BIOCALCIO is a product of oral use especially indicated for preventing and correcting lack and/or deficiency of calcium in the layers body.

TECHNICAL CHARACTERISTICS

- **BIOCALCIO** is a mineral supplement of high bioavailability, to be supplemented in the laying hens or broilers' feed, during critical stages, as the first week of life, development of the cortical and Medullar bone and beginning of the productive cycle.
- It is recommended to work strategically to avoid problems of decalcification in layers during the final weeks of the raising, the start of production, and the final of the productive stage.
- **BIOCALCIO** prevents the occurrence of problems by calcium deficiency; or when problems of decalcification of layer's bone structure appear when the following situations occur: cage fatigue, bone weakness, eggshell weakness, low calcium intake, or increase of eggshell breaking.
- This supplementation strategy of **BIOCALCIO**, avoids the inadequate calcium mobilization from reserve that the hen has on its **Medullar bone** during its production stage, avoiding use of calcium of the hen's cortical bone or structural bone; besides, the supply of **BIOCALCIO** in the stage of starting of production, favors the formation of **Medullar bone** for a better layer performance during its productive life.

PREVENTIVE DOSAGE

LAYERS			
STAGE	**AGE**	**BIOCALCIO L**	**BIOCALCIO P**
Pre Starter	Week 1	1,0 cc/L water	1,0 Kg/MT feed
Pre Posture	Weeks 15-18	2,0 cc/L water	2,0 Kg/MT feed
Pre Peak and Peak Posture	Weeks 19-32	1,0c c/L water	1,0 Kg/Mt feed

BREEDERS			
STAGE	**AGE**	**BIOCALCIO L**	**BIOCALCIO P**
Pre Starter	Week 1	1,0 cc/L water	1,0 Kg/MT feed
Pre Posture	Weeks 20-23	2,0 cc/L water	2,0 Kg/MT feed
Pre Peak and Peak Posture	Weeks 24-36	1,0c c/L water	1,0 Kg/Mt feed

CORRECTIVE DOSAGE

PROBLEM	BIOCALCIO L	BIOCALCIO P
Cage Fatigue	2,0-4,0 cc/L water, until a positive response is observed	2,0-4,0 Kg/MT feed, until a positive response is observed
Egg Shell Breakage	2,0 cc/L water, for 5 consecutive days, repeat monthly	2,0 Kg/MT feed, for 5 consecutive days, repeat monthly

ADVANTAGES

- Reduces decalcification problems of layers if used preventively.
- Prevents loss of bone structure and at the same time the possible occurrence of osteoporosis.
- Helps to correct problems of cage fatigue, bone decalcification, egg breakage, bone fragility, among others.
- It is compatible with all the ingredients regularly used on a poultry farm.
- Improves the viability of layers.
- Improves productive layer/breeder parameters by having a proper calcium metabolism.

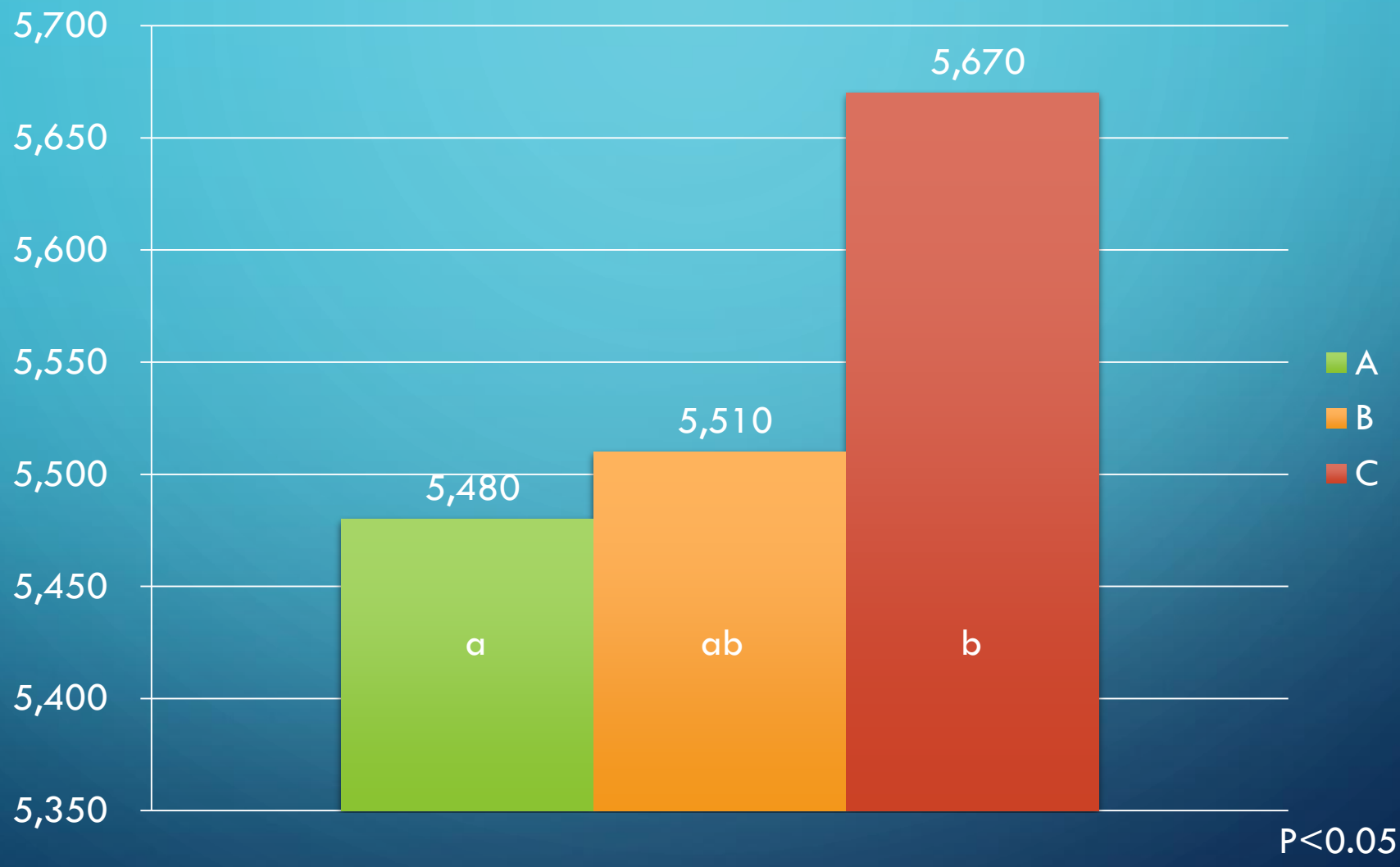
TRIAL BACKGROUND

- During the first 12 weeks the pullet develops the structural or cortical bone in response to the action of the growth hormone (GH); According to Lesson et. al (2000), a proper size pullet should reach 95-98% of the development of the bones in such period of time. From week 15-16, the Medullar bone development begins, during the so-called third phase of the hen's reproductive development (Kwakkel and col, 1993).
- The use of supplementary products with higher value of bone fixation, is important during the development and for the maintenance of the pullet's medullar bone; This presents a moment of physiological importance (weeks 16 to 18) where its formation and the first mineral fixation are generated. Without them, the reserve will be incomplete and the use of the structure will be limited, appearing situations as the cage fatigue, prolapse and pecking (Whitehead and Fleming, 2000).

MATERIALS AND METHODS

Objective: Determine the effect of BIOCALCIO on the length of the tarsus once the development of cortical bone is completed, and its effect on production of eggs in the first productive stage.	
Number and Type of Birds	180 pullets; Lohman LSL
Length of Trial (layer age)	Weeks 12-35
Statistical Analysis	Data was evaluated by using bi-weekly design pursuant plots divided in time. Tukey Test.
Treatments	**A:** Negative Control **B:** Biocalcio 1 cc/L water during weeks12-18 **C:** Biocalcio 1 cc/L water during weeks12-35
Parameters Measured	Tarsus length. Egg production. Total Egg Mass

RESULTS: TOTAL EGG MASS (GRAMS)



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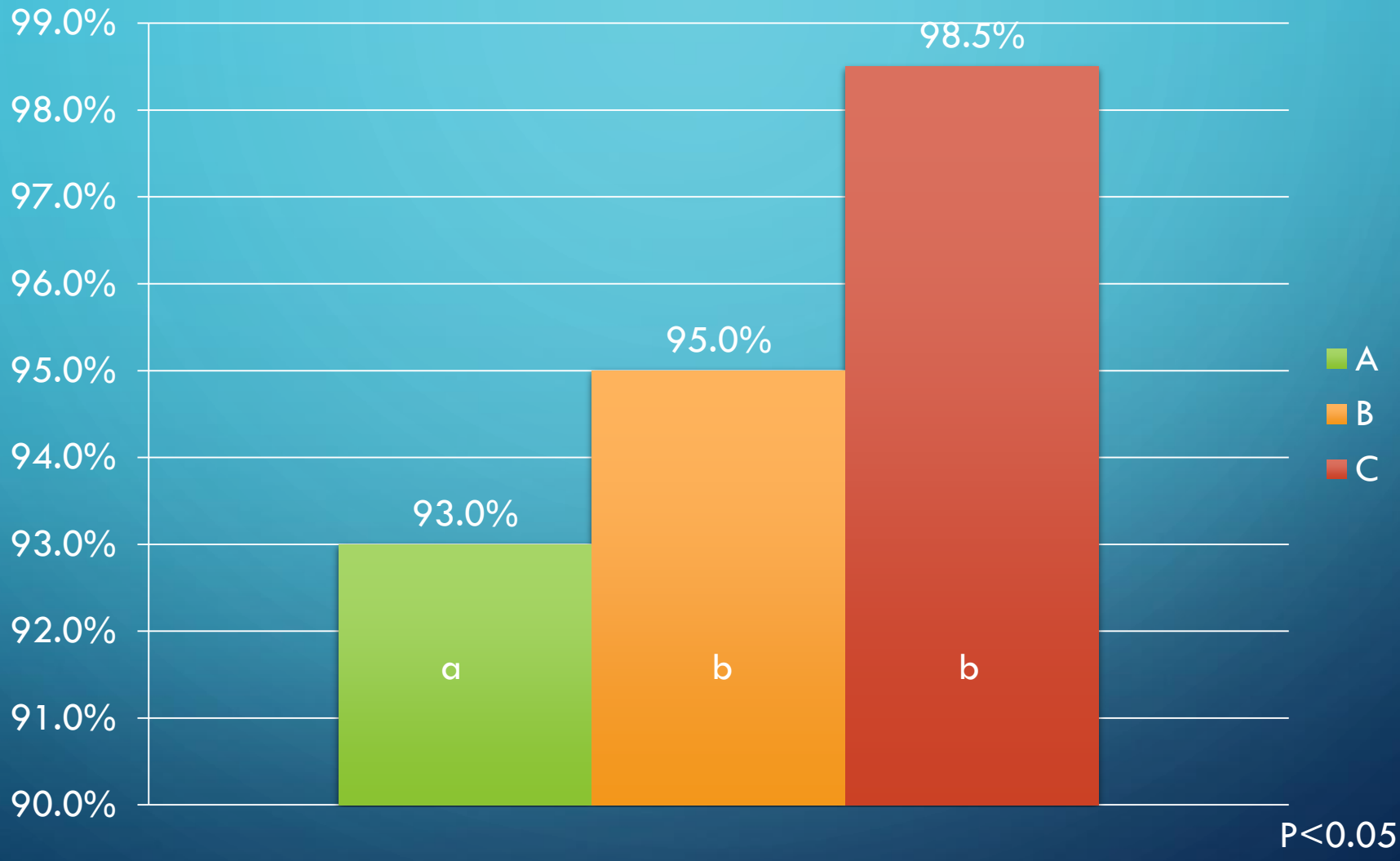
RESULTS: PRODUCTION PERCENTAGE



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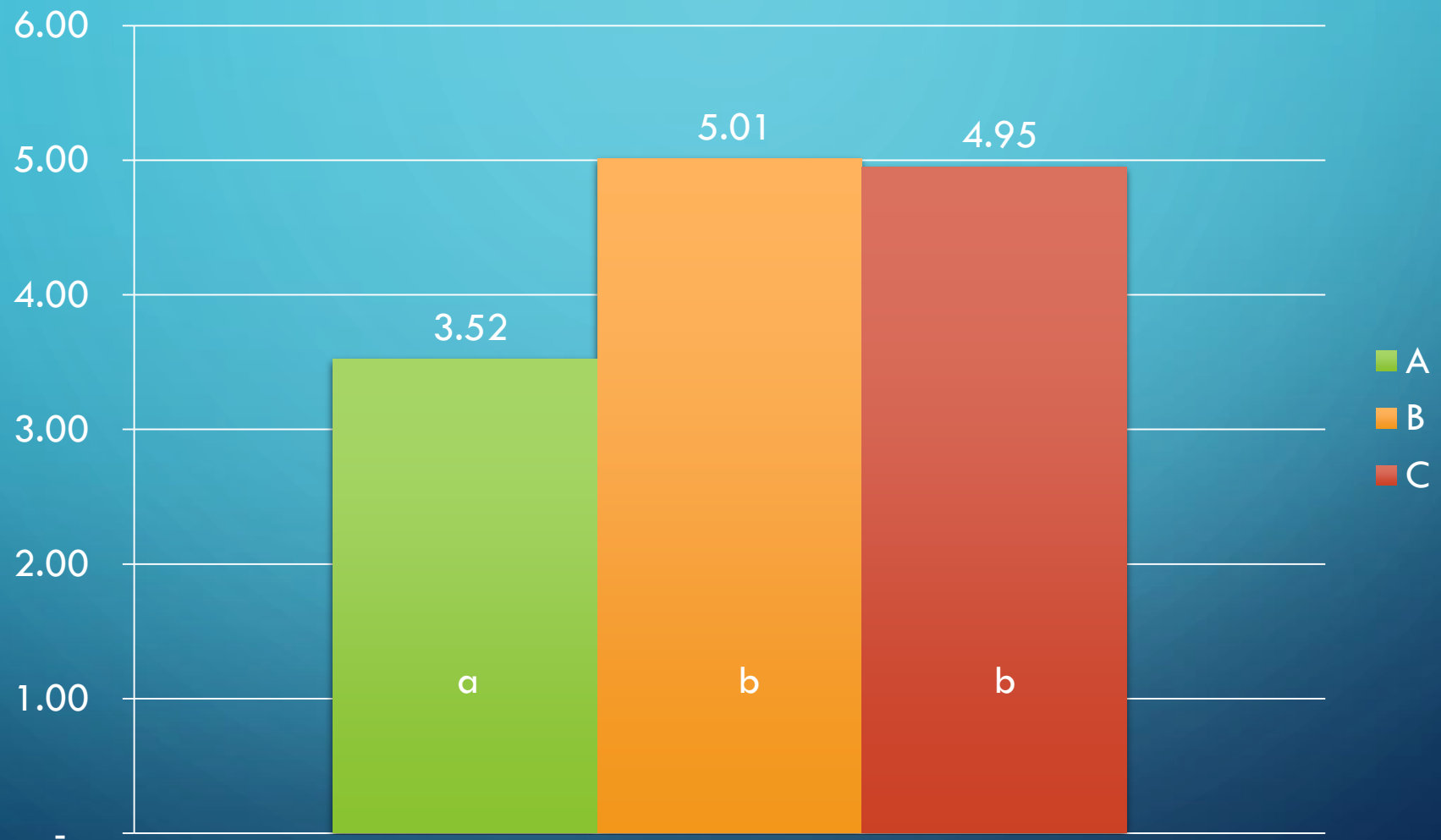
RESULTS: TARSUS LENGTH VARIATION (MM)



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