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The Democratic Republic of the Congo, the cradle of cultivated Robusta coffee (*Coffea canephora*), can we safeguard its coffee genetic resources of world importance?

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Rationale:
Inventorying, conservation and evaluation of coffee genetic resources (CGR) in the DRC.
Methods:
Assesment of archives and of genetic, morphological and organoleptic characteristic of Robusta CGR.
Results:
Congolese Robusta CGR play a crucial role in the coffee production worldwide, but are poorly conserved.
Conclusions & Perspectives:
Important steps are made in order to study and conserve these important CGR, but they have to be accelerated considering the threats on these CGR.

Until the early of the 20th century *C. arabica* was the only coffee species of commercial significance, withstanding many attempts to introduce and cultivate other species such as *C. liberica s.l., C. congensis, C. stenophylla*and genetic lines of *C. canephora.* However, the discovery (late 19thcentury) and introduction (early 20th century) of "*Coffea robusta"* was a game changer. Although the name *C. robusta* is proven to be synonym with *C. canephora*, the commercial name, Robusta, was settled and is to this day a witness of the importance of this introduction based on Robusta CGR sourced from the Sankuru region in the DR Congo, which was principally distributed via the Java Coffee Research Station. Over one century, the share of Robusta is steadily growing from *quasi nihil* to today more than 40% of the coffee production.

Later breeding programs (1930-60) in the DR Congo (at the Lula and Yangambi Coffee Research Stations), Ivory Coast (1970-80's) and Vietnam (1980-90's) were intensively using Congolese CGR, as these have higher yields and better tolerance to coffee berry borer, rust and tracheomycosis, compared to *C. canephora* GR from other regions of its natural distribution. Today, Congolese CGR represents more than 75% of the genetic diversity of the cultivated Robusta of Côte d'Ivoire, Guinea and Vietnam. Accessions preserved in common gardens are either of pure Congolese origin or 1st generation or advanced Congolese hybrids. Additionally, ongoing evaluation of the INERA coffee collection in Yangambi is illustrating the organoleptic and agronomic potential of the cultivated and wild Congolese CGR.

Congolese CGR are under pressure due to deforestation, habitat degradation and climate change. In order to safeguard them for the future we need to invest in local infrastructure and enforce local capacities in conservation and research. An action plan for *ex-situ*and *in-situ* conservation is needed. Several steps have already been made with the support of the EU (11th EDF, FORETS Project, *FED/2016/381-145*), Belgium (Belspo-BRAIN, B2/191/P1/COFFEEBRIDGE) and the Flanders Environment (Climcoff-project), but many more steps are needed.

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