

The Effect of Feeding *Aspergillus oryzae* culture-vitamin mix on the performance of lactating dairy cows during periods of heat stress

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Following a 10-day pretreatment period, 100 Holstein cows were divided into two feeding groups which were further subdivided according to days in lactation (0-60 days and 61-120 days). The daily intake was similar for both groups in amount (21.1 kg DM) and constituents except that Group II received 3 grams of *Aspergillus oryzae* extract, a constituent of the commercial product Vita Ferm. Average biweekly observations were statistically similar for fat, protein and somatic cell content. Milk yields of 4% FCM were statistically greater ($P < .05$) for Group II in early lactation (30.1 vs. 33.7 kg) and overall (29.6 vs. 30.7 kg) but not later lactation (29.1 vs. 27.9 kg). The *A. oryzae* response was most pronounced during times of high ambient temperatures. When the daily ambient temperatures exceeded 32.2°C, cows fed the fungi were observed to respire at a greater rate ($P < .05$) and exhibit a higher rectal temperature ($P < .05$) overall (77.8 vs. 82.4/min and 39.06°C vs. 39.22°C) and in early lactation (76.2 vs. 81.8/min and 39.08°C vs. 39.34°C) but not later lactation (79.2 vs. 83.2 min and 39.01°C vs. 39.07°C).