AN EPIDEMIOLOGICAL STUDY OF THE ASCITES SYNDROME IN BROILER
CHICKENS IN A NORTHERN REGION OF INDIA

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A world-wide ascites survey has shown that ascites has become a major economic
problem in modern broiler operations globally (Maxwell and Robertson, 1997). A study was
conducted on 100 broiler farms (51 Ascites Syndrome affected, 49 unaffected) in 46 villages
of two districts of a northern state of India. Information on Ascites Syndrome (AS) in broiler
chickens and the epidemiological factors existing at the farms were collected using a
questionnaire devised for this purpose. Additionally, one sample each of feed, for the
estimation of sodium chloride and aflatoxin, and water, for determination of sodium chloride,
carbonates and bicarbonates, were collected from each of the 100 poultry farms.

AS was found prevalent during November to March with morbidity and mortality
rates of 8.26% and 4.86% respectively and the case fatality rate was found to be 9.61 per
cent. The economic loss in the form of medication cost and mortality was estimated as Rs.
788305/-. Various epidemiological factors found to be significantly associated (P<0.01) in
the causation of AS included production of smoke inside the shed, use of air-tight plastic
curtains around sheds and on vehicles during transportation, source of feed from local
manufacturers, pelleted feed, high salt, chloride and bicarbonate content of underground
water (> 500mg/litre) and salt content of feed (> 0.5%). Other factors found to be associated
significantly (P<0.05) with AS were: history of ascites at the same farm, source of drinking
water (underground water), stocking rate, furazolidone supplementation in feed, aflatoxin
(AFB1) in feed (> 30 ppb), age of birds (11-40 days), concurrent respiratory problem, number
of chicks (> 75 per box during transportation) and distance of transportation (> 50 km).
Factors not found to be significantly associated with causation of AS were: source of birds,
type of floor of poultry shed and level of carbonates in water. The results of this study should
help poultry farmers reduce their losses from Ascites Syndrome.