

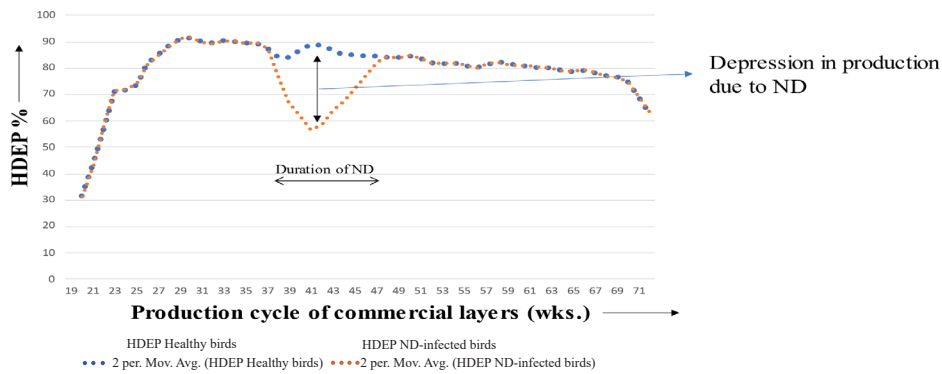


Economic losses due to Newcastle disease in layers in subtropical India

RUCHI SHARMA¹, SANDEEP SARAN^{2✉}, A S YADA³, SANJAY KUMAR⁴, MED RAM VERMA⁴,
 DINESH KUMAR⁴ and JAGBIR SINGH TYAGI²

ICAR-Central Avian Research Institute, Izatnagar, Bareilly, Uttar Pradesh 243 122 India

Received: 12 January 2023; Accepted: 27 April 2023



Supplementary Fig. 1. Effects of ND in the productive cycle of layer farm.

Supplementary Table 1. Probable estimates of parameters employed in the computation of economic losses due to ND

Parameter	Sample size (n)	Mean	SE	Source of information
Number of birds/farms	n = 90	79644.00	3868.00	Field survey
Number of birds died due to ND	n = 11	21188.18	6065.35	Field survey
Number of birds on ND-infected farms	n = 74	80702.70	4066.40	Field survey
Chick cost/bird (₹)	n = 90	34.97	0.04	Field survey
Feed cost/kg (₹)	n = 90	24.62	0.11	Field survey
Labour cost per labour per month (₹)	n = 90	8063.33	78.38	Field survey
Number of labourers per farm	n = 90	15.00	0.77	Field survey
Electricity cost per month (₹)	n = 90	26133.33	1236.38	Field survey
Overall health expenditure (OHE)/bird (₹)	n = 90	10.30	0.11	Field survey
Price per egg sold (₹)	n = 90	4.40	0.00	National Egg Coordination Committee (NECC)
Price of manure sold/month (₹)	n = 90	35790.28	1604.80	Field survey
Price of gunny bag sold/month (₹)	n = 90	37528.61	1637.33	Field survey
Price per kg spent hen sold (₹)	n = 90	41.70	0.00	www.poultrybazaar.net
Age of birds at ND (weeks)	n = 74	37.71	0.90	Field survey
Drop in egg production (%)	n = 74	29.30	1.23	Field survey
Duration of ND (weeks)	n = 74	9.55	0.20	Field survey
Reduction in feed intake (%)	n = 74	18.03	0.86	Field survey

Supplementary Table 2. Regression coefficients of factors influencing economic losses due to ND

Variable	Coefficients (β)	$ T_{cal} $	p value
Drop in egg production (No.)	0.830	29.320	<0.001
Mortality of birds (No.)	0.290	11.180	<0.001
Duration of ND infection (weeks)	0.200	7.350	<0.001
Reduction in feed intake (grams)	-0.140	4.460	<0.001
Age of birds at ND (weeks)	-0.060	2.670	0.009
Experience of farmer (yrs.)	-0.050	2.060	0.043
Farm size	-0.050	1.260	0.212
Vaccination against ND	0.025	1.110	0.269
Increase in OHE (₹/ bird)	0.002	0.049	0.961
Knowledge of ND	-0.040	1.837	0.071
Biosecurity	-0.007	0.271	0.787
Inter-farm proximity	-0.001	0.040	0.968
Education qualification	-0.015	0.663	0.510
Season	0.036	1.686	0.097
R ²			0.969
Adjusted R ²			0.966
F value (6, 67)			350.765
p value			<0.001

Dependent variable: Losses due to ND (₹).