Using fibrolite enzymes to reduce effect of heat stress on Holstein dairy cows

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This study aimed to evaluate the effect of using fibrolytic enzymes (Fibrozyme) on reducing the effect of heat stress on performance of lactating Holstein Friesian cows. An ambient temperature was ranged from 33 to 36°C and the relative humidity was ranged from 52 to 56%. Ninety-four cows were randomly designed among two groups; the first fed without Fibrozyme (control), the second group fed diet supplemented with 15 g Fibrozyme /h/d. The results show that value of rectal temperature and respiration rate for control group were 40.5°C and 82.6 and was 40.4°C and 81.8 breaths/minutes, respectively for Fibrozyme group, those differences were not significant. Milk production, fat corrected milk (FCM), fat and total solids yields were significantly increased (29.37, 28.67, 1.13 and 3.67 kg) for cows fed Fibrozyme diet compared with 26.04, 23.40, 0.87 and 3.10 kg/h/day for cows fed control diet, respectively, while yields of protein, lactose, and solids not fat were insignificant increased. Milk composition was not significantly affected by adding Fibrozyme, except milk fat percentage was significantly (P<0.001) increased. Feed conversion as kg dry DM, CP, TDN and NEL per kg FCM were significantly improved for cows fed Fibrozyme diet in comparing with control group. Fibrozyme supplementation caused significant increase in serum total protein, glucose, Triiodothyronine and total bilirubin, but contents of albumin, ALT, AST, and urea were not significant different. It is conclude that Fibrozyme supplement improved productivity of lactating cow in summer season.