

Effects of varied photo-period durations and Red Korean Ginseng supplementation on growth performance, feed efficiency, and health status in New Zealand White Rabbits

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Methodology

Treatment A: Increased Photoperiod	New Zealand White Rabbits Age: 7-9 weeks Av. Wt.: 900 gms	Treatment B: Normal photo-period
L2: 18 hours light		L1: Normal Daylight length
C2: 0 mg RKGE		C1: 0 mg RKGE
T3: 200 mg/Kg B.wt. RKGE		T1: 200 mg/Kg B.wt. RKGE
T4: 300 mg/Kg B.wt. RKGE		T2: 300 mg/Kg B.wt. RKGE
Parameters: Feed efficiency, Growth, Carcass characters		

- Exp. Duration: 42 Days
- Exp. design: Randomized Complete Block Design
- Location: PMAS-UAAR, Pakistan
- Diet: Pelleted commercial diet (15 % CP, 15.5% CF)

Objectives

- Productive traits (weight gain, feed intake), Body measurements
- Carcass weight, traits, dressing percentage, meat quality.
- Fur Appearance

Results and Discussion

Growth performance of NZW rabbits upon RKGE supplementation and different Light regimes

Paramters	Control 1	T1	T2	Control 2	T3	T4	SEM
Initial b. wt. (g)	731.50	767.50	726.23	730.25	736.75	727.87	12.77
Final b. wt. (g)	1214.45 ^c	1354.65 ^a	1332.09 ^a	1232.88 ^b	1253.28 ^b	1262.00 ^b	16.48
Total b. wt. gain (g)	492.56 ^c	594.77 ^a	606.32 ^a	502.46 ^b	518.61 ^b	533.54 ^b	14.13
Daily b. wt. gain (g)	17.65	21.23	21.65	17.95	18.52	19.07	2.70
Total feed intake (g)	2034.66	2047.32	2045.27	2034.37	1988.74	2030.24	19.68
Daily feed intake (g)	72.83	73.08	73.05	73.66	71.04	72.51	4.68
FCR (g feed/g gain)	4.14 ^a	3.45 ^c	3.37 ^c	4.06 ^a	3.87 ^{ab}	3.79 ^b	0.20
Mortality (counts)	0	0	0	1	0	0	-

Means within a row with different superscripts are significantly ($P < 0.05$) differ among rows. C1 in normal light (0 RKGE), (T1=200mg, T2=300mg); C2 in 18 hours light (0 RKGE), (T3=200mg, T4=300mg).

Table 2: Mean Values and SE values of sensory evaluation of Rabbit Meat

	Raw meat		Cooked meat		
	Colour	Odor	Tenderness	Juiciness	Overall acceptance
No light	3.6 (0.01)	4 (0.00)	3.8 (0.01)	3.6 (0.01)	4.8 (0.02)
18 hours light	3.2 (0.01)	3 (0.00)	4.0 (0.01)	3.3 (0.01)	4.4 (0.01)

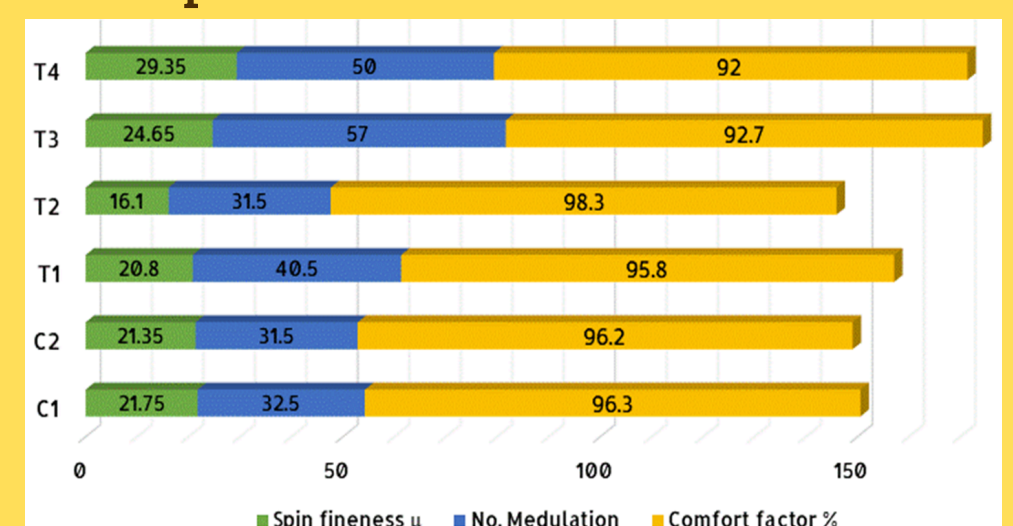
Table 3: Mean Values and SE values of cooking loss and drip loss of Rabbit Meat

	No light	18 hours light	Sig. level
Cooking loss (%)	28.22 (0.10)	27.69 (0.03)	NS
Drip loss (%)	2.74 (0.15)	2.78 (0.12)	NS
Texture	6.24	6.15	S

Meat characters

- RKGE sig. effected ($P > 0.05$) dressing percentage, carcass yield, cooking losses.
- Lighting regimes didn't affect or improve the meat characters.
- No difference in lipid oxidation/WHC of rabbit's meat among all groups.
- Relative weight of digestive tract and abdominal fat comparatively to the carcass weight were not significantly affected by RKGE ($P > 0.05$).
- The proportion of liver was significantly lower in rabbits of T3 and T4 ($P < 0.05$).

Graph 1: Mean Values of Rabbit Fur



Conclusion

- Supplementation of RKGE at 300 mg/kg @ L1, significantly enhances the growth and carcass properties and increases the fur comfort level and spin fineness.
- A dose of 200 mg/Kg RKGE @ L1 exhibits Improved feed intake, FCR, higher body weight gain.

Acknowledgement

