

Feedlot Lamb Nutrition

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Due to the relatively small number of sizable lamb feeder operations in MI, practitioners often feel uncomfortable and inexperienced in addressing nutritional management issues involved with lamb feeding operations. However, many feedlot diseases originate from both producer-generated nutritional management decisions and the economic and labor constraints placed on the operation. *The purpose of this article is to address basic lamb feeding management issues and to provide practitioners with an understanding of some of the common feeding practices utilized by Michigan producers.* However, before practitioners are able to provide reasonable nutritional/health services to lamb feeding operations he or she must first acquire a basic understanding of feedlot nutrition. Practitioners must also appreciate the fact that feed costs represent roughly 60-80% of annual production expenses - yet many clients still fail to recognize the economic impact of nutritional management decisions on both profitability and health issues. While practitioners may feel uncomfortable addressing feedlot questions, feeding lambs is really no different than feeding beef cattle or replacement dairy heifers. Basically, all feeds (sheep or otherwise) contain varying amounts of water, energy, protein, minerals & vitamins; while feed requirements are generally related to the size, age and body type of the lambs being fed.

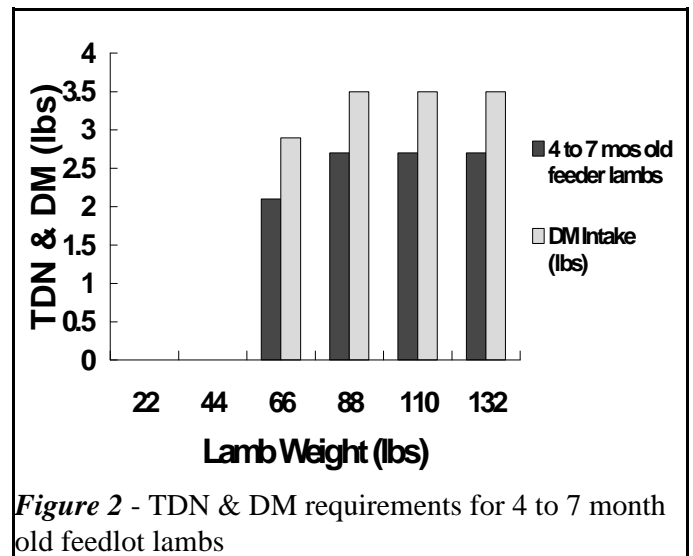
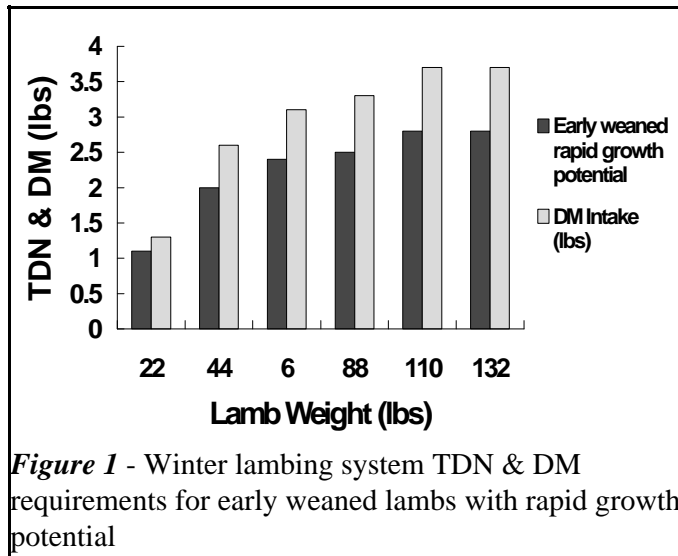
Basic feedlot nutrition : **Water** is one of the cheapest, yet most commonly over-looked feed ingredients in feeder lamb diets. Water should be fed free-choice and in a clean, potable form (not ice and snow). Water quality is especially important in a feedlot setting where lambs rotate back and forth between water supply and self-feeders. If waterers are not cleaned on a daily basis: 1) water quality deteriorates, 2) water intake is reduced and 3) urinary calculi problems often result. Feedlot lambs require about 1.5 - 2 gallons of water/hd/day. Lambs on self-fed alfalfa pellet and shelled corn diets (popular in MI feedlots) commonly exceed these recommendations. Water is also extremely important to incoming lambs. Lambs should be allowed 24 to 48 hrs. to rest and rehydrate on untreated water. Medicating water upon entry further stresses lambs and compounds shipping stresses.

Dry matter: Most MI feedlot diets involve combinations of hay, alfalfa pellets, shelled corn and protein supplement pellets - all at about 90% dry matter. Therefore, high moisture feeds are not commonly an issue with feeder lambs. Lambs can be fed haylage, balage and silage, however, high moisture feeds require special rations. When high moisture feeds are utilized, a significant amount of shelled corn is usually added to the ration to increase the energy density of the diet. Producers who feed balage, haylage and corn silage to lambs often fail to sufficiently supplement the ration with energy dense concentrates (enough corn). Failure to do so is a common cause of poor lamb performance. Energy deficient high moisture rations often yield daily gain figures in the .25 lbs. to .4 lbs./hd./day range instead of the .5 lbs to .8 lbs/hd./day figures expected in most feedlots.

Perhaps more importantly, veterinarians should be aware of “ball park” daily dry matter intake figures for lambs. Expected water and feed intake values are useful for both the regulation of medicated feed or water, and in monitoring response to treatment. Feed consumption is influenced by the type and form of the diet and the weight of the lamb. Generally, younger and lighter lambs will consume more feed (pounds of DM as expressed in % of body weight) than older, heavier lambs.

- Example:
- 1) 70 lb. lambs consume @ 4.3% of their body weight/day (about 3 lbs. feed/hd/day)
 - 2) 90 lb. lambs consume @ 4% of their body weight/day (about 3.6 lbs/hd/day)
 - 3) 140 lb lambs consume @ 3% of their body weight (about 4.2 lbs/hd/day).

If these figures are confusing, simply remember that incoming lambs consume about 4% of their body weight in feed and finish at about the 3% consumption level.



Energy is supplied to the feedlot lamb in three basic forms: 1) *carbohydrates* (sugars, starch & cellulose digestion products) - *the major sources*, 2) *fats*, a very minor source and 3) *excess protein* - an expensive source of energy. *Figures 1 and 2* graphically contrast the energy content of diets required for early weaned rapid growth potential lambs (reared in a winter lambing system) and typical 4 to 7 month-old feeder lambs arriving off of pasture. Young, fast growing lambs require a high grain diet that is about 85% TDN at 22 lbs of body weight. When lambs weigh about 50 lbs. TDN requirements decline to about 76% TDN and remain at that level until lambs are marketed. The high energy requirements of these younger lambs supports growth of a very efficient lamb that is often converting pounds of feed to pounds of gain on a 3 or 4:1 basis. This is the rationale for the all grain/no roughage diets common in winter lambing production systems where lambs are “pushed” to market at an early age (typically gaining about - 1 lb/hd./day and marketed by 120 days of age).

Figure 2 illustrates the relatively constant, 76% TDN requirements for finishing older pasture lambs. The frame growth, amassed during the long pasture season, still requires a high energy diet to deposit enough body fat for lamb to grade properly at slaughter (0.2- 0.3 inch of backfat required for a yield grade 2 or 3 carcass). Grazing-oriented producers, feeding mostly forage diets (100% forage diets seldom exceed 60% TDN), often have difficulty applying adequate fat cover to these older feedlot lambs. Modern large-framed lambs, capable of reaching lean 130 lb.-140 lb. slaughter weights, possess limited backfat reserves when they leave pasture and arrive at the feedlot. Unless fed appropriate amounts of concentrate (for 60 to 90 days), lambs marketed for slaughter directly off of pasture will usually fail to meet federal grading standards. In contrast, smaller-framed lambs often arrive at the feedlot with large fat reserves and finish quickly at 100 lbs.-110 lbs. market weights. While this may appear to be desirable, these smaller framed lambs usually lack the potential pounds of gain needed to financially support feeder operations. However, percent TDN (or any nutritional component) values can be misleading. Lambs eat pounds - not percents. Large-framed feeder lambs often consume enough energy (lbs. of TDN), in a less energy dense diet, to support growth - without excessive fat deposition early in the feeding period. This is the concept behind popular alfalfa pellet/shelled corn diets. Producers reduce alfalfa concentrations and increase shelled corn levels as lambs adjust to the feed. This allows for growth - before lambs become excessively fat. The following example illustrates this point

Example (Figure 3 - shelled corn SC/alfalfa pellet AP ration): Energy levels consumed by 90 lbs. lambs do not exceed NRC recommendations until the ration is comprised of >70% shelled corn (70:30 mix). However, lambs fed

higher concentrate diets (80 SC:20 AP mix) early in the feeding period often become excessively fat - before lean growth has been maximized. While high grain diets (90% concentrate) are the norm for creep-fed lambs produced in winter lambing systems, high concentrate:low roughage feedlot diets, (started early in the feeding period) produce lambs that become extremely fat at lower sale weights (120-125 lbs.). Thus, high concentrate diets early in the feeding period can prevent producers from marketing an additional 15 to 20 pounds of lean gain (assuming the genetics for large framed lambs are present). Low protein levels further compound this scenario. High concentrate diets, fed early in the feeding period, also contribute to grain overload and overeating disease losses and to labor costs related to limit feeding lambs to avoid these health problems.

Feeding alfalfa pellet and shelled corn diets can also become an economic issue if energy levels are not appropriate. Feeder lambs start easily and safely on self-feeders containing high percentage alfalfa pellet diets (85-90 alfalfa pellet:10-15 SC), however, they also consume enormous quantities of feed - especially if fed 100% alfalfa pellet diets. With alfalfa pellet prices at \$180.00/ton it is important to increase concentrate to a reasonable level rather quickly - without creating diets that are too energy dense. Notice (*Figure 4*) the differing feed intakes of lambs on alfalfa pellet/concentrate diets in a recent MSU trial (Shane & Benson). *Figure 4* also illustrates another major difference between young, fast growing lambs and 4 to 7 month-old feeder lambs. Feeder lambs are older, and not as efficient in converting feed to gain. Feed conversion rates of 6 or 7: 1 are normal for these older lambs. This feed:gain ratio increases as forage levels approach 100%. Notice the major gains (both pounds of gain and dollars) achieved by feeding the appropriate ratios of alfalfa pellets and shelled corn. Additionally, many producers fail to recognize the amount of feed (250-350 lbs/hd) required to finish a lamb. The mentality of feeding lambs like “hogs” is a difficult concept for grass-based operators - yet necessary for lambs to grade 2s & 3s and for profitability. Lamb feedlots, like beef feed yards operate on a margin defined by

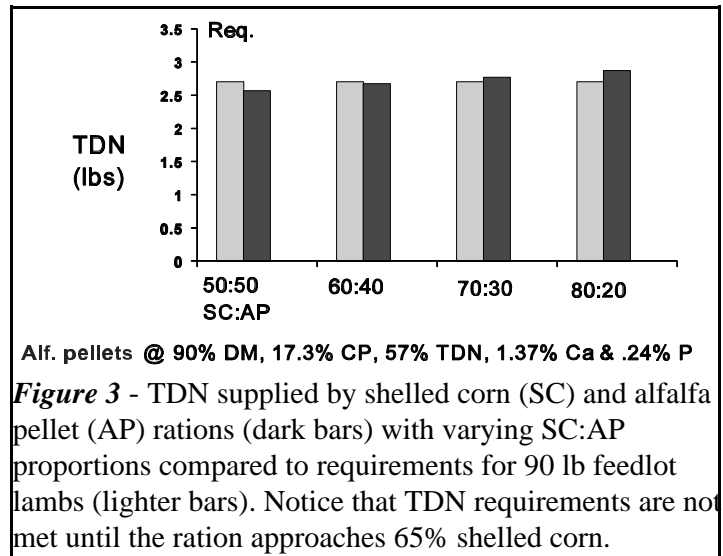


Figure 3 - TDN supplied by shelled corn (SC) and alfalfa pellet (AP) rations (dark bars) with varying SC:AP proportions compared to requirements for 90 lb feedlot lambs (lighter bars). Notice that TDN requirements are not met until the ration approaches 65% shelled corn.

	100% Alf Pellets	50% Alf P 50% Conc	75% Conc 25% Alf P
ADG (lbs/d)	.66	.77	.616
Intake (lbs/d)	5.35	4.79	3.76
F:Gain			
Ratio	8.1:1	6.23:1	6.11:1
\$/ lb			
Gain	\$0.69	\$0.52	\$0.51

Figure 4 - Feed intake, conversion, cost and gain data for various SC:AP rations fed free-choice . (MSU data Shane & Benson)

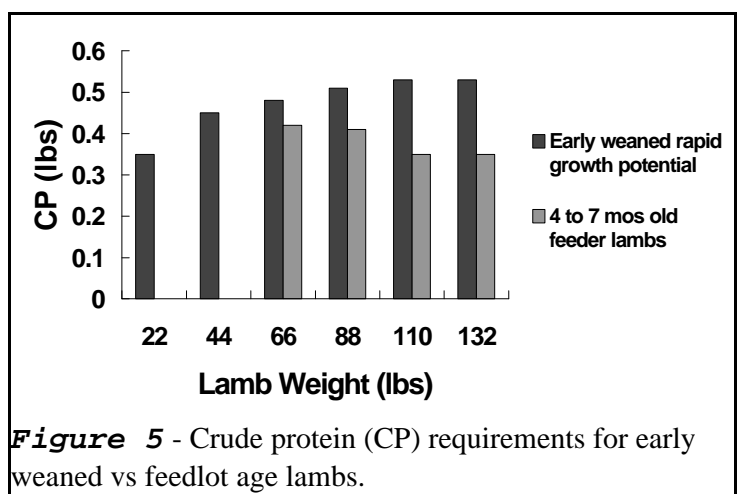


Figure 5 - Crude protein (CP) requirements for early weaned vs feedlot age lambs.

pounds of potential gain. **Ewe flocks that feed their own lambs commonly market lambs 10 to 30 lbs underweight - after incurring the major costs of feeding and lambing the ewe. Finishing lambs to the proper grade (2s & 3s) is an easy way to increase pounds of lamb produced per acre - without increasing ewe numbers.**

Protein: There is a significant difference in the protein requirements of feeder lambs and early-weaned lambs reared in a winter lambing program (see Figure 5). Protein requirements of early-weaned lambs decrease from a high of 26% CP at 22 lbs of body weight, to 17% CP @ 44 lbs, to 15% CP @ 66 lbs, to 14% CP in the finisher ration. Feeder lambs, however, require about 14% CP for incoming 70 lbs. lambs (most feeders enter the feedlot at about 80-90 pounds). Once lambs weigh 90 lbs., CP requirements decline to the 11% CP level required in finisher diets.

Protein is an expensive addition to any lamb ration, thus, excessive feeding of protein should be avoided. Protein supplementation customarily involves feeding alfalfa pellets, soybean oil meal (SBM) or urea (NPN). Feeder lambs (true ruminants), unlike young (<60 lb), early-weaned, creep-fed lambs; are capable of utilizing NPN protein source

Calcium and Phosphorus are extremely important minerals in feeder lamb rations. Notice (Figures 6 & 7) the increased levels of Ca & P required by fast growing, early-weaned lambs reared in winter lambing systems. In contrast, slower growing feeder lambs slowly deposit skeletal structure throughout the grazing season, requiring

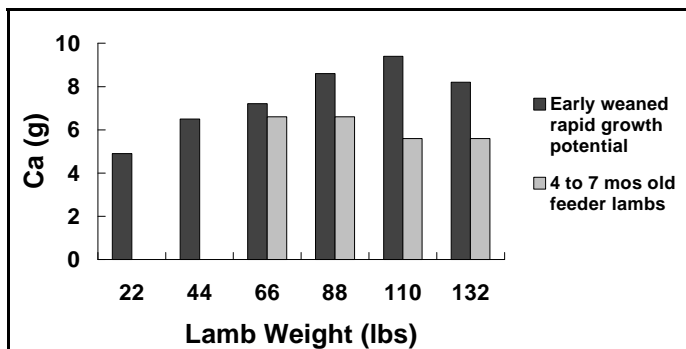


Figure 6 - Calcium requirements for early weaned lambs compared to requirements for older feedlot lambs.

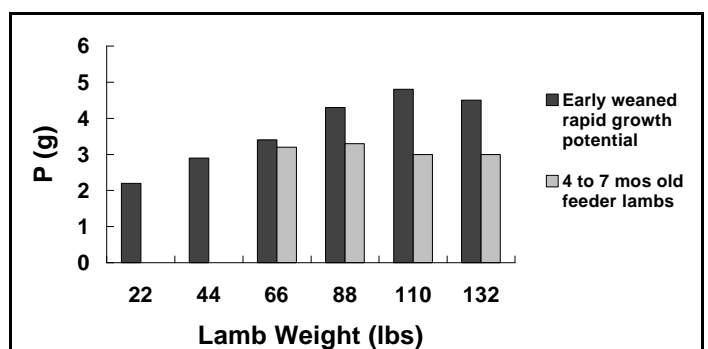


Figure 7 - Phosphorus requirements for early weaned lambs compared to requirements for older feedlot lambs.

relatively less Ca & P in their diet. However, unsupplemented high concentrate feeder lamb rations are often high in P and low in Ca - generating a Ca:P ratio (<1.5Ca:1P) that encourages urinary calculi formation. Calculi are a major source of feedlot losses and are best prevented by balancing rations so that a Ca:P ratio of greater than 1.8Ca: 1P is maintained.

Ca:P ratio: Urinary calculi formation is related to nutritional management. MI lambs are often finished on diets consisting of: 1) 35% protein supplement pellets & shelled corn, 2) alfalfa pellets and shelled corn, 3) hay and shell corn or 4) home formulated grain mixes. As lambs approach slaughter weight, the concentrate portion of the diet increases (high in P but low in Ca) while the forage portion (high in Ca & lower in P) decreases. If unsupplemented with calcium (limestone), these high grain/low roughage diets typically assume a .5 Ca:1 P ratio. Calculi problems often occur late in the feeding period as concentrate:forage ratios increase. The following examples should help to illustrate this point.

1) **If your client feeds a shelled corn and 35% protein supplement pellet ration**, make sure that the supplement pellet contains at least 4% Ca. A protein supplement pellet with a 4% Ca level and mixed as a 85 shelled corn:15 supplement pellet ration still only provides a 1.5 Ca:1 P ratio for a 110 pound lamb (Ex: 2% Ca in a 35%

protein supplement pellet = .78 Ca:1 P ratio & 5% Ca in the pellet = 1.9 Ca:1 P ratio).

Many commercial protein supplement pellets do not contain enough calcium to balance the Ca:P ratio, but instead, contain ammonium chloride to prevent calculi. While ammonium chloride will help to control calculi problems, it should not be fed in place of a Ca:P balanced ration. Producers often require guidance locating a balanced product. The graph in *Figure 8* illustrates the Ca:P ratio in two commercial protein supplement pellets designed for lambs: 1) Brand CM w/ 2.5% Ca and 2) Brand H w/ 6% Calcium. For illustration purposes both products were used in an 85 shelled corn: 15 supplement pellet mixing ratio for 90 lb feeder lambs. Notice the potential for calculi problems in the CM product. It is both deficient in calcium and provides an inadequate 1:1 Ca:P ration. Product H, with 6% calcium provides a better 2:1 Ca:P ratio.

2) **If your client feeds alfalfa pellets and shelled corn, with no other supplementation**, anything greater than a 60 shelled corn:40 alfalfa pellet mix will be imbalanced. Notice the Ca:P ratios in the following examples (see *Figure 9*). **Example:** 1) 50 corn:50 alfalfa pellet mix = 2.4 Ca:1 P ratio, 2) 70 corn:30 alfalfa pellet = 1.4 Ca:1 P ratio and 3) 80 corn:20 alfalfa pellet mix = .9 Ca:1 P ratio. If the 50:50 mix is exceeded then Ca may need to be added - depending upon alfalfa pellet analysis.

3) **If your client feeds hay and shelled corn** a 50:50 mix of alfalfa hay and

shelled corn is the upper limit - just like alfalfa pellets. However, remember that grass hays contain very little calcium compared to alfalfa or clover hays. Calcium will need supplementation if grass hays are fed. **Ex.** (See *Figure 10*): 1) 50 corn:50 good legume hay = 1.7Ca:1P ratio or 50 corn:50 poor grass hay = .9Ca:1 P ratio.

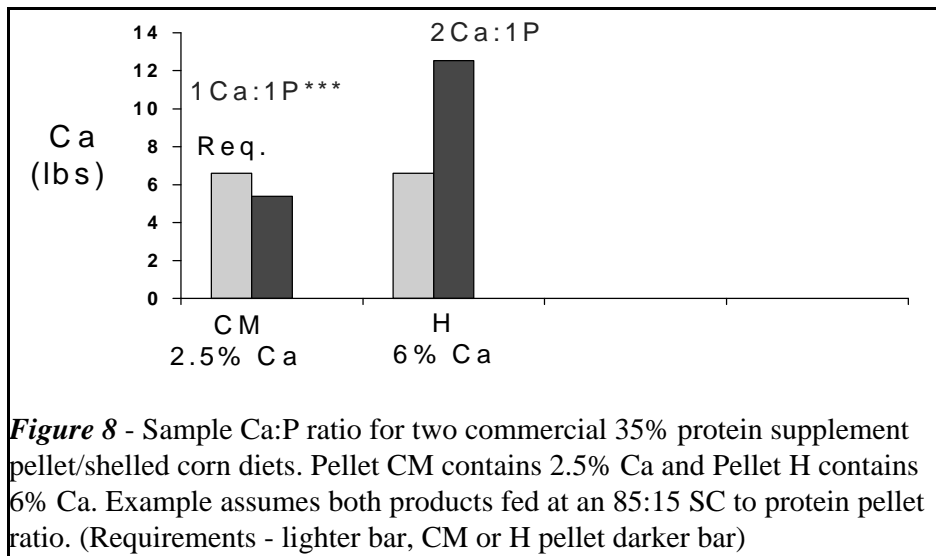
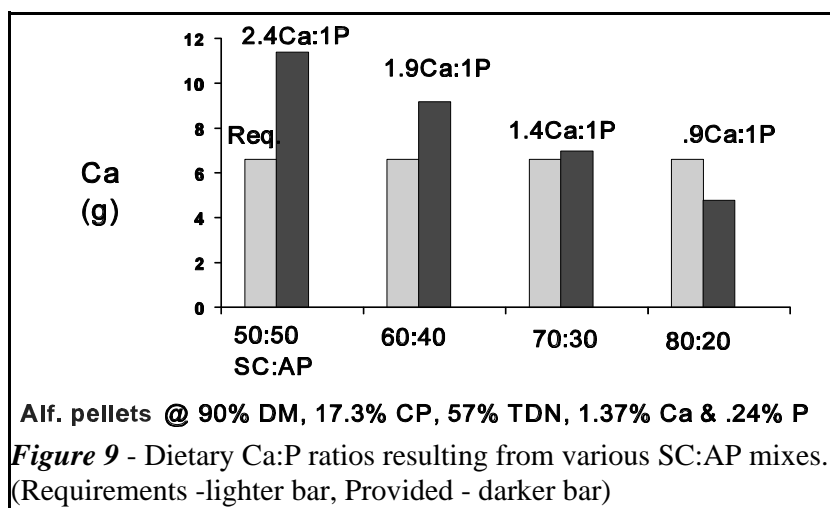
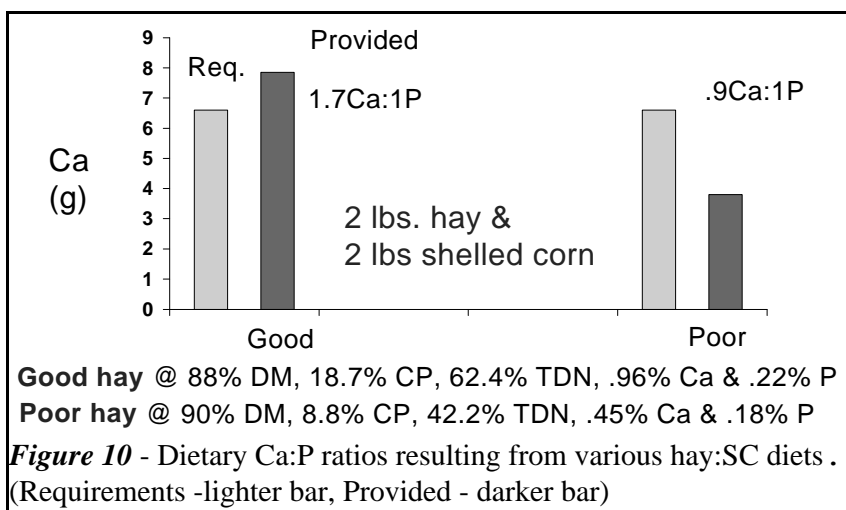


Figure 8 - Sample Ca:P ratio for two commercial 35% protein supplement pellet/shelled corn diets. Pellet CM contains 2.5% Ca and Pellet H contains 6% Ca. Example assumes both products fed at an 85:15 SC to protein pellet ratio. (Requirements - lighter bar, CM or H pellet darker bar)



Alf. pellets @ 90% DM, 17.3% CP, 57% TDN, 1.37% Ca & .24% P
Figure 9 - Dietary Ca:P ratios resulting from various SC:AP mixes. (Requirements -lighter bar, Provided - darker bar)



Good hay @ 88% DM, 18.7% CP, 62.4% TDN, .96% Ca & .22% P
Poor hay @ 90% DM, 8.8% CP, 42.2% TDN, .45% Ca & .18% P
Figure 10 - Dietary Ca:P ratios resulting from various hay:SC diets. (Requirements -lighter bar, Provided - darker bar)

4) **If your client mixes their own grain mix** of corn and soybean meal, limestone will usually need to be added at the rate of 1-2% of the grain mix. However, this will vary with the type of lambs and diet specifications. **Ex.:** For a typical corn and soybean meal ration 1% limestone = 1.3 Ca:1 P ratio, a 1.5% limestone = 1.8 Ca:1 P ratio and 2% limestone = 2.4 Ca:1 P ratio. Limestone is cheap compared to calculi losses that typically occur towards the end of the feeding period.

Other calculi issues

Salt increases: Prevention & treatment of calculi problems should also include adding increased levels of salt to the diet. Customary salt levels of ½-1% of the concentrate can be gradually increased to the 2-3% level. Increased salt encourages water consumption and has a “flushing” affect on calculi. *Ammonium Chloride* at the rate of 8-10 lbs per ton of concentrate can be added to the feed to prevent calculi. Additions of ammonium chloride to the feed and balancing Ca:P ratios are the two primary methods of preventing calculi in feedlot lambs. However, protein supplement pellets (formulated for an 85 corn:15 pellet self-fed mix) may contain higher levels of ammonium chloride (since the pellet is to be diluted) than the 8-10 lbs/ton of ammonium chloride final feed mix level listed above. Ammonium chloride, when concentrated in the supplement pellet, may adversely affect consumption (sorting due to reduced palatability). Because of palatability issues, some feed companies incorporate ammonium chloride in their concentrate mixes, but do not add ammonium chloride to their supplement pellets.

Clean water with enough space for lambs to drink is also important in preventing calculi. Automatic waterers and tanks become extremely dirty as lambs go from feeder to waterer. Clean daily, assure proper function, and make sure there is enough tank space so that lambs don't have to wait in line to drink.

Minerals and vitamins

Minerals and vitamins are also an important consideration in a lamb's diet. All feedstuffs contain various amounts of vitamins and minerals that can be utilized by the lamb. However, for simplicity of discussion, those minerals of concern in the feeder lamb's diet include two categories of minerals 1) Macro minerals: Ca, P, Na & Cl (salt), and Mg and 2) Micro minerals (trace minerals): Cu, Fe, I, Mn, Se & Zn. Although other minerals are often listed in these categories, most are of limited concern in normal production systems. Ca and P in feeder lamb diets generally pertain to calculi problems and have been discussed in detail. Magnesium is usually not a problem in MI feeder type lambs.

Salt & trace minerals are usually treated as a feeding group. Most trace minerals are delivered to rations in the form of trace mineral salt (T.S.) additions to the grain mix, supplement pellet, or in a free-choice form. Salt is required in feeder lamb diets and usually is included at about 0.5% to 1% of the grain mix. Additions at this level usually include trace mineralized salt. If salt is added above the 0.5% to 1% level (to increase water consumption to prevent calculi) it is usually added in the form of plain white salt (Nace). Producers who free-choice feed T.S. are often unaware that trace mineral salt contains no added Ca or P - only salt and the trace elements included at rates designed for various livestock species. Regular feed mill trace mineral salt also contains high levels of copper and no selenium. Producers should use specially designed selenite sheep trace mineral salt in their feeding program. Specially formulated selenite sheep T.S. salt should have no added copper, but does contain added selenium in the form of sodium selenite. Selenite sheep T.S. should contain selenium at the 90 p.p.m. level, however, this varies among commercial products. Feeder lambs should receive .7 mg of selenium/hd/day in the diet. This is usually achieved by free choice feeding of 90 p.p.m. selenite sheep T.S. or the addition of SE 90 (SE 90 = 90.8 mg selenium/lb of product which is the same conc. as SE 200 which is 200 p.p.m. selenium) to the ration (based on individual lamb consumption).

Copper: Due to the increased sensitivity of sheep to copper toxicity, copper should be avoided in all MI sheep feeds. Lambs require about 8 p.p.m. Cu in their diet. Most MI feeds fall into this range - without outside additions of copper

Feeds containing over 15 to 20 p.p.m. Cu can become toxic to sheep - especially if dietary Mo levels are less than 1 p.p.m. Many commercial products also have Mo added to the diet to protect against the risk of copper toxicity from inadvertent mixing accidents. Mo content of > 1 p.p.m. helps protect against copper absorption and toxicity.

Vitamins are usually divided into the categories of 1) fat soluble vitamins - A, D, E & K or 2) water soluble vitamins - C, B vitamins and numerous others. Under practical feeding situations only vitamin E (and occasionally A) are of interest to the feedlot lamb. Vitamin-E and selenium are utilized by the body in similar functions and may be deficient in the diet. In locally formulated grain mixes, vitamin-E is usually added in the form of a vitamin-E concentrate product containing 20,000 IS of E/lb of product @ a cost of about \$1.00/lb. In any lamb ration, vitamin-E levels should include about 25 to 50 IS of E/hd/day. Vitamin-E is commonly added to commercial feeds, however, commercial products often contain minimal amounts of vitamin-E. Commercial 35%CP supplement pellets should contain at least 100 IS of vitamin-E/lb of product.

Vitamin-A is usually not deficient in most lamb diets, however, it is cheap and usually added to commercial feeds. Vitamin-A supplementation is also thought to contribute to urinary calculi prevention. Vitamin-A requirements for feeder lambs are listed at about 2,000 IS of vitamin-A/hd/day. Serum and liver levels of vitamin-A are usually elevated in pastured lambs and vitamin-A is stored in the liver for up to 6 months. Vitamin-A levels are also high in most of the feeds commonly fed to lambs, therefore, vitamin-A deficiencies should not be a problem. If locally added to the diet, vitamin-A is usually purchased as a vitamin ADS premix, which may contain varying levels of vitamins (varies with manufacturer). Vitamin ADS premix may contain 10Xs variations in vitamin-A levels.

Feeding programs for feedlot lambs

Most lamb feeding systems fall under the following three headings: 1) hay and corn (grain mix) diets (limit or self fed), 2) shelled corn and protein supplement pellet diets (self-fed), or 3) alfalfa pellet and shelled corn diets (self-fed). Each has its own advantages and disadvantages.

Hay & shelled corn diets are commonly fed by MI producers who finish their own lambs, or small groups of purchased feeders. While quite labor intensive, this type of diet is popular because it utilizes home grown and home stored products. However, the labor involved with hand-feeding lambs usually limits the scale of the operation to several hundred lambs. Lambs are usually self-fed good quality hay (>16% CP) and hand-fed limited amounts of shelled corn (up to 2 to 3 lbs/hd/day) until market weights are reached. *Starting lambs on grain is extremely important*, as digestive upsets are common. Also, each group of lambs is different in their adjustment to grain diets. Western lambs may be unfamiliar with grain. *Clostridium perfringens type-D* vaccination should also be routine.

To adjust lambs to feed and prevent losses from grain overload and overeating disease, lambs are usually started on medium quality hay for the first 2-3 days. Then grain is slowly added to the ration (top-dressed over the hay) at a starting rate of about 1/4 lb/hd/day, while hay quality is increased. Top-dressing the hay with the grain prevents overconsumption of grain by a limited number of individuals. Grain is *slowly* increased (1/4 - 1/2 lb/hd increase every 4-5 days) until lambs are on about 2 lbs of grain 4 weeks after arrival. If any scouring or depression is noted, the quantity of grain is immediately reduced until lambs return to normal. *Hay and shelled corn rations can be reasonably well balanced if good quality hay (or balage) is fed and if the shelled corn is limit-fed to encourage adequate hay consumption.* In this system, daily gains of about .5 lbs/day can be expected. Gain figures are useful for estimating sale dates and predicting returns. Because no grain mix is fed in this system, some producers also choose to use their free-choice salt mix to regulate intake of limestone and decoquinate. On a daily basis, lambs will consume 1/2 ounce salt/hd (1/2 ounce=.03 lbs.). *In hay and shelled corn feeding systems, self feeding grain is not recommended - unless supplemented with balanced protein pellets.* When lambs are given free-choice access to both shelled corn and hay, hay consumption decreases to a point where imbalances (Ca, P & protein) may occur.

Shelled corn and protein supplement pellet diets are also popular with producers who desire the labor savings of finishing lambs on self-feeders. In this system, lambs are started on feed by hand feeding the corn/supplement mixture as lambs are gradually adjusted to full feed. Most commercial supplement pellets comprise only 10% to 15% of the ration, thus allowing 85% to 90% of the feed to be shelled corn that is stored and/or produced on the farm. This greatly reduces trucking costs. The starting regime is similar to that described in the hay and shelled corn section above. However, once lambs are adjusted to a full feed of shelled corn and pellets, they are placed on self-feeders containing the same mixture. Hay is limited to about 1 lb of hay/lamb/week. Wool picking and wood consumption are often associated with this type of low roughage diet, so producers should provide poor quality hay or straw as a roughage source. When this feeding strategy utilizes properly balanced and medicated commercial supplement pellets it is a reasonably low cost method of feeding lambs and is capable of producing 0.7 lbs./hd/day average daily gains. However, the labor involved with starting lambs on feed often limits the numbers of lambs that can be fed. Also, lambs finish quickly (high energy diet) - limiting the potential for increased pounds of lean gain above the purchase weight. To avoid the labor issue, some feeders choose to start lambs on self-feeders containing a mixture of 90% alfalfa pellets and 10% shelled corn and supplement pellets. The alfalfa pellets are gradually reduced as the corn and supplement pellet mixture increases, bringing the lambs onto feed without the labor involved with hand feeding grain.

Self-fed alfalfa pellet and shelled corn diets are currently the most popular method of feeding large numbers of lambs. Lambs are started on self-feeders containing 85-90% Alfalfa pellets:10-15%shelled corn mixtures. Alfalfa pellets are then reduced at the rate of about 10 -15% weekly, until a 40 alfalfa pellet:60 shelled corn mix is achieved. Lambs start easily and safely on feed and the alfalfa pellets force new arrivals to consume large amounts of water - needed for rehydration after a long semi ride. Furthermore, the entire setup can be automated with a flex-auger system, efficiently feeding thousands of lambs. Custom supplement pellets (5%-10% of the ration) can also be formulated with medications, selenium, salt, etc. Gains will usually range from 0.6 - 0.7 lbs./hd/day if shelled corn comprises 50% to 60% of the ration. Calcium will usually need to be added to the ration if corn exceeds the 60% level. This system allows for lean growth, preventing lambs from becoming overly fat during the early feeding period. Thus, lambs tend to market at higher weights with leaner carcasses - further increasing the margin between buy and sell weights. The ration can also be used as a marketing tool to control finish and "hold" lambs, if fluctuations in the market dictate. The major disadvantage is cost. Practitioners will probably see more of this type of lamb feeding in our MI area.

Hopefully this article has provided you with some insight into basic lamb feeding practices and some of the nutritionally-related health issues facing your clients.