**Definition of scope for DP Genus *Ceratitis* (2016-001)**

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**Background**

The Standards Committee (SC) accepted a recommendation from the TPDP that a new topic be generated for fruit flies in the genus *Ceratitis* MacLeay. The DP entitled “Genus *Ceratitis*” (2016-001) was rated as priority 1 and added to the work plan.

The genus *Ceratitis* consists of 95 described species that are predominantly Afrotropical in distribution and many of these species damage plants used for commercial or subsistence agriculture. Thirteen agricultural pests in the genus exhibit generalist host use behavior by using fruits from multiple plant families. Additional species are considered pests but with limited host use. Diagnosis of pests using adult morphology can require expertise because of overlap in character states between species, sex-specific diagnostic characters, and documented sibling species complexes.

Development of a protocol that includes all *Ceratitis* species or all *Ceratitis* pests would require extensive work, result in a relatively long document, and be relatively limited to implement in comparison to an available online, multi-entry method[[1]](#footnote-1). Diagnostic keys using adult morphology have been published for species in the various subgenera, but each is a lengthy, extensive document. An online multi-entry Lucid key to frugivorous flies of Africa1 is available that can be used to identify *Ceratitis* species. The author team has discussed options for developing a taxonomic scope for the *Ceratitis* DP to ensure it is impactful for IPPC member countries, provides instructions for completing pest identification without reference to other resources, and is feasible to complete given the drafting team and timeline for adoption.

The drafting team proposes to focus the protocol on the most significant generalist (polyphagous) *Ceratitis* pests from a global trade perspective: *C. capitata* (Mediterranean fruit fly), *C*. *cosyra* (mango fruit fly), and the four species of the FAR complex: *C. fasciventris*, *C. anonae*, *C. rosa* (Natal fruit fly), and *C. quilicii*. In addition to adult morphology, these entities have been the subject of larval morphology descriptions at third instar stage and published DNA barcoding studies that can be reported in the protocol. A shared diagnostic protocol for these species is expected to provide a resource to a wide number of users. Other pests could be added to the protocol as pest status changes and revisions are requested.

**Recommendations to the TPDP**

The TPDP is invited to:

1. *review* the information in this document
2. *recommend* the request to define the scope of “Genus *Ceratitis*” (2016-001) to the diagnosis of the genus and six species

1. Virgilio, M, White, I.M. and De Meyer, M. 2014. A set of multi-entry identification keys to African frugivorous flies (Diptera, Tephritidae). ZooKeys 428: 97-108. [↑](#footnote-ref-1)