**Effects of a product of the solid-state fermentation of Aspergillus niger on the in vitro rumen fermentation kinetics of rations fed to dairy cattle**

*1652\_ReadMe\_Protocol\_InVitroDoseResponse.docx:*

Contains a flow chart of the protocol followed in this experiment and an expansion of methods used at each stage of the trial.

*1652\_SupplementaryDataFile.xlxs:*

Sheet 1 = **DM disappearance** of maize and grass silage-based rations, incubated with varying doses of Synergen, after 72 h incubations in the ANKOM gas production system.

Sheet 2 = **pH** of maize and grass silage-based rations, incubated with varying doses of Synergen, after 72 h incubations in the ANKOM gas production system.

Sheet 3 = **VFA,** which displays the volatile fatty acid composition of fermentation fluid in modules after 72 h incubations in the ANKOM gas production system.

Sheet 4 = **Raw gas data**, measured in psi at 10 min intervals during a 72 h incubation where maize or grass silage-based rations were incubated with varying doses of Synergen in the ANKOM gas production system.

Sheet 5 = **Gas modelling**, where the output of modelling the gas data in GasFit (Texas A&M) using the two-pool model is displayed.

Sheet 6 = **Rations,** where the wet chemistry analysis of the maize and grass silage-based rations used in incubations are displayed.

*Abbreviations*

1. M = maize silage based total mixed ration
2. G = grass silage based total mixed ration
3. NSA = non-Synergen adapted inoculum (derived from rumen digesta of fistulated cows non adapted to Synergen)
4. SA = Synergen adapted inoculum (derived from rumen digesta of fistulated cows adapted to 5 g/d Synergen for 21 d)
5. DMD = DM disappearance
6. 0MNSA = 0 mg of Synergen incubated with maize silage and non-Synergen adapted inoculum
7. 0MSA = 0 mg of Synergen incubated with maize silage and Synergen adapted inoculum
8. 0.5MSA = 0.5 mg of Synergen incubated with maize silage and Synergen adapted inoculum
9. 2MSA = 2 mg of Synergen incubated with maize silage and Synergen adapted inoculum
10. 5MSA = 5 mg of Synergen incubated with maize silage and Synergen adapted inoculum
11. 0GNSA = 0 mg of Synergen incubated with grass silage and non-Synergen adapted inoculum
12. 0GSA = 0 mg of Synergen incubated with grass silage and Synergen adapted inoculum
13. 0.5GSA = 0.5 mg of Synergen incubated with grass silage and Synergen adapted inoculum
14. 2GSA = 2 mg of Synergen incubated with grass silage and Synergen adapted inoculum
15. 5GSA = 5 mg of Synergen incubated with grass silage and Synergen adapted inoculum
16. VFA = volatile fatty acids
17. tVFA = total volatile fatty acids
18. NCGD = Neutral cellulase gammanase digestibility
19. Ruminant ME = ruminant metabolizable energy