

**Working Group on Biochemical and Molecular Techniques
and DNA-Profiling in Particular****BMT/16/14****Sixteenth Session
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**THE USE OF REFERENCE VARIETY SIMILARITIES IN VARIETAL DISTINCTNESS II: REFERENCE
VARIETY SELECTION***Document prepared by experts from Seed Association of the Americas (SAA)**Disclaimer: this document does not represent UPOV policies or guidance*

1. At the fourteenth session of the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT), Nelson et al. (2014) produced the idea of using genetic similarity coefficients with a set of reference varieties to determine varietal distinctness. At the fifteenth session of the BMT, Mr. Kees van Ettehoven (2016) expanded this idea to fit within the context of a UPOV characteristic.
2. Here we address reference variety selection, a key feature in application of the reference variety model, among a set of publicly available maize (*Zea mays*) inbred lines. Most of the maize lines studied have expired United States of America plant variety protection (PVP) certificates. We explore the problem of reference variety selection theoretically and empirically. Challenges and opportunities are addressed.

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