



Ruminal in vitro gas production kinetics of above-ground maize plant and plant fractions

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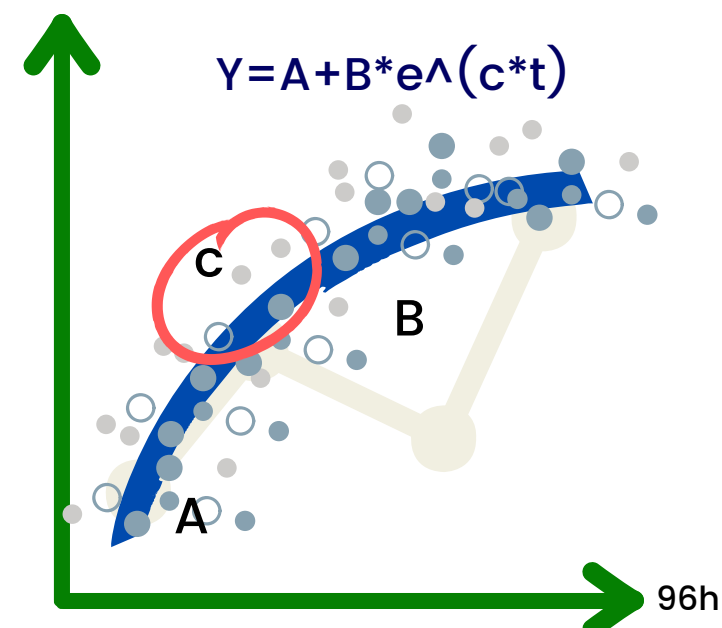
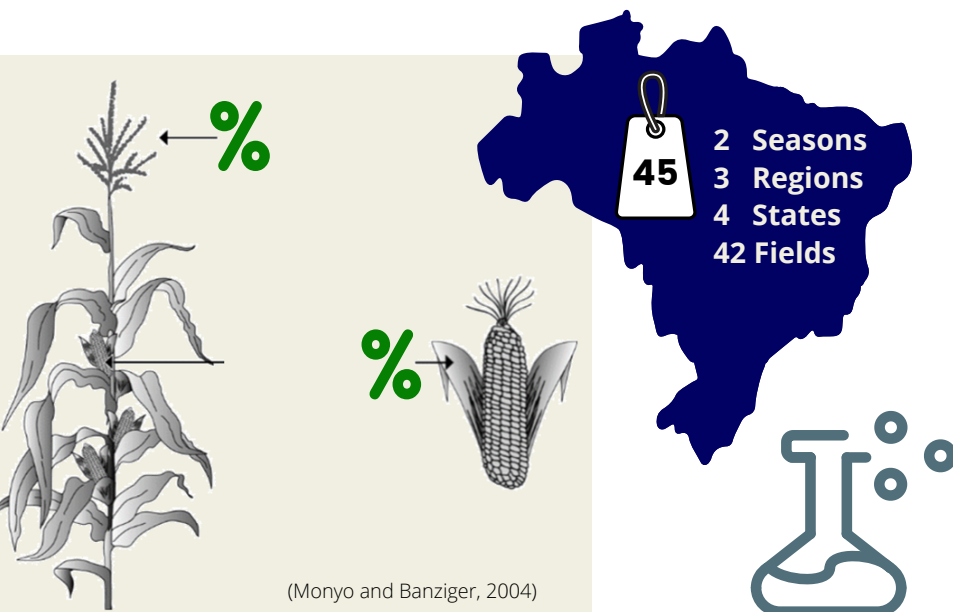
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INTRODUCTION

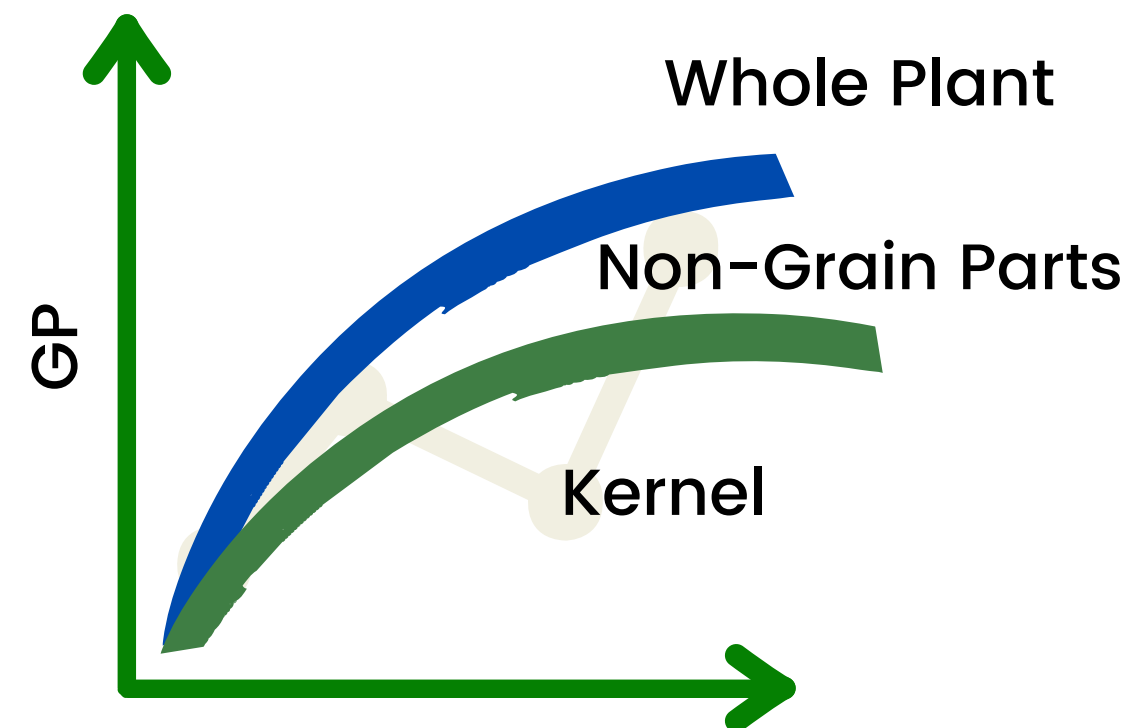
The non-grain parts of the plant may be of particular interest in animal nutrition because a high overall digestibility of the whole plant is the aim. Moreover, especially in tropical and subtropical regions, maize grain is harvested for human consumption and only non-grain are used as feedstuff.

Objective: To estimate ruminal degradation of maize whole plant, grain and non-Grain parts of the plant using in vitro gas production kinetics.

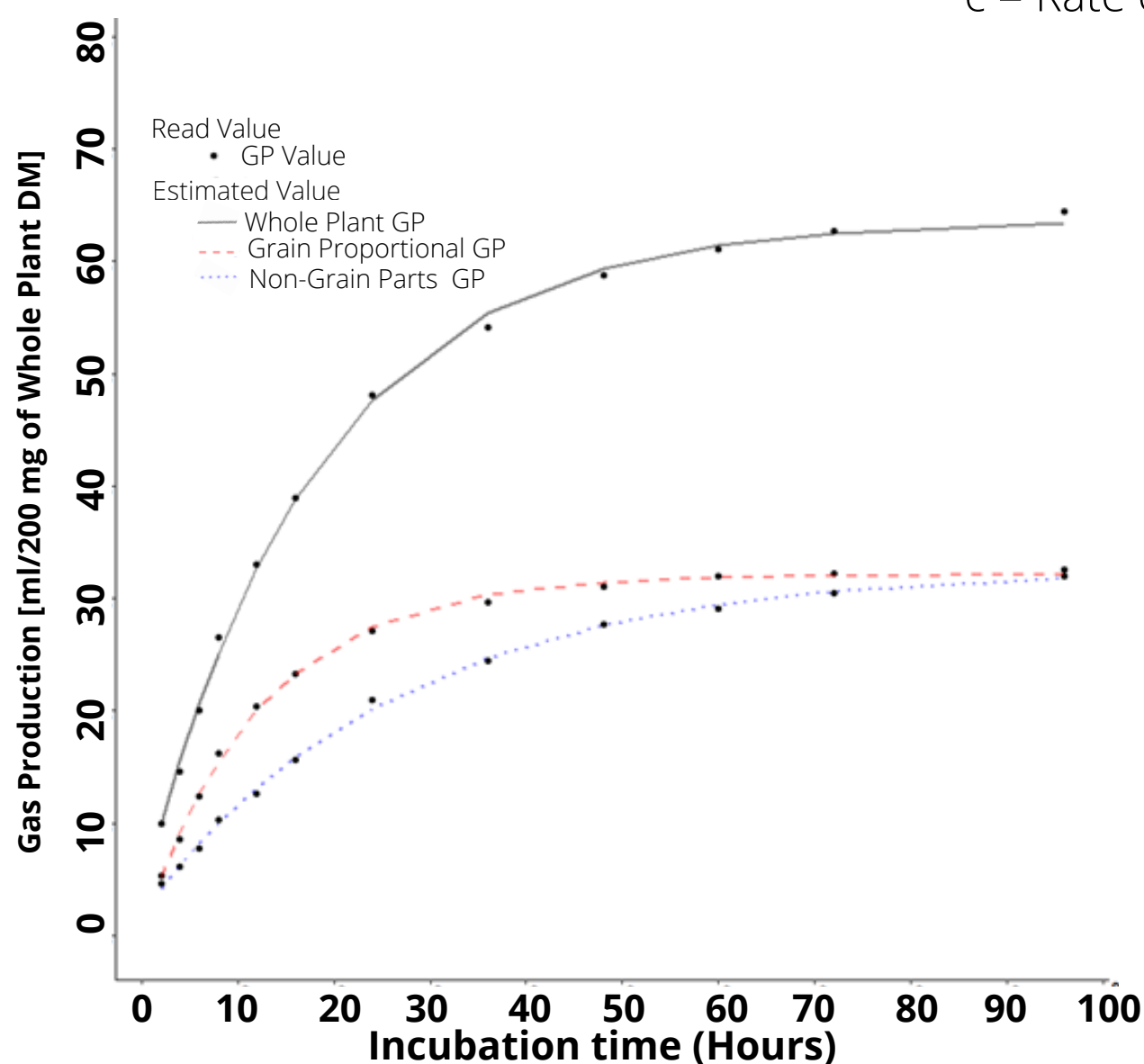
MATERIALS & METHODS



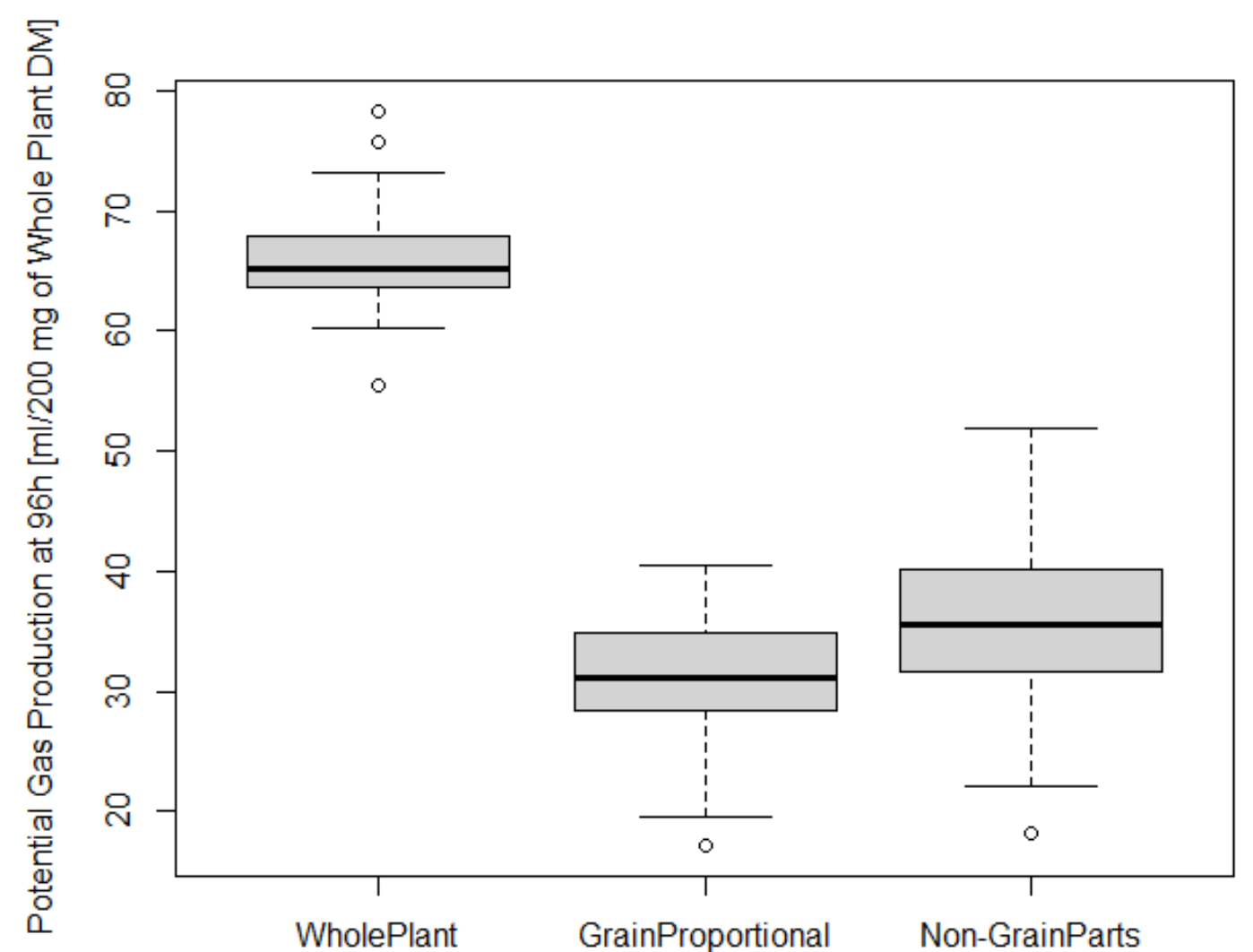
A = Immediately available
B = Ins. fermentable substrate
c = Rate of GP (hr⁻¹)



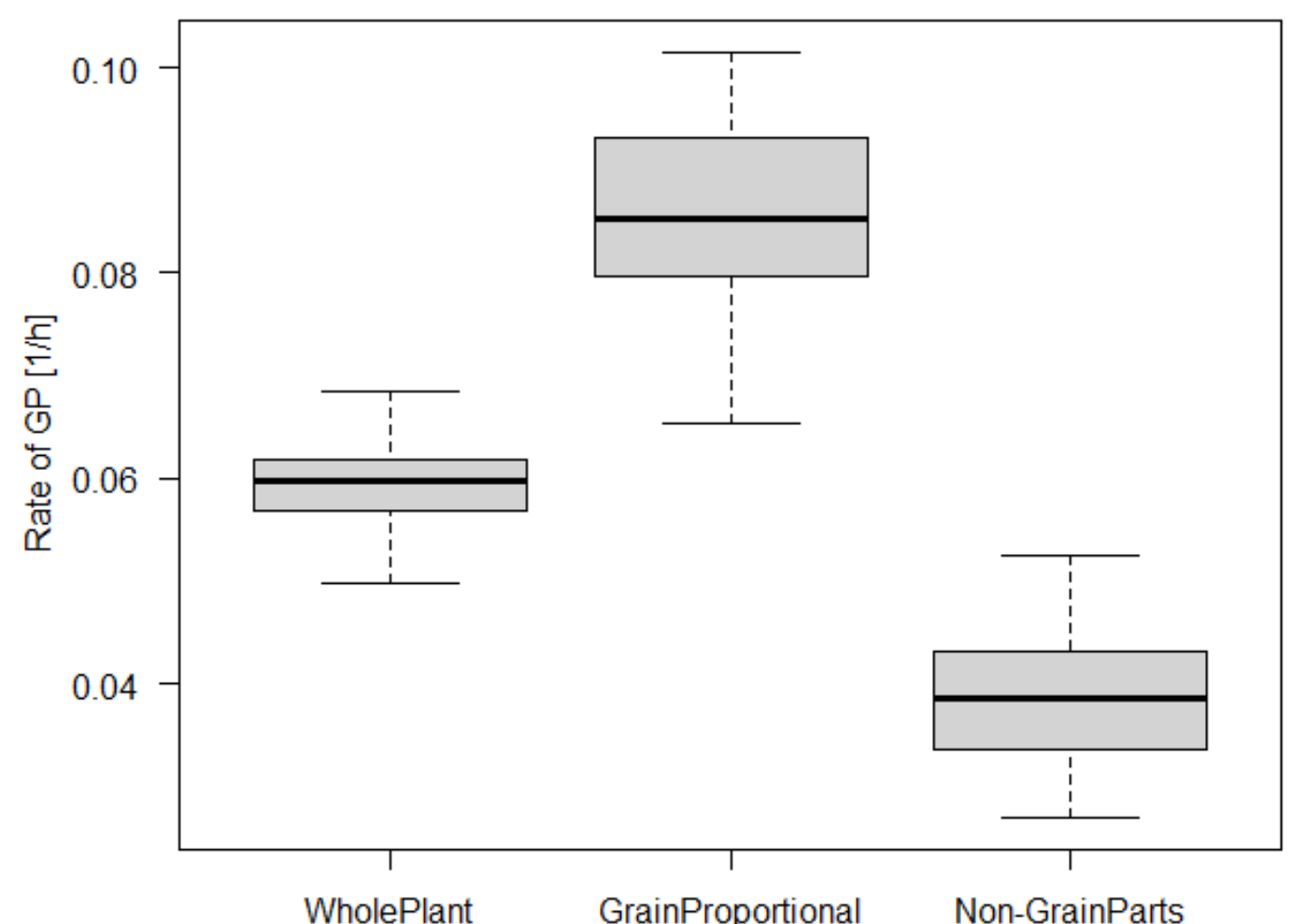
RESULTS



Sample number 10, observed and estimated gas production values with the Monoexponential model Ørskov and McDonald (1979) from 2 h to 96 h of incubation



Potential Gas Production at 96 hours (A+B) by fraction of the plant



Rate of in vitro gas production (c) by fraction of the plant

TAKE HOME MESSAGE

- The generally higher gas production rate of maize grain compared to was likely due to a faster degradation of starch compared to plant fiber.
- The observed variability in parameters describing gas production kinetics was related to actual differences in degradation between varieties, but also the proportion that grain and Non-Grain accounted for in the Whole Plant
- This methodology can be used to get an indirect estimation of the potential Gas Production