MANAGEMENT OF A PROFICIENCY TESTING FOR ANIMAL NUTRITION LABORATORIES

Gilberto Batista de Souza, Ana Rita A. Nogueira, Vitor R. Del Santo, Cristina Maria C. Picchi, Edílson S. Guimarães, Waldomiro Barioni-Junior *Embrapa Pecuária Sudeste, São Carlos, SP, Brazil*

An interlaboratory program has been conducted for the comparison of results provided by laboratories that perform feed analyses of animal nutrition carried out by the Embrapa Cattle-Southeast, a Brazilian Agricultural Research Organization. The program structure and normalization are accomplished in accordance with the ABNT ISO/IEC GUIA 43 rules and with the harmonized international protocol of proficiency assays in analytical laboratories. All steps, from data acquisition to furnished the results, are controlled by a website, by using a dedicate program especially developed to bank of data control. Nowadays, 44 laboratories, provided from Universities, governmental research centers, and private companies, representing all the Brazilian regions, have been participating of the program. The essays foreseen by the program are the normally carried out by animal nutrition laboratories in animal feeds and mineral supplements, such as determination of dry matter, in vitro digestibility, neutral detergent fiber, acid detergent fiber, crude protein, ether extract, lignin, ash and macro- and micronutrients (Ca, P, Mg, K, S, Cu, Fe, Mn, Zn, and Na). Four turns of the program is yearly performed, each two months, and each parcel is composed by three different kinds of animal feed and mineral supplements. The statistical project employed to evaluate the laboratories scores is based on the rules recommended by the ABNT ISO/IEC GUIA 43-1, and the score z is adopted. For the values designates evaluation, median and robust standard deviation, the consensus values based on the results provided by the participants are considered. Another proposition is to prepare and validate non certified reference materials that could be used as internal quality control by the participants of the program. This work presents the experience in coordinating the intercomparison exercise.