reap ripe  
          • A very high yielder (> 4 000 kg/ha) |
| T72     | • Promising to be the variety of the moment  
          • Slow ripening  
          • Easy to cure  
          • Very high yielding (> 4 000 kg/ha)  
          • Suitable for fast and medium growing areas |
THE “KUTSAGA” BRAND

Varieties and cured styles

SLOW VARIETY

FAST VARIETY
THE BURLEY TOBACCO BRAND (BRK)
Burley Variety Development

Burley 21 (Imported)  B RK4 (Local Development)
THE BURLEY BRAND

ZAMBIA

Kamuchira (local)  BRK5 (ZIM)
Malawi (Fusarium Disease Infection)

BRK₄ (ZIM)  
KBM 33 (MALAWI)
Registering the "Kutsaga" Brand

VARIETY RELEASE AND REGISTRATION PROCEDURE
VARIETY TESTING AND ACCEPTANCE

T.R.B — Farmer

Trade

———>

Breeder

Govt Seed Services

VARIETY REGISTRATION AND CERTIFICATION
VARIETY RELEASE AND PROMOTION

- Wide agro-ecological on-farm testing for;
- At least three seasons
- Mandatory trade viewing and acceptability testing
- Adherence to international minimum standards on chemical attributes
- Final data collation, presentation and validation by Certifying Authority leading to;
- Variety acceptance and registration,
- Kutsaga branding and release
INTER-REGIONAL COLLABORATION
MOZAMBIQUE
TANZANIA
CONCLUSION

- Wide testing of Zimbabwean Kutsaga tobacco brand

- Wide adaptability but,

- Recognition of uniqueness of Zimbabwean natural environment – the basis for

- Uniqueness of product / style produced.