Proceedings of the VI Peruvian Congress Animal Reproduction of the Asociación Peruana de Reproducción Animal (ASPRA), Arequipa, Peru, August 17 to 20th, 2016

Dear Colleagues,

We are pleased to formally present the Proceedings of the VI Peruvian Congress Animal Reproduction of the Asociación Peruana de Reproducción Animal (ASPRA). We hope you enjoy the meeting and take advantages of the opportunity to gain new scientific insights, renew friendships and make new contacts. The organizers are pleased with SPERMOVA editors and staff for the support of included abstract of our congress. Our goal of this publication of abstracts in English Language, is to encourage students and researchers the adoption of English as the universal language of science. Similar to the previous year, this event was planned considering both the Organizer Committee along with the members of Scientific Committee has brought together diverse topics and speakers to stimulate thoughts and discussion. In addition to the traditional plenary, we will have roundtables to discuss relevant issues are also part of the program. We also want to thank all the speakers who have agreed to attend this meeting and share their knowledge with us. My special thanks for all ASPRA Board and collaborators, whom have turned this meeting in to a reality

Kind regards

Juan Reategui, PhD
President
(2016-2017)

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{6} INFLUENCE OF EFFECT OF PREGNANCY AND LACTATION ON ALPACA FOBER DIAMETER IN ESTIMATED BREEDING VALUES

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ABSTRACT

The accuracy of estimates of genetic values in the genetic improvement program in alpacas depends on the estimates of the residual variance is as small as possible, for it to know the effects that can influence on the diameter of the fiber, and that these may be included within the model is important, one of the effects included is sex, this, in populations with no selection has been shown to have not relevant differences, but females to go through physiological stages that require energy expenditure as pregnancy and lactation may have an influence on the diameter, that is why this paper aims to estimate the effect of gestation and lactation on the diameter of the fiber, to better define the genetic values. This has been analyzed 10,983 data stored in the PacoPro v5.2 from 2000 to 2015 in Pacomarca genetic center, corresponding to 8,744 animals, 6,899 Huacaya (HU) and 1,845 Suri (SU), analyzed the data separately for ecotype, for estimate the effect of energy expenditure have been grouped into five categories, Male (MV) and empty females non-lactating (VNL) that have no energy expenditure pregnancy or lactation and groups of pregnant non-lactating (PNL), pregnant lactating (PL) and empty females lactating (VL); to avoid bias diameter of VNL at an early age, it has been included reproductive age in years at 06 levels from the third year and has grouped all over 8 years on one level; the age at fiber analysis has been included as a covariate linear and quadratic in days. In Table 1, the mean (μm) and its standard error, Multi-factor ANOVA shows that here is significant difference ($p<0.05$) in the effects of energy expenditure and energy expenditure in interaction with reproductive age are shown HU, but there is no significant difference ($p> 0.05$) for the interaction energy expenditure - reproductive age for SU, we used the method of Duncan for the multiple comparison factor levels of energy expenditure. The differences may be due to hormonal changes and females prioritize the mobilization of nutrients and reserves milk production, followed by the development of pregnancy. Can finally conclude that there effect of gestation and lactation on alpaca fiber diameter, and this can be included from the third year of life and energy expenditure within the model to refine estimates of genetics values.

Table 1. Physiological factors affecting the fiber diameter in alpacas

Category	Huacaya			Suri		
	Records (n)	Diameter (μ)	Sig	Records (n)	Diameter (μ)	Sig
MV – Male	886	26,14	c	312	27,88	c
VNL- Females non-lactating	1454	24,39	a	310	27,52	bc
VL- Empty females lactating	1360	24,34	a	359	27,02	ab
PNL- Pregnant non-lactating	1529	25,44	b	437	27,60	bc
PL- Pregnant lactating	3360	24,47	a	976	26,76	a

Keywords. *Alpaca, fiber, gestation, lactation, genetic value*