

Notes for Feeding Show Lambs

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Successfully showing a show lamb requires pre-planning. For example, do you know what the market weight of your lamb should be at the fair? How much does it need to weigh 110 days before the show? To achieve the proper gain and not have the lamb be underfinished or more commonly, overfinished, what should the average daily gain be? How will you monitor weight of the lamb if you don't have a scale? Can you estimate the weight of the lamb using a tape measure to obtain some dimensions? How will nutritional requirements change as the lamb ages and grows? The younger the lamb is, the more lean muscle is deposited in the daily gain. Older animals require less protein and more energy to complete the finishing process, necessitating more higher energy grain products in the diet. Based upon this, what level of protein would you anticipate are needed for a 60 lb. lamb, 13%, 15%, or 12% (15%)? What about a 110 lb. lamb (12%)?

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Growing lambs will eat about 4% of their body weight each day if given a choice. As the lamb ages and slows down lean muscle deposition, appetite will decline. For a 110 lb. lamb, free choice feed consumption will equal about 3% of body weight per day. So, to obtain daily feed intake for a lamb you wish to grow at its maximum rate, multiply its body weight by .04. How many lbs. of the total ration for an 80 lb. lamb will be grain if you have placed it on a 50% grain grower ration (1.6 lbs.)?

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To avoid legume bloat, adjust your lamb slowly to an alfalfa diet when you receive it according to the timetable shown. Sheep are a type of ruminant animal which are able to digest grass in the diet by the presence of bacteria in the rumen. These bacteria act like little "Pac men" to attack chemical bonds in the fiber. Other bacteria are present in the rumen that love starch in higher energy rations. However, the starch loving bacteria are present in lower amounts for a grazing lamb or a lamb that is eating hay, but will increase if given adequate time to adjust. Lambs need to be slowly adjusted to a finishing ration, or one that contains grain. If moved too rapidly onto a grain diet, the rumen will suffer distress and be overwhelmed by bacteria populations that are changing from grass and hay loving bacteria to a mixture of starch or grain loving bacteria and grass loving bacteria. In this slide, some recommendations are made for how to adjust to a diet containing grain in the step-up rations shown. Since it is usually more of a problem to have lambs gaining too much weight before the fair instead of not enough weight, lambs are usually fed from 40 to 50% of the ration as grain. Due to the increased chance for rapid death from grain bloat or "overeating disease" (enterotoxemia), the maximum grain that should be included in a show lamb ration is 70%. You would only feed this much grain if the lamb was underweight and needed extra energy in the diet for increased daily gain. Indications that a lamb may be suffering rumen distress or acidosis are going off feed and loose stools. Should this happen, the lamb will need to be doctored and put back on a roughage diet and then slowly be brought back up to diet containing some grain when it is normal again.

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To explain further some nutritional principles you will need to know, we need to define total digestible nutrients. By conducting feeding trials with different animals, we have been able to classify feeds for nutritional quality. Higher quality feeds will have more of the amount fed be digested by the lamb and applied to daily gain and maintenance. In the example shown, 4 lbs. of the hay fed passed through the cow as waste products in manure (and urine). Therefore, we know that 6 lbs. of the hay was digestible, so the feed was 60% digestible. This is a good quality hay. Grain products contain more energy. Corn is around 91% digestible, barley about 84%, and oats 76% digestible. So, to slow down average daily gain in a grain diet, more oats instead of corn could be used in the ration.

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The table shown here and in your handouts shows the crude protein and energy or TDN content of various feed mixtures commonly used in Idaho. What is the TDN for a feed ration containing 40% hay in the form of alfalfa hay and 60% grain in the form of corn (71.2% TDN)? Since most of you will be feeding some type of commercial mixed grain, there is also a table that shows the estimated TDN for the grain mix using the feed tag. For example if the feed had 6% fiber, 4% ash, 2% fat, and 13% protein, estimated TDN % would be 81.9%. You can also ask for a more detailed feed analysis for the grain mix you purchase from your feed supplier. This will provide greater information than is contained on the feed analysis tag.

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The feed requirements for lambs are shown in this table. Estimated daily gain, daily feed amounts, and nutrient percentages required in the feed are shown. A 88 lb. lamb gaining 0.60 lbs. per day would require how many pounds of feed per day (3.5)? What would the protein content needed in the feed be (11.7%)? Notice that if you have a lamb with rapid gain in the same weight class and a younger age, the requirements change. What would the crude protein requirement be for the same 88 lb. lamb at a younger age be if it had the genetics for rapid growth (15.5%)? The guidelines above are suggestions based on averages. You will need to monitor the average daily gain of your lamb and its overall body condition and fat cover and adjust the amounts of feed accordingly.

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This table will give you additional information on minimum amounts of feed required to achieve weight gains desired. Again, you will need to adjust the feed weights above to fit your lamb. It is important to keep the lamb gaining weight prior to the sale, even if it is a small amount. Otherwise, you may have a lamb at the sale that is "stale" and will not show well. Obviously, you do not want to get him overfinished either. An important part of showing lambs is to get the right size lamb when you purchase it. This will save you from considerable difficulty in meeting the correct market weight. For heavy muscled black face lambs, market weight is usually around 125 lbs. At a minimum, the lamb will probably gain at least .50 to .75 lbs./d. If you bought a lamb that weighed 80 lbs. at 110 days before the show, the lamb would need to gain .40 lbs./d $\{(125 - 80) \div 110 = .409 \text{ lbs./d}\}$. You will need to combine some exercise with the lamb's feeding program in order to keep it from getting overfinished. You could also lower the energy content of the feed by using lower energy grains in the ration, like oats instead of a sweet mix grain ration containing corn. Another thing I like to do the last 30 days before the show is to switch from alfalfa hay to alfalfa pellets for the roughage part of the diet. I think this helps tighten up the lambs belly by having less bulk in the diet. Let's look at an example daily feeding ration for a lamb

weighing 110 lbs. gaining 0.40 lbs. per day. For daily maintenance, the lamb would require 0.91 lbs/d of a 70% TDN ration. Adjusting for the moisture in the feed (usually about 10%) would increase this portion of the daily feed to 1.0 lbs./d. To accommodate the additional feed for gain would require an additional 1.79 lbs./d of feed on a dry matter basis, or 1.99 lbs. as fed ($1.79 \div .90 = 1.988$). So, we would estimate that we would need to feed this lamb about 3 lbs/d of feed to meet his requirements for both maintenance and growth.

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This leads you through the calculations for the preceding example. You can use this procedure for your own lamb.

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In addition to the science of feeding using feed tables from scientific experiments, there is also an “art” to producing show lambs. Some places in which we can monitor finish are shown by the arrows in the picture shown. Once of the first places fat is deposited is immediately behind the shoulder. Fat continues to accumulate in the flank, and then in the twist (between the hind legs), and in the brisket. When fat has accumulated in the twist and brisket, the lamb is already overfinished. We would want to have minimal fat in the shoulder and flank. We also want to have minimal fat cover over the ribs.

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Two extremes are shown for fat accumulation in the twist. The lamb on the left is heavily muscled with very little fat in this area. The lamb on the right is beginning to deposit fat in this region.

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The carcass for the lamb on the left in the previous slide is shown above.

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Here is a rear view of the same lamb.

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A closeup view of the loin is shown for the same lamb. Notice the muscling in the loin eye and the fat cover over the loin. Fat deposition can be unevenly distributed over the carcass. Notice the fat cover over the loin eye on the left compared to the right.

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A measure of leanness in the lamb carcass is determined by using yield grades. The leaner the lamb, the lower the yield grade number. We are striving to obtain a yield grade of 1 for show lambs, which only accommodates a maximum of 0.15 inches backfat over the 12th rib.

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How much backfat is 0.15 inches? Not very much! If you palpate the backfat for you lamb, then you would want the amount under your finger (excluding the pelt) to be about the width of a freshly sharpened pencil ½ way up the tapered edge.

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Since many of you do not have access to a scale, here is a formula that will assist you in estimating weight. Measure the length of the lamb from the point of the shoulder to the point of the hip with a sewing tape. Next measure the distance of the heart girth completely around the body immediately behind the elbow. Use these measurements in the formula shown. You should be fairly close to the actual weight of the lamb. Be sure and depress the sewing tape with some pressure if the lamb has a good growth of wool.

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As you weigh your lamb, keep careful sight on your final market weight and adjust feed for the gain desired. In this example, a 50% commercial feed ration was similar to barley for the TDN %, or about 84% TDN. A 50/50 mix of this feed and alfalfa hay was 71% TDN. For homework, work with your leader to estimate how much feed you need to give this lamb each day. The TDN value of the feed being fed and the weight of lamb being fed will need to be adjusted since there are not exact tabular values on the "Minimal Feed Amounts Required for Show Lambs" table. You should come up with a total feed amount of around 3.8 lbs. as fed.

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Let's look at three lambs both live and after they are processed. Looking at this lamb, he is long bodied and heavily muscled. You can see some evidence of fat accumulation in the shoulder region, though the flank and twist appear to be fairly clean

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Lamb # 2 is fairly lean as evidenced by a lack of filling behind the shoulder and in the flank. However, this lamb does not have a big leg. It appears to be leaner over the top of the rump than was the first lamb, but the first lamb will probably yield more total lbs. of desired retail product.

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Lamb # 3 is fairly heavily muscled but is rather dumpy. Looking over the top there appears to be a fair bit of finish on the lamb. There also appears to be more fat deposition in the brisket than is desirable.

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Here are the same lambs after being processed. The first animal is on the left and the short dumpy lamb is on the right. The first lamb actually appears to have less fat cover over the loin eye than did the second lamb. It also has a thicker, more full leg of lamb than lamb # 2. However, the # 2 lamb has an acceptable carcass with a good ribeye. The # 3 lamb is obviously overfinished and has a much smaller loineye than the first two animals. Although the carcass would have acceptable eating quality for taste, there would be smaller portions and more table waste.

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The timeline shown here will provide you some basic guidelines for your show lamb if you show in a fall show.

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