SUMMARY AND CONCLUSION
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An experiment was conducted for a period of six weeks with eight hundred one day-old sexed commercial broilers, randomly allotted into five feeding schedules with four diets in each feeding schedules. Each diet having male and female chicks of twenty each, reared separately. The experimental diets were formulated in each stage of feeding (pre-starter, starter and finisher ration) with four dietary profile i.e., low energy-high protein (D\textsubscript{1}), low energy-low protein (D\textsubscript{2}), high energy-high protein (D\textsubscript{3}) and high energy-low protein (D\textsubscript{4}). The four dietary profiles were made by slightly varying protein and energy level in the standards prescribed by Bureau of Indian Standards (BIS, 1992). The broilers were subjected to two levels of feed restriction viz., 10 and 20 per cent to ad libitum feeding during two periods (from 8 to 14 days and from 15 to 21 days). The feeding schedules consisted of S\textsubscript{1} (ad libitum feeding with four diets), S\textsubscript{2} and S\textsubscript{3} (10 and 20 per cent feed restriction to ad libitum feeding from 8 to 14 days of age with four diets in each schedule), S\textsubscript{4} and S\textsubscript{5} (10 and 20 per cent feed restriction to ad libitum feeding from 15 to 21 days of age with four diets in each schedule). Except for the period of feed restriction all the birds were fed ad libitum through out the experimental period.

During this experimental period, data on body weight and feed consumption were recorded every week, mortality and skeletal deformities were recorded at occurrence. From the above data, weekly weight gain, feed efficiency and livability were calculated. At the end of experiment two males and two females were randomly picked up from their respective replicate (totally 16 birds per feeding schedule) and slaughtered. The pre-slaughter weight, eviscerated carcass weight, dressing percentage, giblets weight and abdominal fat weight were
recorded. Finally, relative economics of broilers due to different levels of feed restriction at different periods and variation in dietary profile were worked out to evaluate the cost effectiveness using the prevailing market rates.

The sixth week body weight of different feeding schedules $S_2$, $S_3$, $S_4$ and $S_5$ without consideration of diets in the main effect were higher than *ad libitum* control group in both male and female broilers. However, no significant differences were noticed among them.

Among different diets irrespective of feeding schedule in the main effect, the sixth week body weight of male broilers recorded non-significant difference. Whereas, the female broilers recorded significantly $(P<0.05)$ better body weight in $D_3$ and $D_4$ compared to other diets.

The sixth week body weight gain of male broilers did not reveal any significant difference between *ad libitum* fed control group and feed restricted feeding schedule. Whereas, female broilers recorded significantly $(P<0.05)$ better weight gain in feed restricted feeding schedule compared to *ad libitum* fed group. The sixth week body weight gain among different diets irrespective of feeding schedule did not reveal any significant difference either in male or female broilers.

The feed consumption and feed conversion ratio at sixth week did not reveal any significant $(P<0.05)$ difference between *ad libitum* fed control group and feed restricted feeding schedule either in male or female broilers, numerically improved feed conversion ratio were recorded in all feed restricted groups than control group in both male and female broilers. Among different diets irrespective of feeding schedule, lower feed consumption was recorded in $D_3$ and $D_4$ compared to other diets in both male and female broilers. However, no statically
significant differences were recorded in sixth week feed efficiency of different diets either in male or female broilers.

Better livability was recorded in male and female broilers up to sixth week of age in all feed restricted feeding schedules compared to *ad libitum* fed group. The variation in dietary profile had no severe impact on livability in the main effect, there was little variation in livability percentage among different diets in both male and female broilers.

No incidences of skeletal deformities were recorded in feed restricted group compared to *ad libitum* fed groups. Among different diets irrespective of feeding schedule in the main effect, the incidences of skeletal deformities were negligible.

The carcass characteristics *viz.*., pre-slaughter weight, eviscerated weight, dressing percentage, giblets weight at sixth week of age in male and female broilers did not exhibit any significant variation due to feed restriction and variation in dietary profile.

The mean abdominal fat weight of male and female broilers did not reveal any significant difference due to feed restriction and variation in dietary profile.

The interaction effect on mean body weight, weekly weight gain, feed consumption, feed efficiency, carcass characteristics, abdominal fat weight, livability and skeletal deformities of different feeding schedules and diets were non-significant.

The net profit per bird due to feed restriction and variation in dietary profile in male broilers was highest in feeding schedule S₂ (Rs. 11.66); Diet 1 (Rs. 9.44) and lowest in S₁ (Rs. 4.96); Diet 3 (Rs. 8.15). Similarly, the net profit per kg live weight was highest in S₂ (Rs. 5.96);
Diet 4 (Rs. 4.93) and lowest in S\(_1\) (Rs. 2.67); Diet 3 (Rs. 4.32). Among female broilers, the net profit per bird was highest in feeding schedule S\(_2\) (Rs. 8.17); Diet 4 (Rs. 7.94) and lowest in S\(_1\) (Rs. 4.09); Diet 2 (Rs. 3.99). Similarly, the net profit per kg live weight was highest in S\(_2\) (Rs. 4.57); Diet 4 (Rs. 4.55) and lowest in S\(_1\) (Rs. 2.40); Diet 2 (Rs. 2.36).

CONCLUSION

✓ The feed restriction either in male or female broilers with out consideration of diets provided during 2\(^{nd}\) or 3\(^{rd}\) week of age by 10 and 20 per cent to that of *ad libitum* feeding did not affect the final 6\(^{th}\) week body weight, feed consumption and feed efficiency. The male broilers recorded a marginally higher final weekly weight gain. Whereas, female broilers recorded significantly better weight gain in final week.

✓ The different diets irrespective of feeding schedule in male broilers showed non-significant difference at final body weight, weekly weight gain and feed efficiency. Whereas, female broilers recorded better body weight in high energy diets but did not reveal any significant difference in final week weight gain and feed efficiency. Both male and female broilers recorded significantly (*P*≤0.05) lower feed consumption in high energy diets.

✓ Better livability and no incidences of skeletal deformities were recorded in feed restricted groups. The variation in dietary profile had no severe impact on livability and skeletal deformities.

✓ The carcass characteristics and abdominal fat weight was unaffected due to feed restriction and variation in dietary profile either in male or female broilers.
✓ Interaction effect on body weight, weekly weight gain, feed consumption, feed efficiency, carcass characteristics, abdominal fat weight, livability and skeletal deformities of different feeding schedules and diets were non-significant.

✓ Ten per cent feed restriction to *ad libitum* feeding during 2nd week increased the net profit per bird compared to *ad libitum* fed control group in both male and female broilers. Upon variation in dietary profile Diet 1 (low energy-high protein) and Diet 4 (high energy-low protein) recorded maximum net profit per bird in male and female broilers respectively.

✓ Based on the present study, ten per cent feed restriction during second week of age is recommended for the broiler industry.