The effects of regular visual contact with human beings on fear, stress, antibody and
growth responses in broiler chickens

ABSTRACT

This study investigated the effects of regular visual contact at various ages on tonic
immobility (TI) and heterophil/lymphocyte ratio (HLR) reactions to handling and crating,
antibody production, growth performance, and feed conversion ratios in commercial broiler
chicks. Broiler chicks were exposed to (1) visual contact with an experimenter for 10 min
twice daily from 0 to 3 weeks (V0–3), (2) visual contact with an experimenter for 10 min
twice daily from 0 to 6 weeks (V0–6), (3) visual contact with an experimenter for 10 min
twice daily from 3 to 6 weeks (V3–6) and (4) no visual contact (NV), as control. At 42 days
of age, the birds were captured and crated for 10 min. Following, the 10 min crating, the V0–3
and V0–6 birds had shorter TI duration and lower HLR than those of NV. Although, the
HLR response of V3–6 birds to crating were similar to their V0–3 and V0–6 counterparts, the
latter two groups were less fearful, as measured by TI duration. Subjecting birds to V0–3 and
V0–6 enhanced antibody response to Newcastle disease vaccine. Regular visual contact had
negligible influence on body weight, feed conversion ratios and survivability of birds.
Collectively, the results suggest that regular visual contact from 1 to 21 days of age is
sufficient to reduce fear and stress reactions to handling and crating, and improve antibody
response in broiler chickens.

Keyword: Broiler chickens; Visual contact; Fear; Stress; Performance; Immunity