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EVALUATION OF GRAIN MIXTURE TREATMENT IN OFFERING HIGHER NUTRITIONAL BENEFITS TO FREE RANGE CHICKENS

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The highest cost in poultry production of both meat and eggs has always been the feed, comprising 50-70% of the production cost. For this reason, it is important to provide our flocks with an adequate diet that keeps the birds well-nourished and maintains ideal egg production in layers and weight gain in meat birds. The purpose of this experiment was to determine which treatment of grain mixture provided the greatest health and nutritional benefits to our chickens.

METHODS

To start, we determined a standard mixture of grains. This consisted of 35% corn, 30% wheat, 15% oats, 8% sorghum, 8% forage pea and 4% buckwheat. The homogeneous mixture of grains was then divided into six samples of two pounds each.

Treatments were labeled as T1-T6. T1 was a dry sample of grains; T2 grains were pre-germinated in the paddocks five days before hens would graze; T3 grains were germinated as pasture (spread in the paddocks) ten days before hens would graze; T4 grains were pre-germinated with distilled water; T5 grains were pre-germinated in water enriched with 30 grams of a pre-mix of minerals used for the formulation of concentrates; and T6 grains were soaked (instead of pre-germinated) in water enriched with 30g of the premix.
All samples were sent to a laboratory in sterilized bags for analysis.

RESULTS

Treatment	Description	Nutrition Premixture	Mixture Used (lb)
T1	Dry sample	x	2
T2	Pre-germinated in paddocks	x	2
T3	Germinated as pasture	x	2
T4	Pre-germinated with distilled water	x	2
T5	Pre-germinated in water enriched with premix	30 grs	2
T6	Soaked in water enriched with premix	30 grs	2

The treatment offering the best nutritional value for the chickens was T2, pre-germinated grain mixture given in the paddocks where the chickens graze. The pre-germinated grain mixture encourages chickens to behave naturally, such as scratching. This behavior maintains the chickens occupied and the flock calmer. T2 had protein levels that were much higher than T3 (T2 = 3.47% vs. T3 = 1.68%) but lower than T4, T5, and T6 (T2 = 3.47% vs. T3 = 10.9, T4 = 5.76%, T5 = 5.65%, and T6 = 6.69%).

DISCUSSION & FURTHER RESEARCH

Providing this mixture of pre-germinated grains to the birds when they are rotated in the paddocks is a great way to supplement the chickens diet. The pre-germinated grain mixture should be given when it's approximately an inch and a half in height, as this offers chickens the maximum amount of nutrients possible.