MARKET ANIMAL WEIGHT PROJECTION WORKSHEET

A Date	B Weight	C Pounds Gained	D Days from last weight	E ADG	F Avg. lbs. fed per day	G Feed Conversion	H Desired Wt At Fair	I Lbs. to Finish	J Days to Fair	K ADG needed	L Lbs. to Feed Per Day
		Wt. now - Previous wt.		C ÷ D		F ÷ E		C ÷ H		I ÷ J	Feed conv factor * K

Pigs 3-3.5#
Lamb 6-7#

Show Chow™ Purina Mills, LLC

HONOR SHOW FEEDS

Livestock seminar notes for all species

Date:

- Self explanatory

Weight:

- How much does your animal weigh??
- Have an accurate scale - this is obviously the best way!
    - Every other week if possible or frequent enough to be able to track records and maintain efficiency.
    - Month before fair, weigh your animals once a week
- Taking regular weights on animals is a great way to determine if your animals are receiving the proper amount of nutrition and is healthy.

- If you don't have a scale, all is not lost!
    - You can tape your animals and estimate their weights fairly accurately.
    - Lambs: heartgirth (circumference of the chest, just behind the front legs) squared multiplied by length (from the point of the shoulder to the hip bone/base of tail) and divide the sum by 300. If resulting figure is <100 pounds, add 7 pounds.
    - Hogs: same except divide by 400. Length is head down, between ears, along top of back to the base of the tail. Tape while they are eating!!
    - Cattle: ??
- Try to alternate tape with a regular scale and get a good measure of what your tape is telling you.

Pounds Gained:

- From the last time you weighed.

Days from last weight:

- Subtract weight

ADG:

- This is average daily gain.
- It is used to determine how much the animal is gaining per day.
- Important in helping get the animal to fair at the desired weight!
- This is one of the single most important production figures in the industry. It tells us how productive (not necessarily how efficient) the animal is. Now, because as a producer, you need to be concerned with how much it costs to put those pounds on, we need to also look at efficiency. We will discuss this in a little bit.

- It is computed by taking the total pounds gained from the last weight (column B) and dividing it by the number of days from the last weight (column C).
- Pigs: 1.5 to 2 pounds per day - Lighter pigs need higher ADG, heavier pigs need lower ADG
- Lambs: .75 - 1 pound per day
- Cattle: 2.5 pounds per day through 750#, 3 - 4.5 pounds per day through finishing.

Average Pounds Fed Per Day:

- Enter here the amount of feed fed per day which means you need to weigh your feed!! Know how much your feed container holds in POUNDS., NOT BULK!! (3 pounds may not mean 3 pounds!!)
- How much do you feed?
    - It depends on:
        - Genetic potential
        - ADG needed to reach that genetic potential
        - and the feed conversion rate
    - We'll discuss these as we go, but as a general rule of thumb:
        - Pigs/Cattle: 2 to 3% of body weight
        - Lambs: Can go to 4.5% of body weight
- Always write in your record book how much you feed per day and when you make changes.
- You will probably have to feed all your animals individually and not together because you need to target each animals individual genetic potential.
    - Must always feed a little hay in addition to your ruminants!!!! WHY???

Rumen Function:

- When you feed a ruminant, you are basically feeding bacteria in the rumen that break down food into protein, fats, and carbohydrates. After these nutrients are broken down, they are absorbed into the system. Eventually, the bacteria also die and are absorbed.
- Now, in order for this to occur, the rumen pH needs to remain fairly stable so the RIGHT KIND OF BUGS CAN EXIST!
    - Because the rumen is naturally acidic due to the microbial process of manufacturing proprionic, butyric, and acetic acids, the rumen needs natural, and sometimes added, BUFFERS (compounds that are more alkaline than acidic)
    - Now, the rumen is our big mixing vat of food, water, bugs and all other kinds of stuff, right? Well, out of all that liquid in the rumen, 70% is saliva, and saliva is slightly alkaline (7.4). So saliva acts as a buffer.
    - However, if you feed mostly concentrates (grains and supplements), you are not getting the animal to salivate. This is important because scientific research has shown that cellulose and lignin (roughage) activate the

salivary glands of ruminants (also horses). This in turn raises the rumen pH and keeps the good bugs alive and your animal from getting acidosis, enterotoxemia, or polioencephalomalcia.

SO! Feed your ruminants some hay EVERYDAY!!

Feedlots generally do not feed hay but they are adding lasalocid, chlorotetracycline, oxytetracycline and/or rumensin to the diets. These are approved antibiotics/buffers.

Feed Conversion:

- Tells us how much feed it is taking to put on one pound of gain. This is another important industry figure because it indicates efficiency of our animals in their ability to put on weight.
- Also known as feed efficiency.
- As a rule of thumb:
  - Lambs: 7 pounds of feed per pound of gain
  - Pigs: 3 to 3.5 pounds of feed per pound of gain
  - Cattle: 7 to 10 pounds of feed per pound of gain. (More efficient when lighter in weight because it takes more to maintain weight as they get heavier)
- Genetically superior animals will take less feed to gain, so you need to monitor their weight gain closely!
- To figure, take the average amount of feed fed per day (column E) divided by the average daily gain (column D). This figure then becomes very important in determining if and how much you need to adjust your feed each period to bring your animals in on target.
- Let's talk about feed:
  - Now, on the economics side of things, it is more profitable to feed a higher quality, more nutrient dense feed.
  - Let's say your lamb was converting at 9 to 1 but needed to an ADG of .75. You would need to feed your lamb 6.75 pounds of feed per day. Can't do it!! SO, feeding a concentrated feed, such as Champion Drive Topdress or PowerSurge, you could achieve the necessary ADG.
  - And talking about quality, don't be swayed by price per bag.
  - Look at the nutrient density, quality of ingredients (premium dog food example), and vitamin/mineral composition and figure your price per head per day, NOT your price per bag!!
  - A higher quality product will be less expensive in the long run because it takes less feed to get where you are going.
    - Example:
      - PIG: Start feeding at 75#, feed to 225#
      - Lower quality feed will convert at 4:1
        - 600# of feed / 50 pounds per bag = 12 bags
        - 12 bags at $12.00 = $144.00

- At a 2.6 or 3:1 conversion
- 390# of feed / 50 pounds per bag = 7.8 bags
- 7.8 bags @ $14.00 = $109.20

This example saves you 24% on your feed bill per animal.

Desired Weight At Fair:

- Who knows this?? And what are they??
- The desired weight at fair is essentially the weight where you think your animal will achieve its maximum genetic potential. This depends on frame size, muscle mass, and overall balance (height/length ratio). You can look at the parents of your animals to get a good idea of what yours will turn out like!
- When you hear about the "magic" weight zone where Grand and Reserve animals are chosen from, that is the weight where those animals have achieved their genetic potential. But, if your animal is destined to come in at a different weight, don't try to change that!!
- This brings us to the topic of jockeying your animals' weight by shrinking and filling. We all know this is done and done with some success by "professionals". However it is important to remember that in 4-H and FFA programs, some principles and ethics are much more important than winning. Namely, supplying auction supporters with a good, consumable product. When you shrink and fill the animal, it undergoes additional stress. Now your animal already goes through enough stress in the natural fair/slaughter cycle. To compound that with restricted/bloated diets just exacerbates the problem. *Your animals do better and the consumer is happier when you do not disrupt the animal's digestive process. That's why this chart can minimize big changes you would have to make by managing your feeding program!!*

Pounds to Finish:

- This comes from subtracting the current weight (column B) from the desired weight at fair (column H). These are how many pounds your animal needs to gain!

Days to Fair:

- Self-explanatory

Average Daily Gain Needed:

- Very important!!
- Divide the pounds needed to finish (column H) by the number of days until fair (Column I).
- This number helps you figure whether or not your animal is going to make it to that ending weight or "zone" on time and whether or not it will reach its genetic potential in the allotted time.
- This will actually help you customize and individualize your feeding program.

- Remember!! You must manage your feeding program the whole way through because if you get to a point where your animal needs to gain/lose more pounds per day than is physically possible, you are in trouble!! This is when you can run into trouble with restricting or overfeeding your animal and the nutrients they need/don't need are affected.

Pounds to Feed Per Day:

- This is the culmination of the table!! This figure represents how much feed to give the animal per day, given its current feed conversion rate and average daily gain, so the animal can achieve its genetic potential. And this is what feeding commercial livestock is all about right?? This is probably the most important info you need right now.
- The type of feed is important, keep in mind economics, quality, nutrient density and feed conversions, but the most important is how you manage it. Commercial growers have to manage their animals, why are you any different??
- This table will help you:
    - Set goals for your project (desired weight at fair)
    - Identify strategies for meeting those goals (ADG needed to finish and pounds to feed to finish)
    - Tools to achieve your goals (the information and education derived from and in the table itself)!!