Table 1. Ingredients and nutrient contents of the basal diet of growing rabbits (as fed).

Items	**Basal diet**
Ingredient	***%***
Maize	20.0
Soybean meal (CP 44%)	20.0
Wheat bran	16.0
Berseem hay	30.0
Barley grain	10.0
Molasses	2.0
Limestone	1.0
NaCl	0.5
Premix*	0.5
Total	**100**
Calculated composition, **	
ME (MJ/kg)	7.95
Crude protein (%)	17.50
Calcium (%)	0.88
Available phosphorus (%)	0.20

*Each 1 kg of premix (Minerals and Vitamin mixture) contains: Vit. A, 20,000 IU; Vit. D_3, 15,000 IU; Vit. E, 8.33 g; Vit. K, 0.33 g; Vit. B_1, 0.33 g; Vit. B2, 1.0 g; Vit. B_6, 0.33 g; Vit. B_5, 8.33 g; Vit. $B1_2$, 1.7 mg; Pantothenic acid, 3.33 g; Biotin, 33 mg; Folic acid, 0.83 g; Choline chloride, 200 g.

**Calculated according to NRC, 1977

Table 2. Effect of selenium nanoparticles, spirulina and their combination on growth performance of male rabbits exposed to high environmental temperature.

Item[1]	Treatment[2]				Pooled SEM	*P* value
	CON	SP	SeNPs	SP+SeNPs		
IBW (g/day)	832.73	816.82	871.36	834.1	9.71	0.240
BWG (g)	979.54^{b}	1156.81^{a}	1128.63^{a}	1182.72^{a}	14.90	<0.001
DFI (g/day)	65.50^{c}	72.68^{a}	69.429^{b}	72.91^{a}	0.68	<0.001
FCR (g feed/g gain)	4.69^{a}	4.41^{b}	4.31^{b}	4.33^{b}	0.050	<0.001
FBW (g)	1812^{c}	1970^{b}	2000^{ab}	2016.18^{a}	6.58	0.026
Mortality (%)	0	0	0	0	--	--
GPR (%)	38.72^{b}	44.86^{a}	46.55^{a}	46.87^{a}	0.689	<0.001

[a,b,c] Mean values followed by different superscript letters in the same row are significantly different ($P < 0.05$).

[1] IBW; Initial body weight: FBW: Final body weight; BWG; Daily body weight gain, g: DFI; Daily feed intake, g: FCR; feed conversion ratio; Growth performance rate: GPR .

[2] CON= Basal diet without additive; SP=Basal diet with 1g/kg spirulina; SeNPs= Basal diet with 50mg/kg selenium nanoparticles; and SP+SeNPs = Basal diet with spirulina (1g/kg diet) plus selenium nanoparticles (50 mg/kg diet).

Table 3. Effect of selenium nanoparticles, spirulina and their combination on blood hematology of male rabbits exposed to high environmental temperature.

Item[1]	Treatments groups [2]				Pooled SEM	*P* value
	CON	SP	SeNPs	SP+ SeNPs		
Hemoglobin (g/dl)	11.04^{c}	11.82^{bc}	12.22^{ab}	12.74^{a}	0.182	0.001
RBCs (10^6/ml)	5.16	4.97	5.25	5.38	0.096	0.536
MCV (pg)	63.57	65.07	64.38	62.40	0.570	0.413
MCH (pg)	22.23	22.62	22.56	22.09	0.219	0.820
Platelets (mcl)	174.6^{c}	206.4^{b}	195.4^{b}	227.2^{a}	5.058	<0.001
WBC 10^3/ml)	7.64^{a}	5.642^{c}	6.48^{b}	5.08^{c}	0.251	<0.001

^{a,b,c,d} Mean values followed by different superscript letters in the same row are significantly different ($P < 0.05$).

[1] RBCs= Red blood cells; MCV= Mean corpuscular volume; MCH= Mean corpuscular hemoglobin; WBCs=White blood cells.

[2] CON= Basal diet without additive; SP=Basal diet with 1g/kg spirulina; SeNPs= Basal diet with 50mg/kg selenium nanoparticles; and SP+SeNPs = Basal diet with spirulina (1g/kg diet) plus selenium nanoparticles (50 mg/kg diet).

Table 4. Effect of selenium nanoparticles, spirulina and their combination on blood biochemical of male rabbits exposed to high environmental temperature

Item[1]	Treatment groups[2]				Pooled SEM	P value
	CON	SP	SeNPs	SP+ SeNPs		
Total Protein (g/dl)	5.89[d]	2.7[b]	6.74[c]	8.9[a]	0.360	<0.001
Albumin (g/dl)	3.89[b]	4.60[a]	4.04[b]	4.72[a]	0.128	0.018
Globulins (g/dl)	2.0[c]	3.29[b]	2.67[b]	4.18[a]	0.258	<0.001
ALT (U/L)	89.88[a]	35.11[b]	60.94[b]	41.79[b]	7.305	0.006
AST (U/L)	36.62	37.17	34.91	35.91	0.712	0.763
Total Bilirubin (mg/dl)	1.13[a]	0.87[b]	0.46[c]	0.48[c]	0.086	<0.001
Direct Bilirubin (mg/dl)	0.22[a]	0.14[c]	0.18[b]	0.13[c]	0.011	<0.001
Glucose (mg/dl)	14.16	22.74	22.95	23.65	1.786	0.189
Total Glycerides (g/dl)	89.26[a]	83.62[b]	62.93[c]	47.74[d]	5.043	<0.001
Creatinine (mg/dl)	1.81[a]	1.36[b]	1.43[b]	1.36[b]	0.061	<0.001
Uric acid (mg/dl)	5.75[a]	4.74[c]	5.28[b]	4.63[c]	0.143	<0.001

[a,b,c,d] Mean values followed by different superscript letters in the same row are significantly different ($P < 0.05$).

[1] ALT; Alanine aminotransferase: AST; Aspartate aminotransferase.

[2] CON= Basal diet without additive; SP=Basal diet with 1g/kg spirulina; SeNPs= Basal diet with 50mg/kg selenium nanoparticles; and SP+SeNPs = Basal diet with spirulina (1g/kg diet) plus selenium nanoparticles (50 mg/kg diet).

Table 5. Effect of selenium nanoparticles, spirulina and their combination on immunological responses and interferon gamma (IFNγ) level of male rabbits exposed to high environmental temperature.

Item[1]	Treatment groups[2]				Pooled SEM	*P* value
	CON	SP	SeNPs	SP+ SeNPs		
IgA (g/ml)	233.67	245.33	254.67	258	6.031	0.545
IgG (g/ml)	258.33^{c}	318^{b}	384.33^{a}	327.67^{b}	10.401	<0.001
IFNγ (pg/ml)	64.97^{a}	32.44^{c}	51.18^{b}	26.8^{c}	4.700	<0.001

[a,b,c] Mean values followed by different superscript letters in the same row are significantly different ($P < 0.05$).

[1] IgA; immunoglobin A: IgG; immunoglobin G and IFNγ; interferon gamma.

[2] CON= Basal diet without additive; SP=Basal diet with 1g/kg spirulina; SeNPs= Basal diet with 50mg/kg selenium nanoparticles; and SP+SeNPs = Basal diet with spirulina (1g/kg diet) plus selenium nanoparticles (50 mg/kg diet).

Table 6. Effect of selenium nanoparticles, spirulina and their combination on redox status of male rabbits exposed to high environmental temperature.

Item[1]	Treatments[2]				Pooled SEM	*P* value
	CON	SP	SeNPs	SP+ SeNPs		
Oxidative stress biomarkers						
MDA (nmol/ mL)	0.40[a]	0.20[c]	0.27[b]	0.21[c]	0.025	<0.001
PCO (ng/mg)	2.65[a]	1.42[c]	1.83[b]	0.91[d]	0.179	<0.001
Antioxidant biomarkers						
SOD (u/ml)	0.25	0.24	0.24	0.24	0.003	0.736
GSH (u/mL)	0.14[c]	0.22[b]	0.20[b]	0.27[a]	0.015	<0.001

[a,b,c,d] Mean values followed by different superscript letters in the same row are significantly different ($P < 0.05$).

[1] MDA; malondialdehyde: PCO; Protein carbonyl: SOD; Superoxide dismutase and GSH: Reduced glutathione.

[2] CON= Basal diet without additive; SP=Basal diet with 1g/kg spirulina; SeNPs= Basal diet with 50mg/kg selenium nanoparticles; and SP+SeNPs = Basal diet with spirulina (1g/kg diet) plus selenium nanoparticles (50 mg/kg diet).