Sourcing Feed For Your Dairy Animals

Find a feed option that works for your homestead





What We Will Cover In This Masterclass

✓ Links to troubleshooting guides that will help you understand species specific nutritional requirements.

- ✓ Small scale hay making
- ✓ Large scale hay making
- Storing feed
- Sourcing and buying hay
- Sourcing and buying grain, supplements and minerals





Introduction

Figuring out what you need to feed your dairy animal can be one of the most confusing steps of starting your Milkmaid journey. Different animals have different feed requirements, and feed is very important when it comes to all animals, but especially dairy animals. Dairy animals, whether goat or cow, are very sensitive. They tend to have very specific requirements, and not meeting these requirements can cause a lot of grief.

To start this masterclass we are going to look at a few troubleshooting guides by Milkmaids that are very knowledgable in their fields of goat and cow nutrition. Choose the module that suits your needs, and take a few minutes to go through what the general requirements for your species of animal are. Once you have done this, the remainder of this masterclass will take you through making your own, sourcing, assessing, and even storing the feed that you need for your animals. I have recruited the help of my husband, Zach, for huge portions of this masterclass. Zach is very knowledgable about making, sourcing and assessing feed. He has experience owning and operating a custom haying business, as well as years and years of experience making and assessing quality of his own cows feed. Not all feed is equal and this masterclass will show you how to make sure you are feeding your animals the best quality feed, as well as getting the best bang for your buck!

Choosing An Option That Is Right For You

Determining how you are going to acquire feed for your dairy animals will be different for every homestead. Whether you are looking at buying all of your feed off farm, making some or all of your feed, or doing a hay share with a neighbour who has equipment, this next section is going to take you through some of the things you need to know whatever your homestead needs are.

- ✓ Small Scale Hay Making
- ✓ Large Scale Hay Making
- ✓ Setting Up A Hay Share

✓Buying Hay



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Small Scale Haymaking At The Kneaded Homestead

By ashley Titman

My name is Ashley! We are homesteaders in Mid West Michigan where we have 15 acres of land on which we raise dairy and beef cattle, meat and layer chickens, gardens and children, and yes we even put up our own hay with minimal equipment. We strive to have a low inputs homestead and the key to that is being able to produce some of our own feed. The following essay is how we put up hay on our homestead with as little inputs as we can manage. I write this in hopes to inspire others to use what they have to the best of their abilities and to think outside of the box. What we do is not the way everyone else will be able to do it, but is a launching pad for others to see what possibilities may lie in their homestead.

Why We Choose A Different Method for Haymaking

Quite simply we chose to put up hay with minimal equipment because we're trying to utilize what God has blessed us with to our best ability. We wanted to put up hay on our own so as not to have to pay to hire someone and so that we could learn a new skill! Our hay field is only a 3 acre field which is extremely manageable on our own but not necessarily big enough to justify the cost of hiring someone to hay it for us. Plus finding someone right now with time and willingness to hay just a 3 acre field is challenging. It also creates one less input we'd be putting into the farm by hiring another thing out. So we do it ourselves.

Haymaking Simplified

Now, there is an art and science to haymaking, I recognize this. But for all that I don't know about the art and science, I do know that hay boils down to thisgrowing, cutting, drying, collecting, and storing. These are the main 5 things to consider when considering growing hay. Lets take a look at them.

Growing

Growing hay can look very different on different farms. Some will grow just alfalfa, some will grow just grass, some will have fancy blends seeded from the local farmers co-op, and some, like us, will use whatever naturally grows on their land which happens to be a blend of grasses, legumes, and weeds. Hay is just like anything else and requires some fertility to be added to the ground at least once a year. This can be manure, cover crops, or various supplements like lime, potash etc. Other than managing the fertilization we spend a lot of time praying for rain! And Lord willing the hay grows until its ready to be cut.

Cutting

Cutting hay on a small scale can be super simple. The main point of consideration with cutting hay is that you want it to be cut at the base and laid down. You don't want a brush hog or rotary cutter that has blades that spin because what you end up with is mulch. So brush hog and lawn mowers aren't great for cutting hay. Instead a hand sickle or something like a sickle bar mower are good choices. Hand sickles do take some time to learn to get the hang of but for small acreage could be the right choice. Sickle bar mowers can be PTO driven or ground driven. Ground driven offers a lot more flexibility because it can be pulled by anything. You could pull a ground driven sickle bar mower with a horse, a farm truck, or a tractor.

Drying

Typically farms use a machine called a Tedder to fluff and help dry the hay midway through the drying period but on a small scale it isn't absolutely necessary. As long as the weather has been dry we find raking it into windrows after a day of drying to be sufficient at drying it. To rake into windrows you could use a hay rake machine that turns the hay into nice neat rows for you or you could use lawn rakes to gather the hay into rows.

Collecting

Since we're talking small scale here, we're going to skip over the different baler options that most modern farms use. Instead good old pitchforks and a wagon (or truck bed!) are all a small scale hay maker needs. The hay needs to be picked up off the ground and hauled to where it will be stored.

Storing

The most important aspect of storing is that the hay stays dry. Other than that storage can be in whatever manner you have as long as it can all fit! Remember loose hay will take up more space than baled hay. You can store it in a barn on the floor, in a shed, in a tarped enclosure, any where it will stay dry and off the ground. On our farm we use our chicken tractors that are 8' x 16' x 8' with pallets on the ground to keep the hay up off the dew/ground moisture and tarps over top, and any excess goes into my barn where I have two 10' x 10' stalls.

The Equipment We Use

We use a mixture of small tractor power (eventually we will be using horses!) and human power to get our haying done. We use a ground driven sickle mower pulled behind our small tractor or farm truck for cutting, a ground driven hay rake pulled behind the tractor or farm truck for raking into windrows, humans and pitchforks for loading the hay onto a car trailer which transports it to our storing places. Our storage units are our meat chicken tractors with tarps over them and our barn. It's really that simple!





General Step by Step

This is what hay harvesting looks like on our homestead:

- 1. Once hay is tall enough and hasn't went completely to seed we cut with the sickle bar mower.
- 2. Hay drys for a day or two on the ground as it was cut.
- 3. Then it gets put into windrows with our hay rake and left to dry for another day or two.
- 4. Once it's sufficiently dry we gather the hay into large mounds.
- 5. When hay is in large mounds, we pull the car trailer up to the mounds and with two people we can lift an entire large stack of hay onto the trailer.
- 6.We fill the trailer then haul it to the chicken tractors or the barn to be stored.
- 7.Repeat until we're done!

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Our 3 acre field takes an hour or so to cut, an hour or so to rake, then about two hours for one person to mound, then another 4 hours for it all to be loaded and stored. All in all, 8-10 hours spread over 3-5 days to harvest 3 acres of hay with 2-3 people. Our sad and neglected hay field yielded about 7,000lbs of hay on one cutting, or the equivalent to 140 square bales of hay. As we rebuild our soil our yield should get better!

Conclusion

Is hay making hard work? Yes. Is it worth it? Also yes, in my opinion. For very small investments in equipment we are able to harvest almost all of our cattle feed. Plus utilizing something that was previously just mowed for nothing. It doesn't take fancy equipment to make hay, it can be as simple as you'd like or as complex as you like. Bribe some friends with some ice cream after haying is done and you'll find it can be quite enjoyable to work hard!

Large Scale Haying

with Each Falkenstein

Cutting Hay

The first thing to do before cutting hay is to look to make sure you have a weather window. Zach likes to have 4-5 days of good hay drying weather before he cuts down his hay.

When cutting alfalfa, the best time to cut it is in the budding stage. This is the stage directly before the alfalfa flowers. You will always have some flowers, but the budding stage is gold standard. Alfalfa that is cut in the budding stage will be higher quality feed rich in protein. A younger plant will retain more of its leaves during the haying process, and will be more digestible for your animals.

Raking Hay

Your hay is ready to rake when the top layer is dry. It will be dry and will crunch, but still have a rubbery feel. The bottom layer will still be wet, and you can use the peel test that Zach demonstrates in this video to see if it is still wet enough.

It is very important when thinking about raking hay, to look at the forecast. If you rake your hay and the swath (that is the line of raked hay) gets rained on, it is very difficult to get it dry before it starts to mold. Sun and a little breeze are conducive to drying hay.

Baling Hay

To test if your hay is ready to bale, go to the thickest swath and do the crack test that Zach demonstrates in the video, to see if it is dry enough.

Alternatively if you are making hay on a larger scale, you may want to invest in a moisture tester. A moisture tester can be pushed in a bale and will tell you how much moisture is left in your hay. This is for larger scale farms, and the crack test is a great alternative to fancy equipment.



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Storing Hay



Depending on the type of feed you have, silage, haylage (also called baleage), or dry hay, you will need to organize different ways to store it.

Silage - Is chopped hay that at a higher moisture content, is packed tightly into a pit or bags. Packing it tightly and eliminating air from these bags or pits allows the feed to ferment without molding and preserves the nutrients of the feed.

Haylage/Baleage - These terms are used interchangeably and refer to hay that is baled at a higher moisture content and then wrapped individually or in long tubes of bales, to create an air free environment that facilitates fermentation without molding.

Dry Hay - Dry Hay is hay that is dried to a low moisture content. It can be baled into squares or rounds, made into stacks, or put up loose. It must be dry enough at storage that moisture does not become trapped within and cause caramelization and mold growth.

If you are a small scale homestead most likely dry hay is going to be your best option for storage. Because of silage and haylages high moisture content they do not last long exposed to air before they start to spoil. Larger farms like our ranch, are able to feed fermented feed regularly because we have the numbers of animals that can consume fermented feed quickly. In colder climates you may get away with opening up fermented feed and feeding it over the course of a month, but in warmer temperatures, this is a recipe for mold.

If fermented feed is your only buying option, and you are a small homestead, ask the farmer if they would be able to bale you up smaller (maybe 4x4) individually wrapped haylage bales or buy silage at lower quantities frequently from farms with silage, to keep it from going bad.

For many homesteaders dry hay is the best option for storage. Dry hay should be stored undercover, this could be a roof or a tarp, to keep moisture off of it. Round bales that are net wrapped, are better at repelling moisture than twine wrapped round bales, and all round bales are better at repelling moisture than flat topped square bales. Never the less, if you go to the trouble of making or buying dry hay, its a good idea to always keep it covered.

It is also important to remember fire safety when storing feed. If your bales get wet before you bring them into the barn (rain, dew), be sure to let them dry out flat before stacking them. This is how many barns have burned down.

Where To Look For Hay To Buy

✓ Online market places like kijiji, craigs list ect.

- ✓Web search hay in your area
- Look at bulletin boards at feed stores
 - ✓ Ask neighbours

When buying hay the biggest thing is you want to make sure you are spending your money on good quality feed. Without being there when the hay was baled, a lot of assessment about the quality of the hay has to come from the farmer. Some larger hay farms and most dairy farms will have their hay tested to see the total digestible nutrients in the hay. These numbers give you evidence about the quality of the hay and how much nutrients are in it. Larger farms may also have a moisture tester (like Zach used in the baling video) to tell you how much moisture is in the feed and this can also give you an idea of its quality.

If you have access to none of these numbers, don't worry! A simple test to see how good the feed is, is to buy a bale, take it home and see if your dairy animal will eat it.

Setting Up A Hay Share

If you have land on your homestead that could be hayed, but you don't have the equipment to do it yourself, you may be looking at setting up a hay share.

Hay shares are when a farmer with haying equipment comes to your farm and hays your land in exchange for a share of the hay. Typically a hay share is set up at 60/40 which means, the hayer gets 60% of the bales and the land owner gets 40%. However, this is not a set in stone number and there are many reasons this number may need to be adjusted.



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Sourcing Grains and Minerals

✓ Local Feed Stores

Local Ration Mixing Companies

✓ Local Dairy Farms

Many large dairy farms have a nutritionist on staff to help mix up Total Mixed Rations (TMR). Because we do not have access to nutritionists that know all of the ins and outs of how to create balanced rations it is up to us to do our best. In this category you want to look at three things. 1) What is your animal not getting from her diet. 2) What are your production expectations 3) What is your animals current diet.

What is your animal not getting from her diet?

What type and quality of hay were you able to source? If you have hay that is mostly comprised of pasture grasses or long stem grasses, and contains very little alfalfa, though it is a good fiber, you may be looking at a forage that is deficient in both energy and protein. You may have to add things into your animals diets to help them achieve optimal nutrition.

What are your production expectations?

Most dairy farms are working to push production as well as butterfat, and protein content in milk. Luckily genetics and healthy balanced diets are also very good at controlling this.

What is your animals current diet?

Most high producing dairy animals are supplemented with grain. Grain can be used for both maintaining and increasing milk production, as well as maintaining body condition. Milking animals put a lot of energy and calories into producing milk, many of them even if they are not getting sufficient calories, will still maintain a high production, at the cost of their body condition.

If having a dairy animal that is not reliant on grain is important to you, it is important to source a animal that is used to a grain free diet. Grass fed only dairy lines are available. Of course with this you do most often have to make concessions when it comes to production, but not always! When possible try to look for generational grass fed lines.

It is important with this to remember that dairy animals are working very very hard to produce milk. There may come a time in even a grass fed animals life, when they are milking off of their back, working so hard to produce milk that they are loosing condition to a dangerous level. In an ideal world a grass fed animal would be fed a high quality forage diet and mineral supplementation, but ideal is sometimes hard to come by, and if forage quality is low one year, or your animals needs change, your grass fed dreams may have to change as well.

Grain can be a very efficient source of protein and energy. If you can mimic the efficiency of grain in your pastures and in your hay, then you will have better luck feeding your animal less supplementation.

We feed our dairy cows a 16% dairy ration grain supplement everyday to help them maintain body condition and to push production, though at a much lower level than a commercial dairy farm.

Dairy rations like this can most often be purchased at feed stores. This 16% dairy ration is comprised of 16% protein, as well as a mixture of energy, minerals and vitamins. We choose to feed this verses mixing up our own dairy ration because it takes the confusing out of it. If you live in an area that does not have pre mixed feed rations at the feed store, you can mix one up yourself.

Store your grain in a dry place off of the ground. We store ours in a mini feed bag on top of a pallet so that it stays dry, plus can easily be moved around with the tractor. Be sure to keep your grain well locked away from your dairy animals. A dairy animal that gets into the grain will quickly bloat and this is a common cause of death in both dairy goats and cows.

Minerals

Animals should always have free choice salt and mineral access.

Blocks are not ideal forms of mineral and salt for dairy animals. You may have heard that the recommendations for feeding dairy animals is loose salt and minerals. The reason for this is that it takes a lot of licking for animals to get the nutrition they need from a block. Mineral blocks also do not allow the animal the opportunity to pick and choose what her needs are and this is something they will sometimes do if loose minerals are separate.

Store minerals and salts undercover and keep them from getting wet.