

## ACIDULANTS FOR JAPANESE QUAILS HOUSED AT HIGH STOCKING RATES AT FINISHING PHASE

### ACIDULANTES PARA CODORNAS JAPONESAS ALOJADAS EM ALTAS TAXAS DE LOTAÇÃO NA FASE FINAL DE PRODUÇÃO

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The quail for being an alternative species will be able to supply a new market niche due to its fast growth, high laying rate, low feed intake, in addition to the increase of the acceptance of its products by the consumer. A growing interest in raising the stocking rates in the cages as an alternative to increase the performance of the stock is noticed; although studies demonstrate that high densities can result into unfavorable environment to the birds' welfare with alterations in the performance of the flocks and as a stressing factor being able to alter the production and profitability of the flock. At high stocking rates, the birds become predisposed to aggressiveness reactions, presenting cannibalism behavior, besides the combination of factors such as pH, temperature, ventilation and humidity deficiency which create environmental conditions favorable for certain benign bacteria which utilize uric acid of the manure through their enzymatic complexes and produce ammonia, causing stress to birds and which can cause damages to performance with significant economic losses to the producer. The experiment with 112-day duration was conducted with the objective of evaluating the inclusion of acidulants in the Japanese quails' drinking water and verifying the effect on the stocking rate in cages. A completely randomized design with four treatments (2 stocking rates of quails x 2 additions of) and 5 replications of 24 and 36 birds per cage, corresponding to the stocking rates of 141.67 and 94.44 cm<sup>2</sup>/bird, respectively, receiving or not acidulant in the water (acetic, lactic and phosphoric acid) was utilized. Performance was evaluated through egg weight (EWg), egg yield (%Laying.), egg mass (EMg/bird/day), feed intake (FIg/bird/day), feed conversion (FCkg/dz and FCkg/kg) and mortality (%Mort) (Table 1). No significant statistical differences about the performance ( $P>0.05$ ) were found. There was a significant effect ( $P<0.05$ ) of the density for daily feed intake with the lowest intake at the stocking rate of 94.44 cm<sup>2</sup>. It follows that the stocking rate of 94.44 cm<sup>2</sup>/bird can be utilized without damages to the laying quails' performance at finishing phase.

**Table 1.** Acidulants for Japanese quails housed at high stocking rates at finishing phase

Treatments	EWg	%Laying	EM g	FIg	FC/dz	FC/kg	%Mort
Density							
24(141.67cm <sup>2</sup> /bird)	11.26	88	10.12	31.67b	0.423	3.152	0.34
36 (94.44 cm <sup>2</sup> /bird)	11.21	90	9.95	30.06a	0.408	3.034	0.47
With acidifier	11.21	89	10.02	30.81	0.416	3.091	0.37
Without acidifier	11.26	89	10.04	30.92	0.417	3.095	0.44
General Mean	11.24	89	10.03	30.86	0.417	3.093	0.40
CV (%)	1.6	3.94	3.91	4.46	5.50	5.26	14.50

In the column, means followed by different letters differ each other ( $p < 0.05$ ) by the Tukey test.

Keywords: Acidifiers, egg yield, quail production.

Acknowledgments: Granja KAKIMOTO- Bastos-SP and also to Mr. Clédson Makoto Sugahara by the donation of the acid-metering pump production.