2000 and May 1st, 2000. Group B freshened between June 1 st, 2000 and August 1st,2000. Group A out-produced Group B consistently in all four groups according to the number of days on the close-up ration as follows: Group 1, 894 kg; Group 2, 759 kg; Group 3, 684 kg and group 4, 599 kg. The results emphasize the importance accurate pregnancy diagnosis has in generating lists for moving dry cows to ensure adequate time on the close-up prepartum ration. Cows freshening during periods of high heat stress also benefit from a longer time on the close-up ration , but produce an average of 734 kg less milk than cows calving during cooler periods.

Key Words: transition, DCAD, heat stress

764 Efficacy of two sustained-release intraruminal selenium supplements. B Renquist*[1], C Maas[2], J Oltjen[1], M Sween[1], and D Flavell[1], [1]*University of California, Davis,* [2]*Pacific Trace Minerals, Inc.*

Our objective was to test the efficacy of sustained-release selenium (Se) boluses for beef cattle. Fifty-five English breed heifers (mean initial body weight = 245.84 kg) were randomly assigned to one of four treatment groups: D1- one Dura-Se# bolus (Schering-Plough Co.) on day 0; D2- one Dura-Se# bolus on day 0 and day 121; P- one Se-365 bolus (Pacific Trace Mineral, 30 g, 10% elemental Se) on day 0; and C- control no additional Se. Heifers grazed Se deficient native foothill range without any additional supplement. Body weights and blood samples were taken for Se analysis from animals in all 4 groups at days #28, 14, 28, 49, 63, 121, 183, 293, and 365. No evidence of excess Se intake was observed (lameness, alopecia, brittle hair, coronitis). Data were analyzed in a model with Se treatment as the main effect; a log transformation for blood Se was used to make variances among treatments similar. On day 14 blood Se levels were higher for the three supplemented groups than for the control group ($p< 0.05$). On day 28 group P had higher blood Se levels than either D1, D2, or C ($p<0.05$). At days 183 and 293, the D2 had the highest blood Se levels (231.1 22.7 and 133.4 13.4 mg/L), with groups P (136.8 23.0 and 75.8 17.9 mg/L), D1 (114.3 16 and 34.8 8.8 mg/L), and C (21.26 2.8 and 15.53 2.7 mg/L) having descending Se blood levels, respectively. On day 365, groups D2 and P provided blood Se levels above the 50 mg/L that is considered deficient. Groups D1, D2, and P gained 11.2, 23.2 and 11.7 kg more than the 100.0 kg gain of the control group ($p = 0.084$, 0.0006 and 0.022, respectively). Se supplementation with the Se-365 pellet provided sufficient Se to raise the blood Se levels above deficient levels. When compared with 1 Dura-Se# bolus, the Se-365 pellet prevented blood Se levels from falling to deficient levels for a more extended period.

Key Words: Selenium, Supplement, Intraruminal

765 Evaluation of Mannan Oligosaccharide on the immune status of dairy cows and their calves. S.T. Franklin[1], K.E. Newman*[2], and M.C. Newman[1], [1]*University of Kentucky,* [2]*Venture Laboratories, Inc.*

Because of legislation against subtherapeutic antibiotic use in livestock, producers are looking for alternative products that may demonstrate similar performance, health and economic benefits. Mannan oligosaccharide (MOS) has been shown to provide benefits in a number of livestock species that are similar to antibiotic growth promoters. Among the benefits documented are increased colostrum immunoglobulin levels in sows receiving MOS. Forty cows were divided into two treatment groups by parity to evaluate the effect of MOS (10-g/h/d) on serum and colostrum immunoglobulin levels, blood parameters and vaccine antibody titers to rotavirus and calf immune status and growth. No overt differences were noted in blood parameters. Antibody titers to rotavirus vaccination following calving were numerically greater in calves from cows receiving MOS than in calves from unsupplemented cows (24,381 vs. 22,345 in colostrum and 12,777 vs. 6,809 in calf serum). Serum immmunoglobulin levels were also numerically greater 24-h post-calving in calves whose dams received MOS than calves from unsupplemented cows (IgG 1902 vs. 1718 mg/dl; IgM 278 vs. 243 mg/dl). The exact mechanism of the effect of MOS on immune function is not fully understood, but improved immune status of the calf may provide an aid in performance and a reduction in the use of antibiotic use in milk replacer formulations.

Key Words: oligosaccharide, colostrum, calf

Goat Species

766 Feed intake and efficiency measurements in goats. J.M. Dzakuma* and E. Risch, *Prairie View A&M University, Prairie View, TX. USA.*

Two breeds of goats, the Spanish (SP) and the Tennessee Stiff-legged (TS), were fed three levels (100% or *ad libitum*, 85% and 70% of *ad lib*) of the same ration containing, approximately, 18%CP and 65% TDN. These goats were classified as intermediate (SP=47.5 kg) and small (TS=36.8 kg) mature sizes. They were individually penned and fed. Feed intake, orts, excreta, and bi-weekly weights were collected until yearling age. After weaning at, approximately, 70 d, 48 goats (24M and 24F) from each breed were divided into three groups of 8, by sex, and placed on the ration. Twenty-four goats (4M and 4F from each dietary level) were slaughtered at 6 mo of age. The other 24 goats were slaughtered at 13 mo and carcass data collected. The objective of this study is to understand nutrition, genotype and management interactions. Adjusted weaning(WN) wt, WNWT = BRWT + 70(ADG birth to weaning). Average Daily Gain, ADG = Wt gain/Interval in days. Feed Efficiency, FE = Wt gain/Feed consumed. ADG post-weaning and FE were calculated between WN and 6 mo and between 9 and 13 mo, corresponding to when data were collected. Analyses of all variables were performed using the GLM procedure in SAS (1998), with dietary level, breed and sex as main effects, and their secondary effects. No statistically significant differences were observed in feed intake amounts between the SP and the TS breeds throughout the duration of the study. Cumulative amount of feed intake for the SP and the TS goats, respectively, from WN to 6 mo were, 51.3 and 50.5 kg, and from 6 to 13 mo were, 67.7 and 66.7 kg. The TS, being a smaller size breed, ate the same amount of feed ($P>.05$) as the SP, an intermediate sized breed. Calculated FE were: (SP_{wn-6mo}=.122 kg per kilogram of feed consumed vs TS_{wn-6mo}=.167 kg per kilogram of feed consumed ($P<.01$) and SP_{6-13mo}=.088 kg per kilogram of feed consumed vs TS_{6-13mo}=.104 kg per kilogram of feed consumed) and ADG: (SP_{wn-6mo}=.058 kg vs TS_{wn-6mo}=.083 kg ($P<.01$) and SP_{9-13mo}=.034 kg vs TS_{9-13mo}=.038 kg). It would appear the TS is growing more efficiently than the SP. The project has been repeated with the addition of Boer, a large mature breed size, and will be reported. Knowledge of the interactions of feed intake, genotype and body composition changes will help characterize growth curves in goats.

Key Words: Spanish, Tennessee Stiff-legged, Goats, Feed Intake, Feed Efficiency

767 Prediction of energy requirements for maintenance and gain of growing goats. J. Luo, A. L. Goetsch, and T. Sahlu, *E (Kika) de la Garza Institute for Goat Research, Langston University, OK.*

Literature data were compiled and a database was constructed to estimate ME requirements for maintenance (ME_m) and BW gain (ME_g) for three different biotypes of growing goats (i.e., $\geq$ 50% Boer or meat, dairy, and indigenous) by regressing ME intake (MEI, kJ/kg $BW^{0.75}$) against ADG (g/kg $BW^{0.75}$). Because of differences among biotypes in intercepts and slopes ($P < 0.05$), data subsets for the different biotypes were used. The meat subset included 60 observations from 11 publications, representing 548 goats; the dairy subset had 116 observations from 25 publications with 1,851 goats; and there were 157 observations from 34 publications and 1,024 goats in the indigenous subset. Dairy and indigenous subsets were split into two groups-one for equation development and a second for evaluation. Observations with residuals greater than 1.5 times the residual SD from initial regressions were deleted. Equations were meat: MEI = 457.0 (SE = 22.3) + (25.23 (SE = 1.74) × ADG) ($n = 57$; $R^2 = 0.79$); dairy goats (development subset, $n = 63$): MEI = 573.7 (SE = 46.2) + (23.56 (SE = 3.10) × ADG) ($n = 56$; $R^2 = 0.52$); and indigenous (development subset, $n = 87$): MEI = 500.0 (SE = 11.9) + (18.59 (SE = 1.64) × ADG) ($n = 76$; $R^2 = 0.63$). Intercepts and slopes from regressions of observed against predicted MEI with evaluation subsets based on dairy and indigenous equations were not different from 0 and 1, respectively. Prediction equations for the three biotypes

had similar slopes, but the intercept for dairy differed ($P < 0.05$) from those for meat and indigenous. A common slope equation with a dummy variable (D; dairy = 1 and others = 0) was: MEI = 480.0 (SE = 13.5) + (103.2 (SE = 17.4) × D) + (22.85 (SE = 1.23) × ADG) (n = 189; R^2 = 0.74). In conclusion, based on a compiled database from publications with growing goats, ME_m was 583.2 kJ/$BW^{0.75}$ (139 kcal/kg $BW^{0.75}$) for dairy goats and 480.0 kJ/$BW^{0.75}$ (115 kcal/kg $BW^{0.75}$) for meat and indigenous goats, and ME_g was 22.85 kJ/g (5.46 kcal/g). Supported by USDA project No. 9803092.

Key Words: Goats, Energy

768 Influence of nutrition on ovarian activity in goats.I. Effect of fat by-pass supplementation. C. A. Meza H.*[1], D. Lopez A.[1], J. G Chavez P.[2], H. Salinas[3], M. Valencia[4], and M. Mellado[5], [1]*Universidad Autonoma Chapingo,* [2]*Gabinete de Radiodiagnostico y Ultrasonografia,* [3]*Instituto Nacional de Investigaciones Agricolas Forestales y Pecuarias,* [4]*Universidad Juarez del Estado de Durango,* [5]*Universidad Autonoma Agraria Antonio Narro.*

Aim of this study was to evaluate, in puberal goats, the effect of by-pass fat supplementation (FAT) on ovarian activity and serum growth hormone (GH) concentration. Goats (n=21) with 21.3*0.45 kg body weight (BW) and 7 months old, received either low (LFAT, 0 g/hd per day) or high (HFAT, 40 g/hd of a Ca fatty acid salt per day; equivalent to 0.256 Mcal NE) during a 28-d pre and 14-d post-ovulation period. Goats had access to water, shade, mineral salts and a basal diet of alfalfa hay (2.0% BW, 14.6% CP), under natural photoperiod (25 NL). Upon estrous synchronization (PGF2α, 2x 11d apart), blood samples were collected 36h later at 15-min intervals during a 6-h period to evaluate GH area under de curve (AUC) and pulsatility (PULSE). On d-15 post-ovulation, both follicular and corpus luteum number were determined by transrectal ultrasonographic scanning. Overall averages for total follicles (TF), corpus luteum (CL) and total ovarian activity (OA) were 2.28, 0.9, and 3.14, respectively. Neither TF, nor CL or OA were affected (P>0.05) by fat supplementation level. Overall GH average was 18.6 ng mL-1; neither AUC nor PULSE were affected (P>0.05) by FAT level. Results suggest that nutrient partitioning could had privileged body growth processes in puberal goats, instead of optimizing the activity of the hypothalamic-hypophyseal-ovarian axis. The last scenario seems to delineate an effective metabolic strategy exerted by puberal goats which assures that energetic resources would not be diverted toward reproductive functions that depict a low probability to be physiologically successful in this growing phase.

Key Words: Goats, Energy supplementation, Ovarian activity

769 Influence of nutrition on ovarian activity in goats. II. Interactions among body condition, by-pass protein suplementation and endocrine profile. C. A. Meza H.*[1], J. A. Ortiz[1], R. A. Cuevas[1], J. G. Chavez P.[2], H. Salinas[3], M. Valencia[4], and M. Mellado[5], [1]*Universidad Autonoma Chapingo,* [2]*Gabinete de Radiodiagnostico y Ultrasonografia,* [3]*Instituto Nacional de Investigaciones Agricolas Forestales y Pecuarias,* [4]*Universidad Juarez del Estado de Durango,* [5]*Universidad Autonoma Agraria Antonio Narro.*

Aim of this study was to evaluate the possible relationship among by-pass protein supplementation and ovarian activity in goats with divergent body condition (BC). Goats in low (LBC, n= 16; BW= 28.71.02 kg) or high (HBC, n= 16; 38.461.02 kg) received one of two levels of by-pass protein (blood meal): Low (LP, 0 g goat per day) or High (HP, 125 g goat per day) during 40 d pre- and 15 d post-ovulation. Goats had access to water, shade, mineral salts, and a basal diet of alfalfa hay (2.0% BW, 14.8% CP). Upon estrous synchronization (PGF2α 2x 11d apart), blood samples were collected 36h later at 15 min intervals during a 6-h period to evaluate GH and LH area under the curve (AUC) and pulsatility (PULSE). On d-15 post-ovulation, ovarian activity was evaluated by transrectal ultrasonographic scanning. Overall means for total follicles (TF), corpus luteum number (CL), and total ovarian activity (OA) were 2.31, 2.34 and 4.65, respectively. While TF was not affected (P=0.1) by BC, both CL (P=0.003) and OA (P=0.01) differed between BC groups, with the largest values depicted by the HBC-goats. Similarly, the HP-goats showed the best values for TF (P=0.04), CL (P=0.06) and OA (P-0.01), when compared with the LP-group. Overall GH and LH averages were 8.47 and 2.52 ng mL; respectively. However, neither AUC nor PULSE differed (P>0.1) among treatments. These results suggest that both by-pass protein supplementation and a good body condition are able to increase the activity and(or) sensibility of the hypothalamic-hypophyseal-gonadal axis. The last resulted, in turn, in an increased ovarian activity in goats, without differences between treatments in serum LH or GH concentrations.

Key Words: Goats, By-pass protein supplementation, Ovarian activity

770 Effect of pasture feeding and lactation stage on the biochemical composition of goat milk and cheese flavor. K.A. Soryal*, S. Zeng, B. Min, S. Hart, K. Tesfai, and T. Sahlu, *E (kika de la Garza Institute for Goat Research, Langston Univ., OK.*

This study examined the effect of pasture feeding with different levels of concentrate and lactation stage on milk fatty acids and cheese characteristics. Twenty lactating Alpine goats were randomly assigned to four groups. Group A was confined, fed alfalfa hay and supplemented with 0.66 kg concentrate (per 1 kg of milk over 1.5 kg/day) (Control). The three pasture groups with different levels of concentrate were B (0.66 kg/d); C (0.33 kg/d) and D (no supplementation). Two batches of milk (10 kg) were collected monthly for processing into a soft cheese, Egyptian Domiati, from April through September 2001. Milk samples were analyzed for fat, protein, lactose and TS, and cheese samples were organoleptically scored. Results indicated that the overall mean values of short chain (C_6, C_8, C_{10}; SCFA) and long chain (C_{12}, C_{14}, C_{16}, C_{18}, $C_{18:1}$, $C_{18:2}$ and $C_{18:3}$; LCFA) fatty acids in milk were 0.98 and 6.79 mg/g, respectively. Both SCFA and LCFA contents in goat milk were affected ($P < 0.001$) by stage of lactation. SCFA concentration for D was lower, 0.83 mg/g than for A, B and C (1.04, 1.02 and 1.04 mg/g, respectively). However, LCFA content in B (7.34 mg/g) was significantly higher ($P < 0.05$) than for D (6.28 mg/g). SCFA (1.7 mg/g) and LCFA (9.2 mg/g) in the early lactation were greater ($P < 0.001$) than in mid to late lactation (0.7-1.2 and 6.0-8.1 mg/g, respectively). Milk fat content was positively correlated with milk protein (r = 0.42, $P < 0.01$), TS (r =0.87, $P < 0.001$), and cheese yield (r = 0.60; $P < 0.001$) but was negatively correlated with flavor score (r = -0.33; $P < 0.01$). Milk protein was positively correlated with TS (r = 0.68, $P < 0.001$) and cheese yield (r = 0.38; $P < 0.05$). SCFA and LCFA concentrations in milk were positively correlated (r = 0.7; $P < 0.001$). In conclusion, the best cheese flavor was obtained with milk from groups receiving little or no supplemented concentrate (C and D) in mid-lactation when LCFA and TS contents in milk were low.

Key Words: Fatty acids, Domiati cheese, Pasture feeding

771 Rotational grazing as a parasite management tool for goats. W.E. Pomroy[1,2], S.P. Hart*[1], and B.R. Min[1], [1]*E (Kika) dela Garza Institute for Goat Research, Langston University, OK,* [2]*Institute of Veterinary, Animal and Biomedical Sciences, Massey University, NZ.*

This study investigated the use of a short-duration, long-rest-period rotational grazing system as a method for controlling internal parasites in goats. Pastures (in central Oklahoma) were blocked by presence (15% cover) or absence of trees with two 2.0-ha pastures of degraded tallgrass native prairie per block. Two pastures were each divided with electric fence into 14 strips for rotational grazing beginning in May. Goats grazed each strip for 5 d and were moved to the next strip for two rotations, resulting in a 65-d rest period. Two pastures were set-stocked. Non-lactating, mature goats were used, six Angora and six Spanish does per pasture. Does were dewormed at the start of the study and fecal egg counts were used to confirm the efficacy of deworming. Initial and final weights of goats were taken. Tracer animals (11.5 kg BW Alpine wethers) were dewormed effectively (confirmed by fecal egg counts) and allowed to graze with animals in each pasture (three tracers per pasture) for 17 d near the end of the study to measure pasture contamination. Tracers were euthanized after an additional 11 d and worms in the abomasum and small intestine were identified and counted. Goats were sampled every 3 wk for fecal egg counts (modified McMaster procedure) and hematocrit. Fecal egg counts (FEC) were log transformed prior to statistical analysis. The FEC were reduced by rotational grazing ($P<0.05$; 309 *vs* 121 eggs/g). There was a significant treatment by block effect ($P<0.005$) in that pastures with trees had higher FEC, presumably due to animals congregating under trees and feces being shaded from the sun. Hematocrit and BW gain were not affected by treatment ($P>0.10$). Pasture contamination with *Haemonchus contortus* larvae, (74.4% of worms identified) as determined by tracer animals, was lower ($P<0.001$; 630 *vs* 40 worms per animal) for rotationally grazed

animals than for set-stocked animals with a block by pasture interaction ($P<0.001$) due to trees as previously discussed. Contamination by other species (*Ostertagia circumcinta*, 8.2% and *Trichostrongylus colubriformis*, 17.4%) of larvae followed a similar pattern. A short-duration, long-rest-period, rotational grazing system on tallgrass native range can effectively control internal parasites in goats, but the presence of trees in pastures can increase parasite infestation.

Key Words: Internal parasite, Pasture rotation, Goat

772 *In situ* degradability kinetics of the diet consumed by grazing goats in a semiarid region of north Mexico. A.S. Juarez-Reyes[1], R.A. Alvarez-Gamboa[1], G. Nevarez-Carrasco[1], and M.A. Cerrillo-Soto*[1], [1]*Universidad Juarez del Estado de Durango. Durango, Dgo. Mexico.*

The objective of this study was to determine the *in situ* degradability of forage consumed by grazing goats in a thorn scrubland in the north of Mexico. Three goats fitted with rumen and esophageal cannulae belonging to a herd 360 animals were used to obtain diet samples for a period of 24 months. Two seasons were considered; dry season from January to June and rainy season from July to December. The extrusa samples collected from the previous month were placed in nylon bags (5 g DM) and incubated in the rumen of the same animals for 0, 3, 7, 12, 24, 48, 72 and 96 h. The course of DM degradation of the samples was described by using the equation $p = a + b\ (1 - e^{-ct})$. The fractions a, b, a + b, c and ED were analyzed by ANOVA according to a randomized block design. The values obtained for the soluble fraction (a), insoluble but fermentable fraction (b), potential degradability (a + b), degradation rate constant (c) and effective degradability (ED) were higher for the rainy season. The rate of DM degradation (c, %/h)registered in the dry season for both years suggest supplementation practices may be necessary.

	Season		
Fraction	Dry	Wet	sem
a (%)	30.2_a	37.8_b	0.85
b (%)	35.0_a	39.3_b	0.92
c (%)	4.1_a	5.2_b	0.20
a + b (%)	65.2_a	75.1_b	1.20
ED (%)	50.4_a	60.5_b	1.26

$_{ab}$ values with the same letter within rows do not differ (P¡.05) sem standard error of the mean

Key Words: Grazing goats, *in situ* degradability, Diet

773 In vitro maturation of caprine oocytes in different sera. P. Tajik*[1] and M. Hashemi[2], [1]*Faculty of Veterinary medicine, Islamic Azad University, Science and Research Branch,* [2]*Islamic Azad University, Tehran North Branch.*

Different protein supplements such as fetal calf serum (FCS) (Martin-Lunas et al, 1996), calf serum (CS) (Crozet et al, 1993), estrus goat serum (EGS) (Keskitepe et al, 1994) and bovine serum albumin + EGS (Rajikin et al, 1994), have been used for in vitro maturation of caprine oocytes. However, in nearly all experiments, hormones have been added to the tissue culture media. On the other hand, the experiments on in vitro maturation of caprine oocytes using TCM-199 supplemented with 20% estrus goat serum, FSH, LH and estradiol 17β, showed no significant difference between prepubertal and adult goats (Mogas et al, 1997). In a different study we found no significant difference in maturation in vitro of caprine oocytes among different concentrations of EGS in non-breeding season (Tajik and Shams, 1998). In the present study, three different sera, including estrus sheep serum (ESS), have been added to maturation medium and their effect have been reported. Oocytes were aspirated from caprine ovaries, washed and cultured in TCM-199 containing penicillin, streptomycin and 0, 10, 15 or 20% of FCS, ESS or EGS. After 24-26h culture, oocytes were freed from cumulus and corona cells by hyaluronidase and passing through a fine pipette, fixed in aceto alcohol, stained with aceto orcein and observed under a phase-contrast microscope for evidence of maturation. High maturation rates (74% - 94%) were observed in all concentrations of the 3 different sera examined. No significant difference was observed between different concentrations and among different sera. Almost no maturation observed in the medium lacking serum. In conclusion, these sera with the concentration examined can be substituted for one another for in vitro maturation of caprine oocytes.

Sera examind Concentrations	FBS (%)	EGS (%)	ESS (%)	Significance
0 (Control)	2/24 (4)	-	-	
10%	49/59 (83)	35/38(86)	34/36 (94)	-
15%	23/29 (79)	14/18 (77)	34/41 (83)	-
20%	26/31 (84)	17/20 (85)	28/38 974)	-

Key Words: In vitro maturation, Caprine oocytes, Different sera

Growth and Development
Somatropic Axis and Leptin in Cows

774 Correlation of circulating IGF-I with IGF-I mRNA and growth hormone receptor (GHR) 1A mRNA expression in calves exposed to long or short day photoperiod. P.E. Kendall*, T.L. Auchtung, and G.E. Dahl, *University of Illinois, Urbana.*

The galactopoietic effect of a long day photoperiod (LDPP) is well known in lactating cattle and is associated with a concomitant rise in circulating IGF-I concentration. However, LDPP has no effect on GH concentrations or hepatic GHR 1A mRNA expression. This study looked at the relationship between blood IGF-I concentration, IGF-I mRNA and GHR 1A mRNA expression in the liver in response to photoperiod. Two groups of Holstein steer calves were maintained indoors and exposed to either a LDPP (16L:8D; n=6) or short day photoperiod (SDPP) (8L:16D; n=6) for 9 weeks. Jugular blood samples were collected at weekly intervals to determine changes in serum IGF-I by radioimmunoassay. Liver biopsies were obtained at 3-week intervals to quantify changes in hepatic GHR 1A mRNA and IGF-I mRNA using real time PCR. IGF-I concentrations displayed a temporal increase in both treatments, with levels being consistently higher ($P<0.05$) in LDPP calves compared to SDPP calves. Both hepatic IGF-I mRNA expression and the amount of GHR 1A mRNA were positively ($P<0.01$) correlated with circulating IGF-I concentrations. Therefore, changes in circulating IGF-I are associated with altered expression of hepatic IGF system genes, and while IGF-I increases in response to LDPP, IGF system gene expression is not affected by photoperiod. It remains possible that net increases of IGFs into circulation in cattle exposed to a LDPP are related to shifts in IGF-binding proteins (IGF-BPs) in circulation. We are currently quantifying the relative abundance of IGF-BP-2, BP-3 and BP-5 to resolve this issue. In summary, galactopoietic effects of LDPP are associated with higher concentrations of IGF-I in circulation, yet the mechanism producing this response remains unknown.

Key Words: Cattle, Photoperiod, IGF system

775 Plasma IGF-I does not reflect growth rate and fattening in finishing-fed dry dairy cows. M Vestergaard*[1], KF Jorgensen[1], HR Andersen[1], HB Bligaard[2], and K Sejrsen[1], [1]*Danish Institute of Agricultural Sciences, Tjele, Denmark,* [2]*Danish Meat Research Institute, Roskilde, Denmark.*

The purpose was to investigate the growth and fattening potential of various categories of culled dairy cows. A total of 126 Danish Friesian cows (60 first and 66 later parity) were purchased from commercial dairy herds. Cows were culled for various typical reasons at different stages of lactation (22 to 395 days post partum). All cows were non-pregnant and milk yield ranged from 1 to 25 kg/d (14.4±0.6 kg). LW varied from 330 to 770 kg (562±6.4 kg). Cows were allocated to 3 treatment groups based on parity, LW, BCS, and culling reason. Cows were housed in tie-stalls. All cows had free access to barley straw and water during a 7-d drying off period in which cows lost 1.3 kg/d of LW on average. A