Table 1. Least squares means and significance levels for the effects of line and diet on reproductive traits during the first

two parturitions of resistant (R) and susceptible (S) mouse lines fed non-toxic (-) and toxic (+) diets

Trait	R	S	P_L[a]	(-) diet	(+) diet	P_D[b]
int1, d	22.6	25.4	.03	22.4	25.6	.01
int2, d	37.9	41.6	< .01	38.0	41.6	< .01
nborn1, n	10.2	9.3	.12	10.6	8.9	< .01
nborn2, n	11.6	9.8	< .01	11.6	9.9	.01
nwean1, n	8.4	7.4	.06	8.8	7.0	< .01
nwean2, n	9.7	7.9	.01	9.6	8.0	.03
litwt1, g	42.3	36.8	.01	47.5	31.6	< .01
litwt2, g	49.3	40.1	< .01	54.6	34.7	< .01

[a]P-values for line effects   [b]P -values for diet effects

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Table 2. Least squares means, pooled standard errors, and significance levels for the effects of genetic line x diet interaction on reproductive traits during the first two parturitions of resistant (R) and susceptible (S) mouse lines fed non-toxic (-) and toxic (+) diets

Trait	R-	R+	S-	S+	P. S. E.[a]	P_{LxD}[b]
int1, d	21.5	23.8	23.4	27.4	± 1.23	.47
int2, d	36.9	39.0	39.1	44.1	± 1.28	.28
nborn1, n	10.3	10.1	11.0	7.7	± .54	< .01
nborn2, n	11.6	11.6	11.5	8.1	± .65	.01
nwean1, n	8.5	8.3	9.0	5.7	± .55	< .01
nwean2, n	9.9	9.5	9.3	6.5	± .70	.09
litwt1, g	46.6	37.9	48.4	25.2	± 2.2	< .01
litwt2, g	57.2	41.3	52.1	28.2	± 3.23	.22

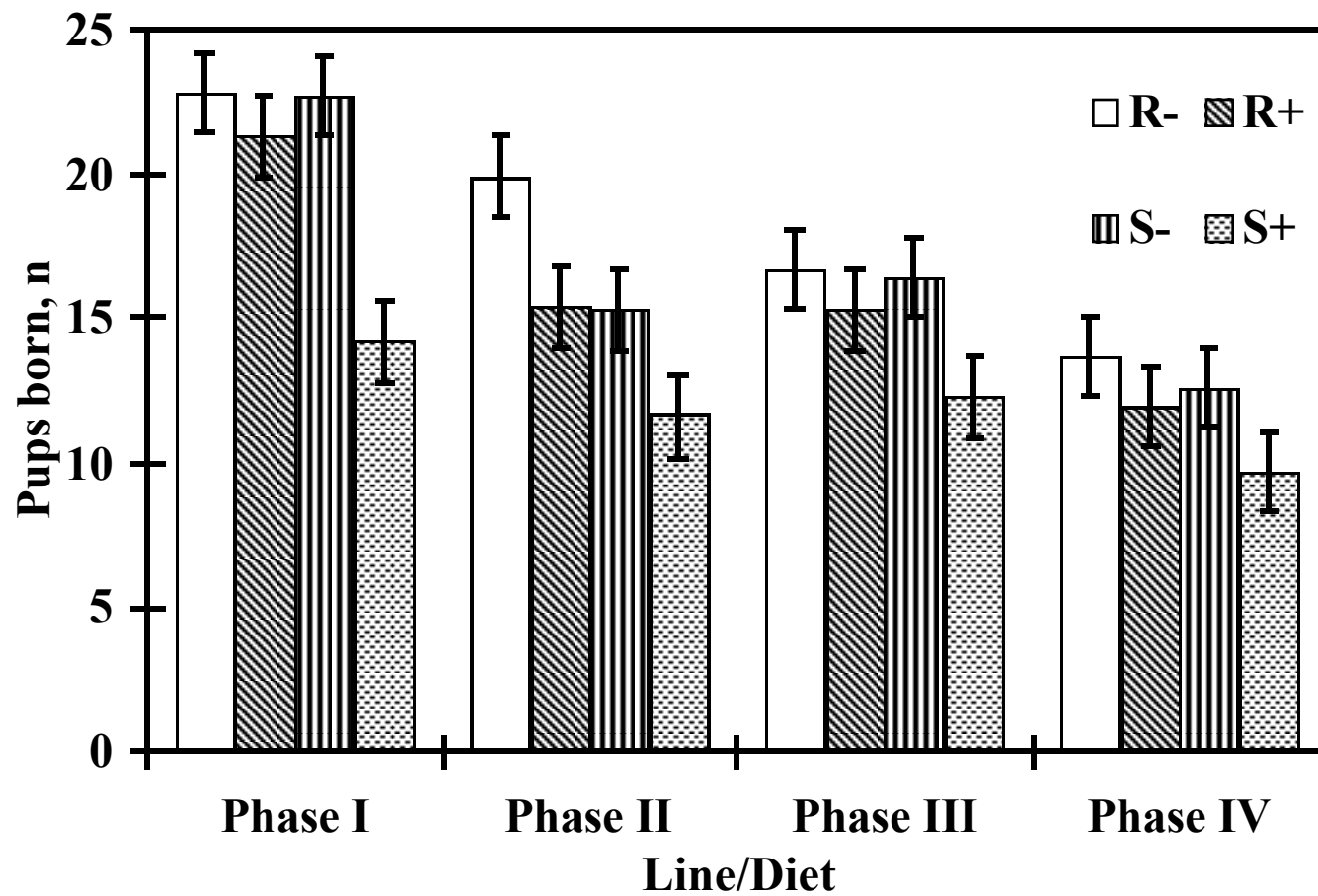[a] Pooled standard errors   [b] P -values for line x diet interaction

Figure 1. Number of pups born per pair within four time phases during 36 weeks cohabitation by resistant (R) and susceptible (S) mice fed non-toxic (-) and toxic (+) diets
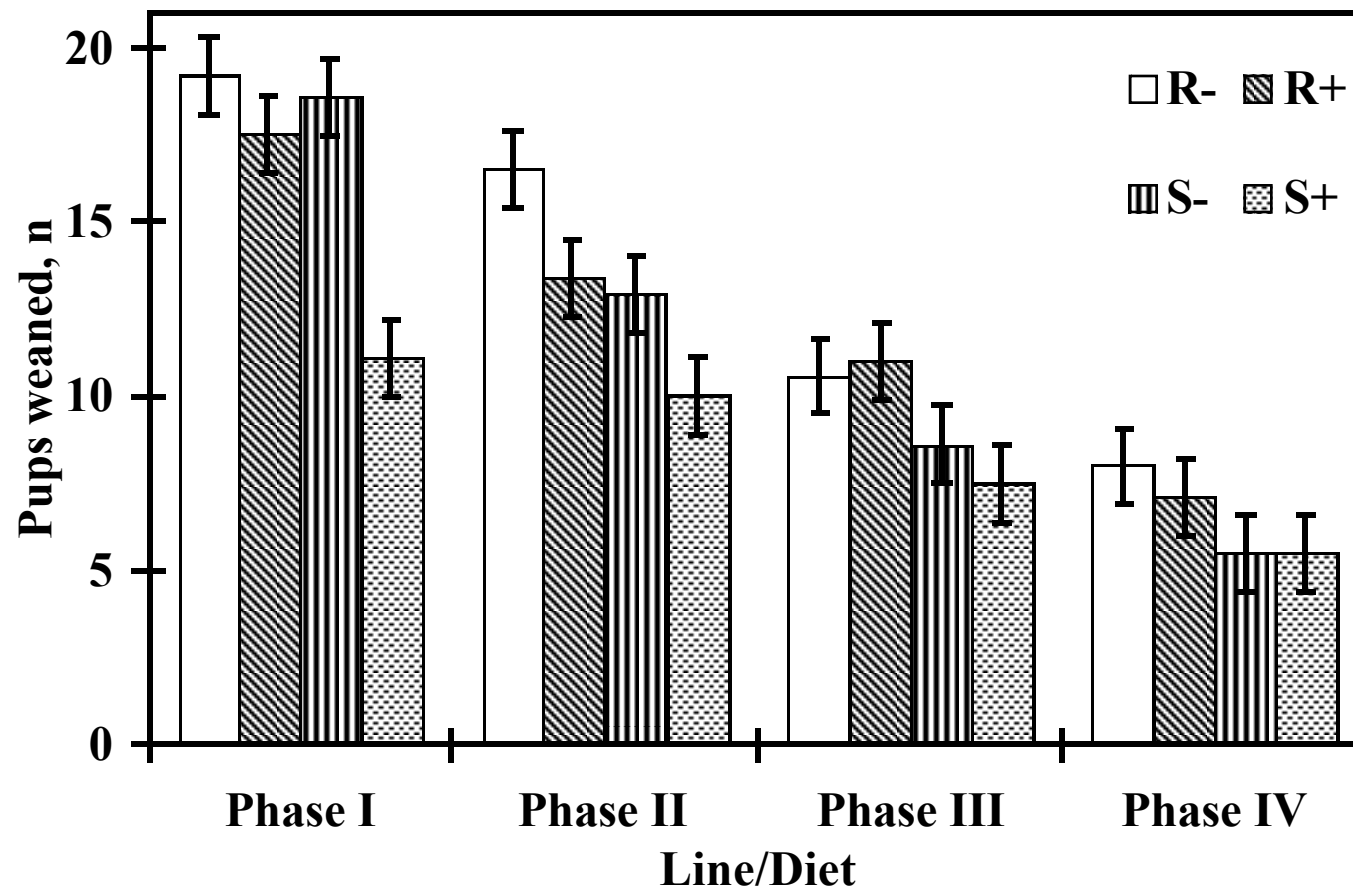
Figure 2. Number of pups weaned per pair within four time phases during 36 weeks cohabitation by resistant (R)

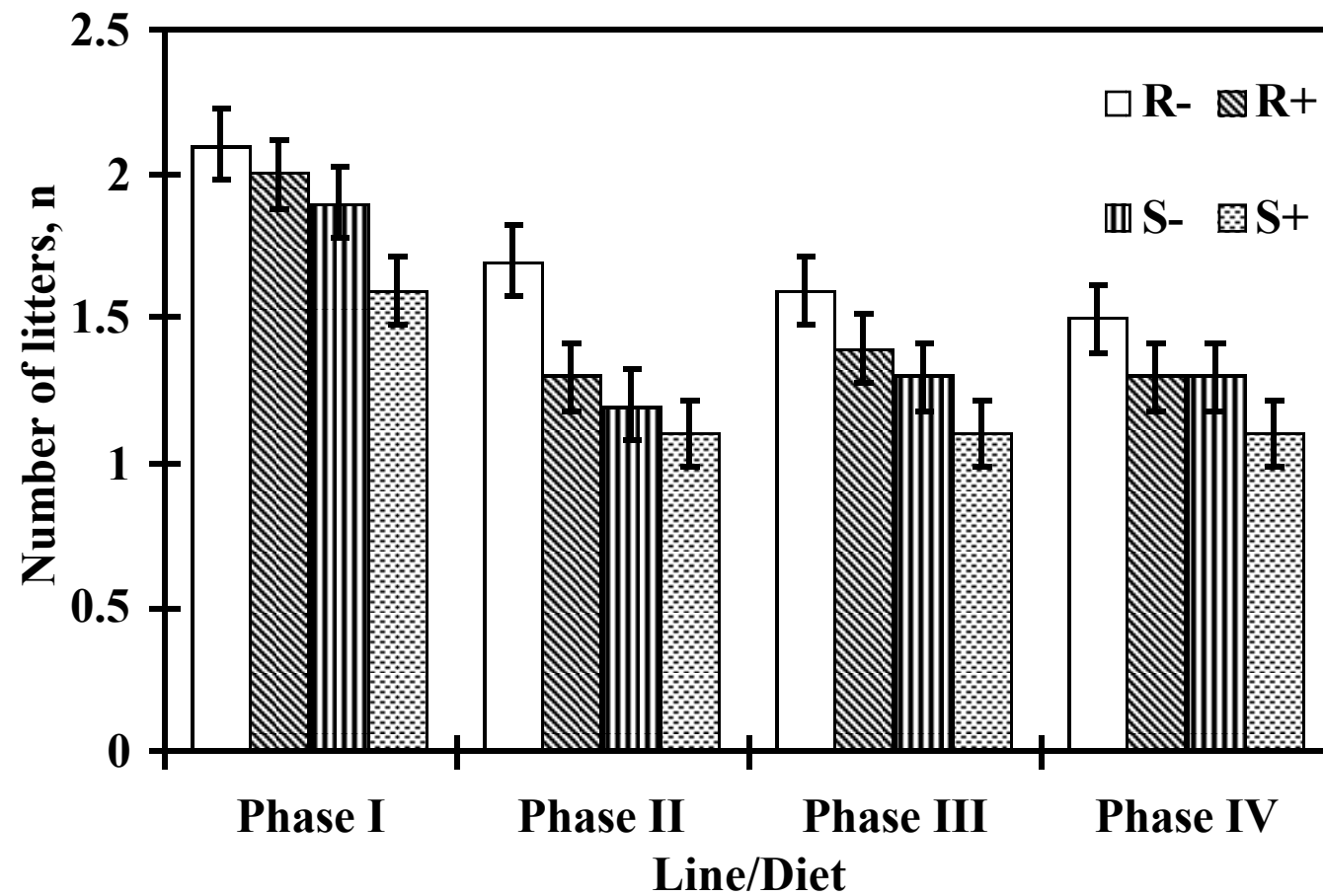and susceptible (S) mice fed non-toxic (-) and toxic (+) diets

Figure 3. Number of litters produced per pair within four time phases during 36 weeks cohabitation by resistant (R) and susceptible (S) mice fed non-toxic (-) and toxic (+) diets
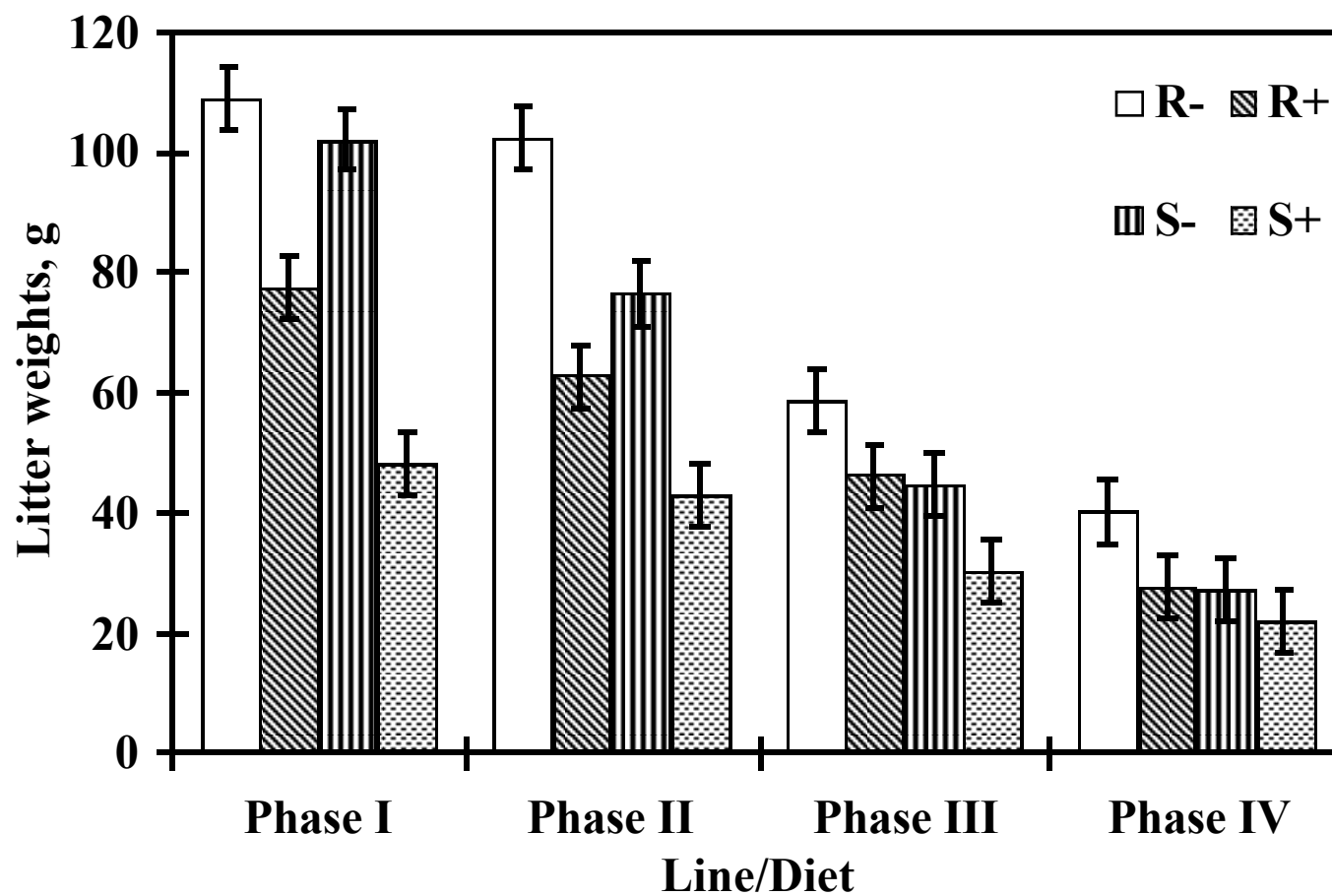
Figure 4. Adjusted weights of all litters produced per pair within four time phases during 36 weeks cohabitation

by resistant (R) and susceptible (S) mice fed non-toxic (-) and toxic (+) diets
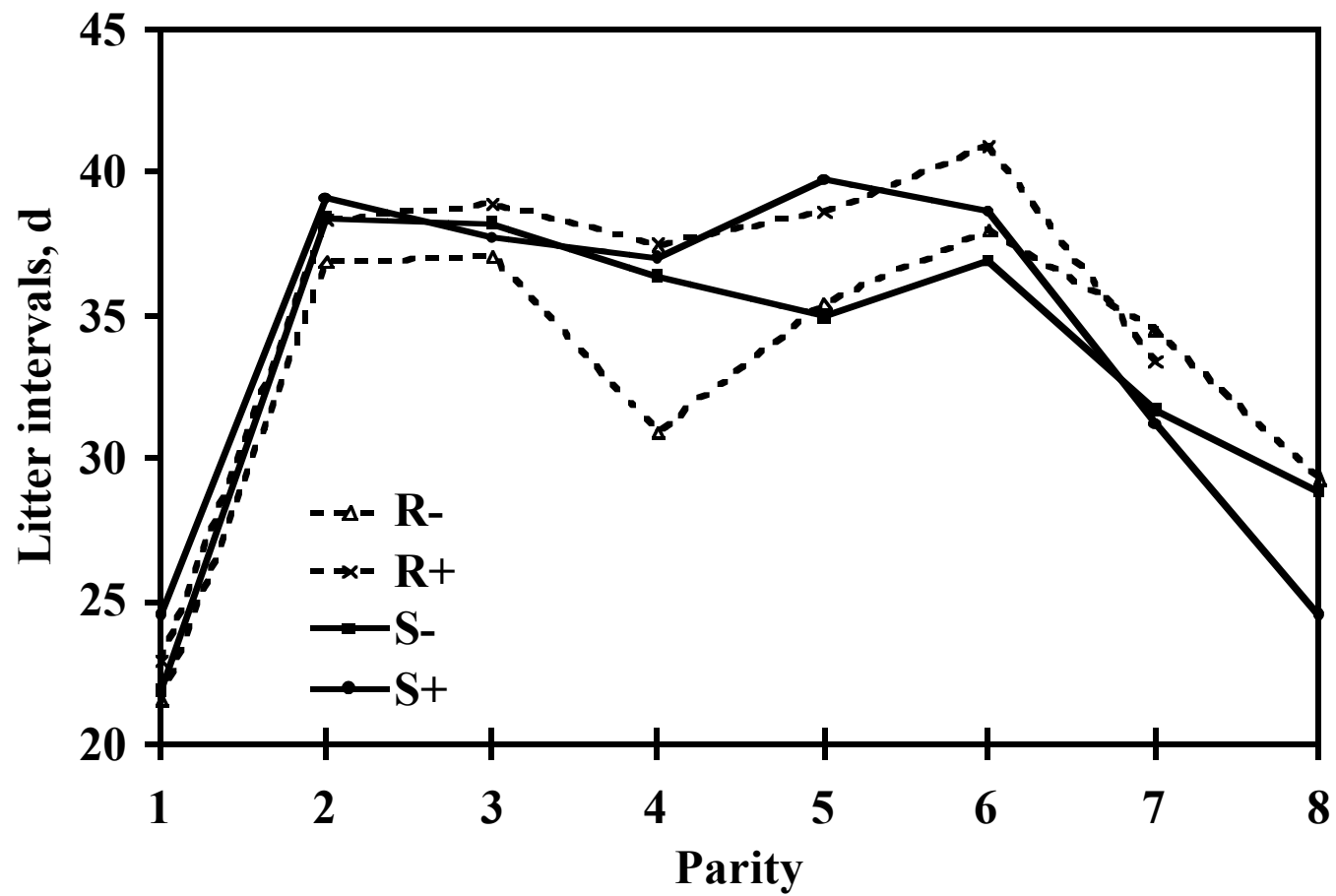
Figure 5. Least squares means for parturition intervals during 36 weeks cohabitation by resistant (R) and susceptible (S) mice fed non-toxic (-) and toxic (+) diets

Table 3. Least squares means and significance levels for the effects of line and diet on total reproductive ability of resistant (R) and susceptible (S) mouse lines fed non- toxic (-) and toxic (+) diets during 36 weeks cohabitation

Trait	R	S	P_L[a]	(-) diet	(+) diet	P_D[b]
tborn, n	68.4	57.5	< .01	70.1	55.8	< .01
twean, n	51.7	39.9	< .01	50.0	41.6	< .01
tnum, n	6.4	5.3	< .01	6.3	5.4	< .01
twght, g	260.1	196.5	< .01	277.5	179.0	< .01
surviv, %	77.0	72.0	.08	75.0	74.0	.85

[a]P-values for line effects

[b]P -values for diet effects

Table 4. Least squares means, pooled standard errors, and significance levels for the effects of genetic line x diet interaction on

total reproductive ability of resistant (R) and susceptible (S) mouse lines fed non- toxic (-) and toxic (+) diets during 36

weeks cohabitation

Trait	R-	R+	S-	S+	P. S. E.	P_{LxD}[a]
tborn (n)	73.1	63.6	67.0	48.0	± 3.9	.22
twean (n)	54.4	49.0	45.6	34.1	± 2.9	.30
tnum (n)	6.8	6.0	5.8	4.9	± 0.3	.55
twght (g)	305.8	214.4	249.3	143.7	± 13.2	.59
surviv (%)	77.0	77.0	72.0	71.0	± 3.0	.89

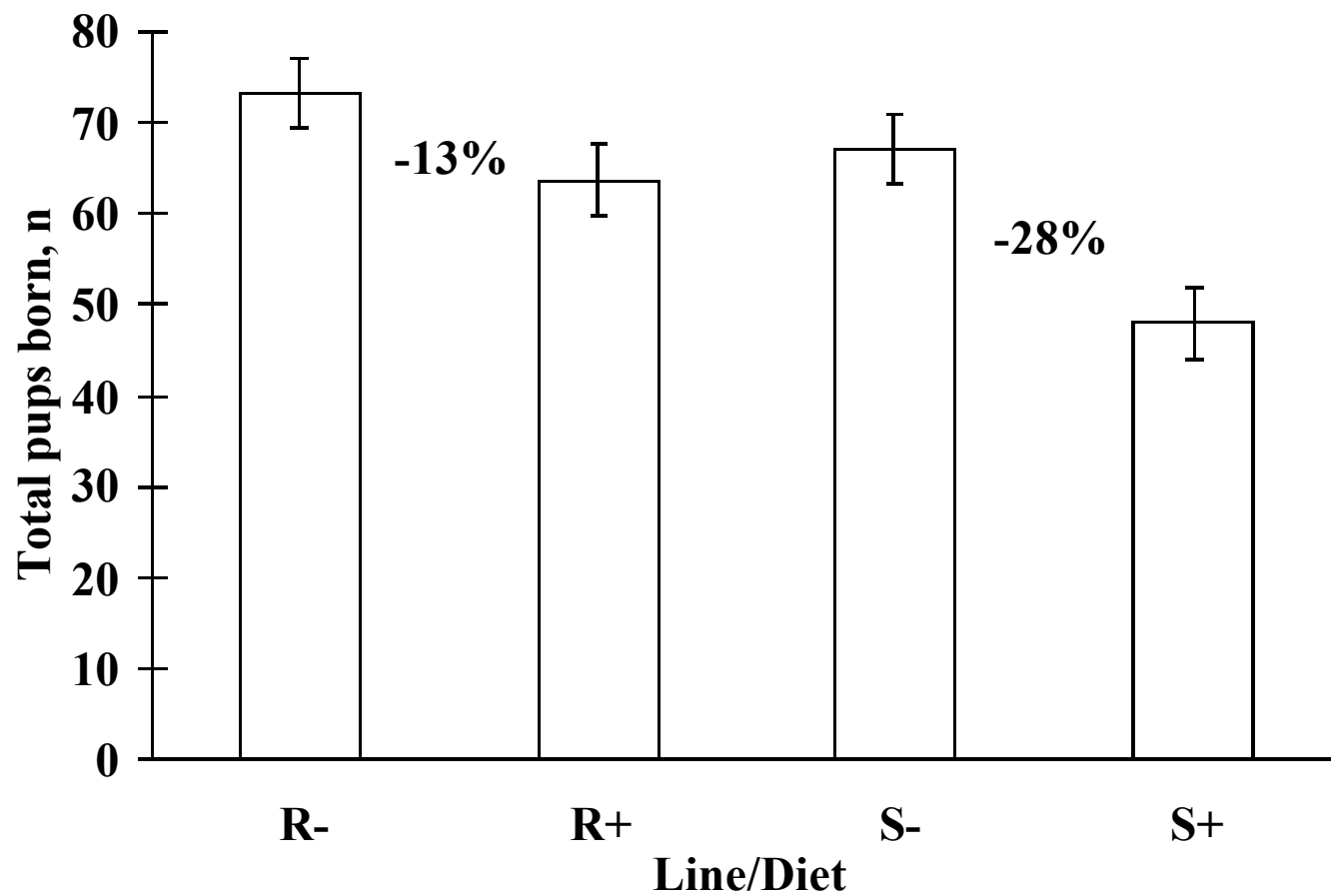[a]P -values for line x diet interaction

Figure 6. Total pups born per pair in 36 weeks cohabitation by resistant (R) and susceptible (S) mice fed
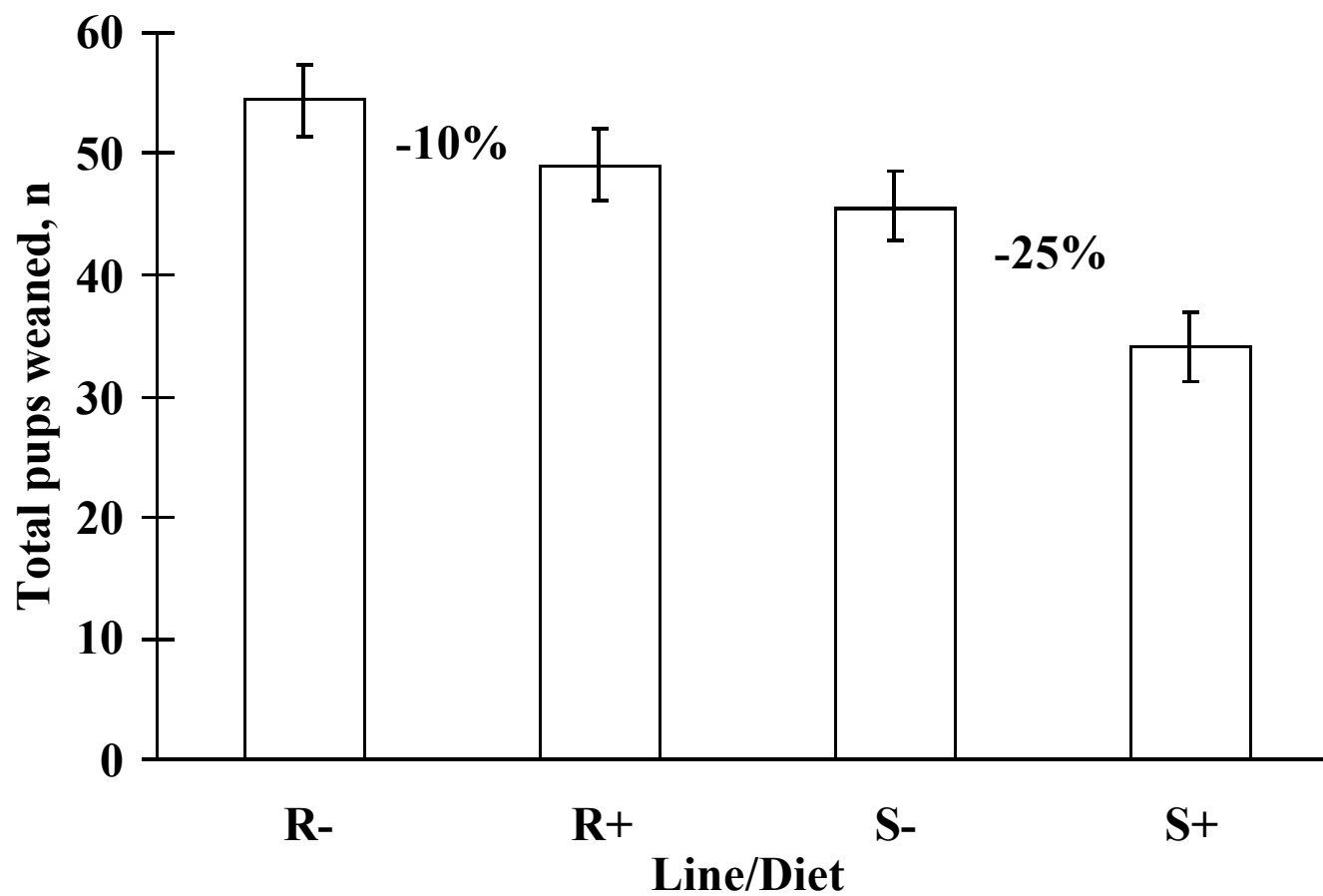
non-toxic (-) and toxic (+) diets

Figure 7. Total pups weaned per pair in 36 weeks cohabitation by resistant (R) and susceptible (S) mice fed

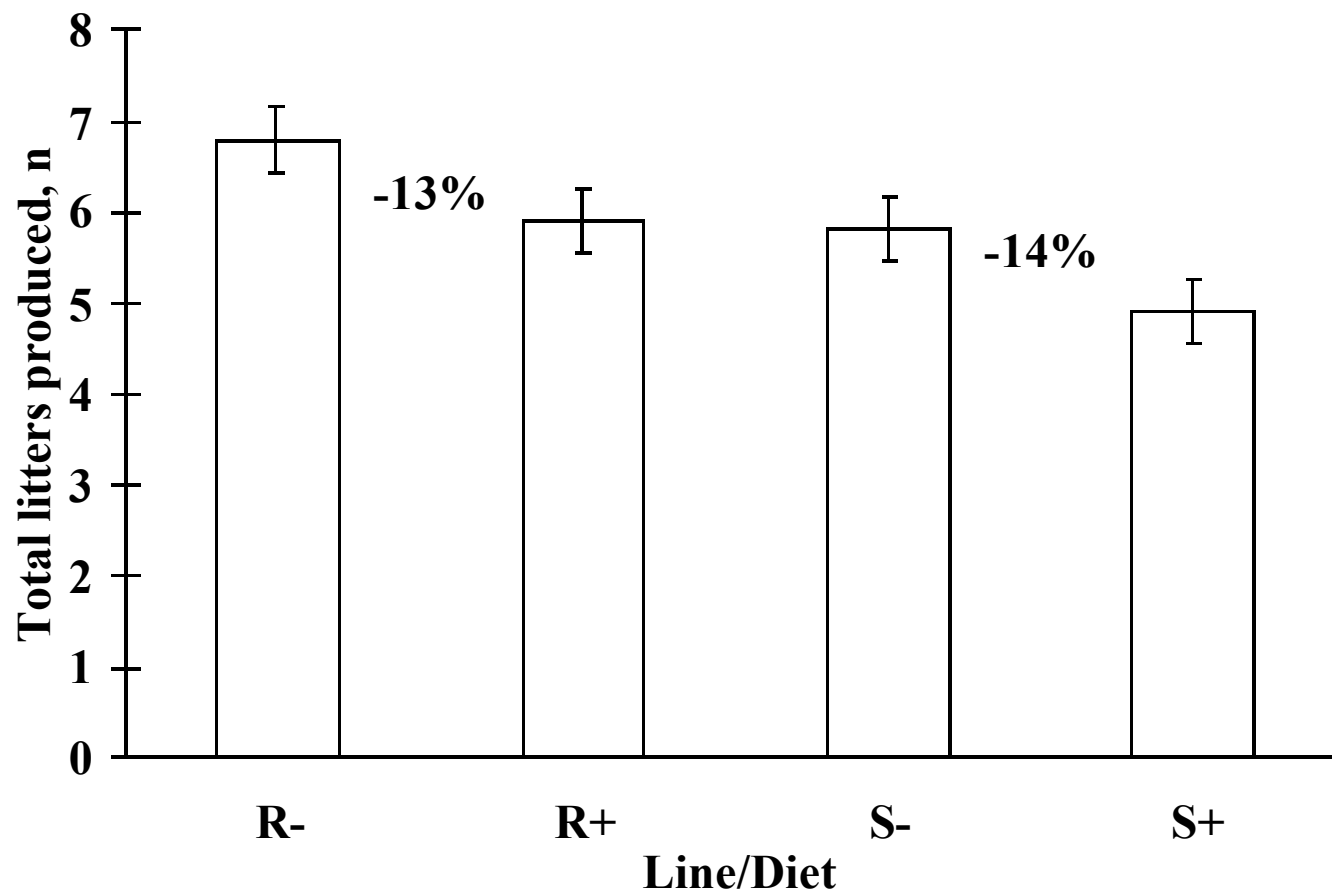non-toxic (-) and toxic (+) diets

Figure 8. Total number of litters produced per pair in 36 weeks cohabitation by resistant (R) and susceptible (S)

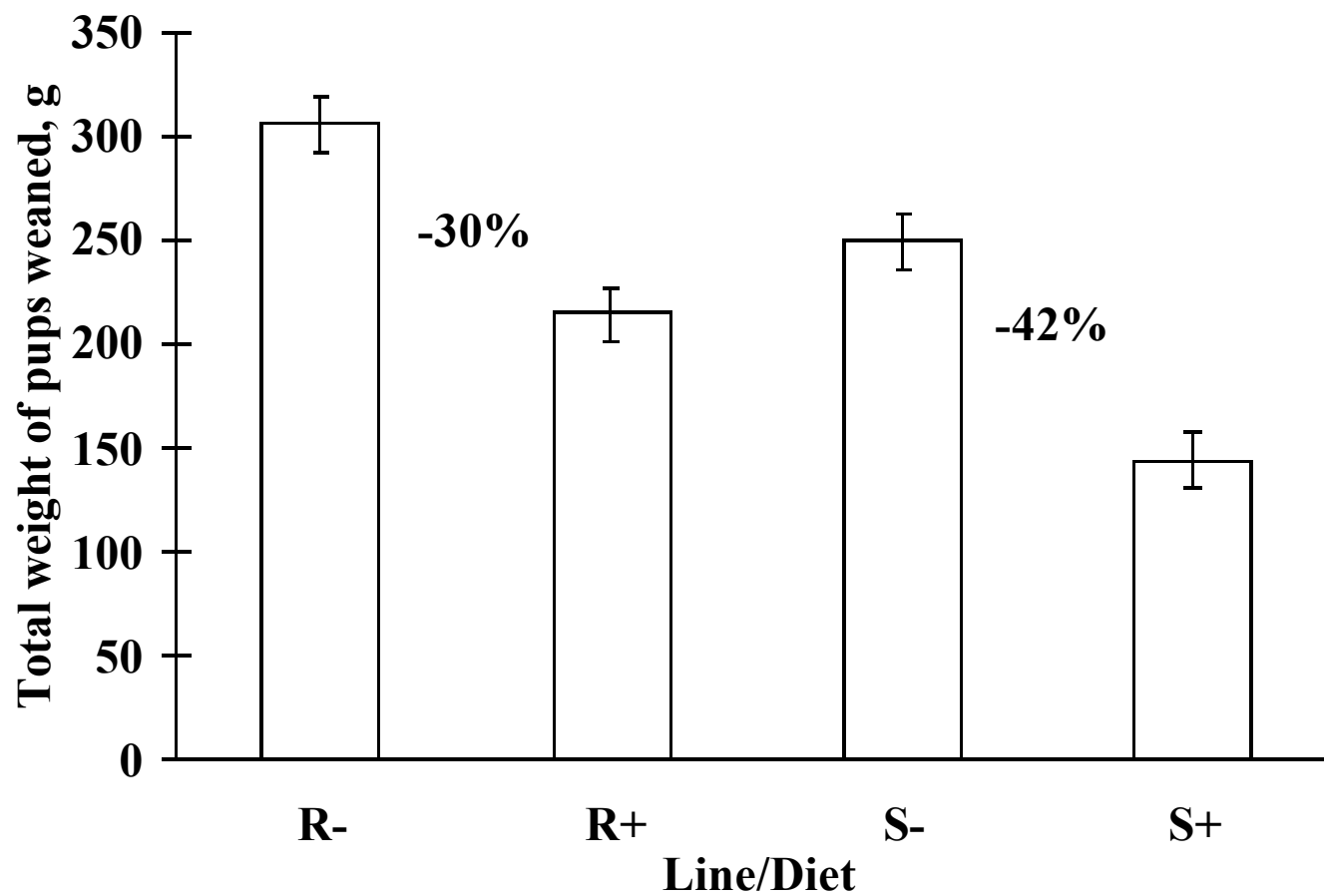mice fed non-toxic (-) and toxic (+) diets

Figure 9. Total weight of pups produced per pair in 36 weeks cohabitation by resistant (R) and susceptible (S)

mice fed non-toxic (-) and toxic (+) diets

Table 5. Least squares means and significance levels for the effects of line and diet on liver enzyme activities of resistant (R)

and susceptible (S) mouse lines fed non-toxic (-) and toxic (+) diets during 36 weeks cohabitation

Trait	R	S	P_L[a]	(-) diet	(+) diet	P_D[b]
Glutathione-S-epoxytransferase[c]	15.1	12.4	.05	13.4	14.1	.59
Uridine diphosphate glucuronosyl-transferase[c]	2.0	1.7	.12	1.9	1.9	.94

[a]P-values for line effects

[b]P -values for diet effects

[c]Measured in nanomoles per minute per milligram of protein

Table 6. Least squares means, pooled standard errors, and significance levels for the effects of genetic line x diet interaction on

      liver enzyme activity of resistant (R) and susceptible (S) mouse lines fed non-toxic (-) and toxic (+) diets during 36

      weeks cohabitation

Trait	R-	R+	S-	S+	P. S. E.	P_{LxD}[a]
Glutathione-S-epoxytransferase[b]	15.4	14.8	11.4	13.4	± 1.32	.34
Uridine diphosphate glucuronosyl-transferase[b]	2.0	2.0	1.8	1.7	± .18	.73

[a]P -values for line x diet interaction

[b]Measured in nanomoles per minute per milligram of protein

Table 7. Correlations within line x diet groups between total number of pups born (tborn), total numbers of litters produced (tnum), total weight of offspring produced (twght), survival percentage (surviv), and glutathione-S-epoxytransferase (GST) and uridine diphosphate glucuronosyl-transferase (UDPGT) enzyme activities

Trait	tborn	twean	tnum	twght	surviv
GST					
R-	- .50 *	0	- .44*	.04	.40*
R+	- .04	.30	- .08	.32	.37**
S-	- .21	- .05	- .20	- .20	.07
S+	- .05	.07	- .12	0	.17
UDPGT					
R-	.11	- .11	.07	- .23	- .21
R+	- .09	.22	- .24	.24	.33
S-	- .09	.35	.11	.18	.34
S+	- .05	.19	.16	.08	.30

* (P< .05)   ** (P< .10)