



## Building a Better Barn

**It's possible to build a barn that balances your dream barn with practical reality. Read more on choosing a site, function, accessories, get online resources and read lessons learned.**

By Sarah Christie

### About the Author:

Sarah Christie has firsthand experience building a new barn, having completed hers just prior to writing this article.

When you decide to build a barn, combining your wish list with a dose of practical reality will result in a barn that brings you pleasure, saves you money and provides years of active use.

There are reasons why barns are traditionally painted red—they are the functional and metaphorical heart of any farm. Barns shelter cows and cats, horses and hay.

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They evoke memories of exploration, discovery, safety and solace. Barns are the hub of summertime activity, and a warm oasis of winter quiet. They age more gracefully than houses or humans, and over time, they take on a persona all their own.

We instinctively relate to barns because like most Americans, barns work for a living. If you are fortunate enough to have an existing barn on your property, you may have toyed with the question of whether to remodel or replace it.

Then again, you might have unconsciously adjusted your needs and habits to fit the parameters of the barn.

### Online Barn-Building Resources

Classic Equine Equipment Inc.  
800-444-7430  
[www.classic-equine.com](http://www.classic-equine.com)

MD Barns  
800-343-2276  
[www.mdbarns.com](http://www.mdbarns.com)

Barnmaster  
800-500-2276  
[www.barnmaster.com](http://www.barnmaster.com)

Steel Master Buildings  
800-341-7007  
[www.steelmasterusa.com](http://www.steelmasterusa.com)

ClearSpan Structures  
866-643-1010  
[www.clearspan.com](http://www.clearspan.com)

Wick Buildings  
800-356-9682  
[www.wickbuildings.com](http://www.wickbuildings.com)

JW Hall Enterprises



800-475-8158  
www.jwhall.com

Ramm Fence  
Barn and Stall Components  
800-434-8456  
www.rammfence.com

Rockin J Horse Stalls  
800-765-7229  
www.rockinhorsestalls.com

Sand Creek Post and Beam  
888-489-1680

www.sandcreekpostandbeam.com Regardless of your approach, you are probably going to spend nearly as much time in the barn as you are in the house, so it makes sense to create a space that is functional, efficient and pleasing to work in. Only you can assess your true needs.

Are you more likely to get daily use out of a well-designed wash rack and rat-proof grain bins, or a wet bar with Dolby sound?

Combining your wish list with a dose of practical reality will result in a barn that brings you pleasure, saves you money and provides years of active use.

#### Choosing a Site

Consider wind direction, sun, runoff patterns

Of course, "location, location, location" is first and foremost. The structure itself may be elaborate or simple, but location is independent of design.

Horses smell wonderful, but that doesn't mean you want to live directly downwind of their stalls. That flat area at the bottom of the hill may look inviting to build on, until it becomes a flood plain next winter.

Understanding the "micro-climate" of your site, i.e. the path of the sun, direction of the prevailing winds and runoff pattern during rainstorms, is essential to planning a barn that works.

Pay attention to the prevailing winds on the property. They probably change from morning to evening. With a little foresight, you can orient the stalls and/or breezeway to take advantage of airflow, keeping the barn well ventilated. This is critical for the respiratory health of your livestock, as well as your own comfort.

Siting the structure to take advantage of the morning sun and afternoon shade will make the building comfortable year-round. Avoiding natural drainages is environmentally and economically smart. Erosion control is a costly, never-ending battle. It's better to give flowing water a wide berth when building.

#### The Basic Functions of a Barn

Choosing what design works best for you depends on your location, budget and needs.

Barns perform three basic functions. They can house and shelter livestock, store feed and equipment, and provide a workspace for tinkering and repairs.

As such, they can be specialized or multiuse. Pole barns are the least expensive to build and are commonly designed for hay storage. But by enclosing one or more sides, they can easily accommodate equipment, tools and materials.

Livestock barns are most commonly designed for horses, but can be modified for goats, sheep or other stock. Barns that function more like a workshop can provide space for lumber milling, carpentry and mechanical repairs.

Old-style working barns typically blend one or more of these functions, although hay storage on large spreads frequently demands a dedicated structure (or two).

Today, numerous modular barn companies offer every conceivable configuration and style of barn imaginable. Barn builders can choose from Tudor, Kentucky classic, rustic, Spanish, Amish or basic shedrow designs, as well as exterior siding materials to fit any locale. Choosing what design works best for you depends on your location, budget and needs. If



you are going to keep animals in your barn, consider the need for insulation and air circulation.

Residents of mountain states will probably prefer a design that allows them to close the barn against inclement weather in the winter. If aesthetics and resale value are high priorities, a raised center-aisle design makes a gracious statement and offers functionality that takes advantage of natural light and airflow. A gable roof option is more affordable, but still offers the advantages of a fully contained structure.

A courtyard layout evokes the ambiance of Spanish elegance, but it requires significantly more area than other designs. The possibilities are almost endless.

Collecting a clip file on barn designs, equipment, fencing, landscaping and accessories will help you mentally formulate that dream facility until it eventually materializes.

Your wish list will one day become a valuable resource guide when the time comes to build. But unless you have worked in a number of professional barns, it can be difficult to discern what is really useful, what is not, and what luxuries might actually be worth the cost.

With a little common sense, you can bridge the gap between the fantasy barn and the functional barn.

#### Accessorizing a Dream Barn

If money is not an obstacle, there is no limit to the amount of accessorizing that can be done to build a dream barn.

Using an architect specializing in barn design, it is possible to repeat architectural themes found in the home, and accommodate amenities such as a loft or apartment, office, intercom, sound system, video surveillance, trophy case, restrooms and entertainment areas.

For farm owners with show or racehorse facilities who entertain high-rolling clientele, these luxuries can actually qualify as requirements. A lounge area with a big screen TV is a perfectly reasonable feature if you need to let clients view videos of your sale prospects performing in world-class events.

But even the priciest barns share some common features with backyard versions.

#### 10 Affordable Accessories You Can't Do Without

Most builders do not have the luxury of unlimited funds. When budgeting for the new barn, keep in mind that you can always add more items later. But it is ultimately more cost-effective to build in as many features as you can afford up front, so the labor will be amortized over the entire job, as opposed to making a special installation call a year later. Some items you may be able to install yourself, with little more than a screwdriver and a drill. **Solar power**

If your barn is located a considerable distance from the nearest power source, and in an area that gets a direct southern exposure, it may be cost effective to consider a solar collector for your electricity. In some states, if you think you will be producing more energy than you are using, you can even tie into the "grid." This makes you a net generator of power, rather than a consumer, and has the added advantage of running your power meter backward!

#### Hot water

An "instantaneous water heater" will provide water on demand without taking up a lot of space or running up your power bill. Perfect for barn/office use, these compact, propane units are about the size of a large dictionary and can be mounted on an exterior wall. (Available through RV catalogs or environmental merchandise stores.)

#### Restroom

With or without a shower, a commode in the barn will be appreciated by all. If you are daunted by the task of installing a septic tank or paying for another sewer hookup, consider a composting toilet. This technology has improved dramatically over the past decade, and can be maintained completely odor-free.

#### Overhead retractable hose with pressure nozzle

A pressure nozzle will not only clean more effectively, it conserves water, saving both energy and natural resources. Having the hose overhead keeps it out from underfoot, so it won't kink or get run over.

#### Rubber stall mats

If you have horse stalls, these will save your horses' legs, save your sub-floor from horses that paw, weave or pace, and save you enough money in bedding costs to pay for themselves in less than five years.



#### Fly traps

They haven't invented an aesthetically pleasing one, but there are several very effective models on the market. Even if your facility is spotless, the neighbor's flies are bound to come calling. A fly trap (a glass or plastic one-way jug baited with something awful) placed in a discreet location will provide you with pounds of dead flies over the course of the summer. Smelly, but satisfying.

#### Owl/bat houses

Forget the cutesy bird feeders—court some useful wildlife. One way to cut down on bugs, rats, mice and gophers is by encouraging bats, owls and hawks to make your spread their happy hunting ground. Environmental catalogs sell bat and raptor houses, or your local Audubon chapter may offer plans for building your own.

#### Cordless barn phone

Yes, this way you can yak to your friends while you are doing barn chores. But more importantly, if you ever have an emergency, you can have your vet on the line while you are attending the patient, making it easier to describe symptoms and follow instructions.

#### Refrigerator

Just a small one, about the size you find in hotel rooms. This is perfect for keeping carrots, antibiotics, vaccines, sodas and sandwiches cool and fresh. You live in the barn anyway, you might as well be comfortable and have a nice lunch!

#### Small tractor

If you've never owned a tractor, this may sound like an intimidating purchase. But home tractors are almost as user-friendly as riding mowers, but they are infinitely more useful. You'll wonder how you ever got by without one.

#### 5 Items You CAN Do Without

If one can achieve the same results with less cost, fewer materials and less risk, then why not go low-tech? By most standards, the following items are essentially overkill. Forced-air heating system

In a well-insulated barn, the animals are their own heaters. Between winter blankets, bedding and exterior barn doors that can be closed against snowstorms, a barn full of bodies generates enough natural heat to keep the residents toasty warm.

#### Overhead automated fly control system

Why would you or your horses want to inhale pesticide on a regular basis? If it kills insects, it can't be good for you either. Look into non-toxic methods of fly control, such as citronella spray or natural predator wasps.

#### Security light

High-wattage security lights stay on all night long. This detracts from the beauty of the night sky, confuses migratory birds, and is a general affront to the serenity of natural darkness. Besides, it provides a beacon for burglars.

#### Air conditioning

Once again, insulation and airflow should be sufficient to keep most barns comfortable in the summer months. Plant some shade trees, make use of insulation and prevailing breezes as a much less expensive way to keep your barn cool.

#### Concrete stall floors

Rubber mats over a packed base are sufficient to keep bedding and dirt from mixing. Concrete flooring is expensive, and it is harder on feet and joints, even under rubber.

Combining your wish list with a dose of practical reality will result in a barn that brings you pleasure, saves you money and provides years of active use. Whether you are building from scratch or revamping a grand old gentleman of a barn, planning, environmental sensitivity and a firm grasp of your material needs and economic limits will help guide you through the adventure.

Lessons Learned Sarah's own experience with rebuilding

#### Barn Discovery

I was at the grocery store on June 30, 2002, when a spark from a passing forklift ignited a grassfire on my ranch.

In less than an hour, it turned 25 acres of dryland pasture, oaks and pines to charcoal. Fortunately, the irrigated lawn around my home saved the house, but my pole barn was not so lucky.

The eucalyptus and pine trees adjacent to it caught fire, and soon the telephone-pole supports collapsed in flames, engulfing two tons of newly delivered hay, my 4-wheel drive Kubota tractor, and 30-plus years of equipment, tools and miscellany essential to running a farm.



After I got over the shock of loss (it could have been much worse—my horses, dogs and home were all fine), I began to look at rebuilding as an opportunity to make some changes and improvements that I would not otherwise have tackled.

In so doing, I learned that there is no single, magic formula for building a better barn. You must know your site, your needs and your budget. Here are some pieces of personal advice, learned the hard way: **Saving Space.** I originally planned to build a barn of the same dimensions as the one I lost. But I soon realized that I really didn't need that much space. The previous owners stored several tons of hay every year, and I rarely had need for more than one or two tons at a time. The money I saved in downsizing went into building a second story loft—something I had always wanted to do with the first barn. Now I have covered, secure storage that can be converted into a studio or office in the future, as well as a functional, open hay and equipment storage area below.

**Don't Skimp on the Base.** I was tempted during site prep to order the minimum amount of base. It seemed like such a waste of money to dump a bunch of sand and gravel on a site that already looked level to me. But when the first rains drained right into the center bay and puddled around the stairs, I had to order another truck and trailer load. Lesson learned: Spreading base in a finished barn is much more challenging than spreading it before it's built!

**Let There Be Light!** The biggest expense relative to lighting is getting power to the site. The cost of installing fixtures and outlets is negligible. My former barn had a single outlet and a single exterior light. My new barn has a ceiling fan, exterior and interior lights, a lighted stairway and plugs everywhere. No more flashlights and extension cords!

**Know Your Weather.** I decided to change the orientation of my new barn for better traffic control. What I didn't factor in was the prevailing winds and rain. As soon as the autumn winds returned, I recognized my mistake. As a result, I had to close in an extra side that I had previously planned to leave open—another additional expense.

**Reuse, Recycle.** In an attempt to cut costs, I looked for opportunities to use recycled materials. I scrounged used telephone poles for supports, and refinished some old wooden-frame windows. What I didn't realize is how much charm and character this would add to what would otherwise be a completely new structure. This is obviously a matter of taste, but when coupled with the cost savings it becomes attractive in more ways than one.

**Plan for Changes.** As the building took shape, I got excited about possibilities and new ideas that I had not considered during the planning phase. In addition to the obvious need for more base and siding, I added more windows upstairs, built in additional storage and changed the configuration of the stairs. My contractor was obliging, but it added to the total cost. I suggest keeping a 10 percent "contingency fund" on hand!

—Sarah Christie

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