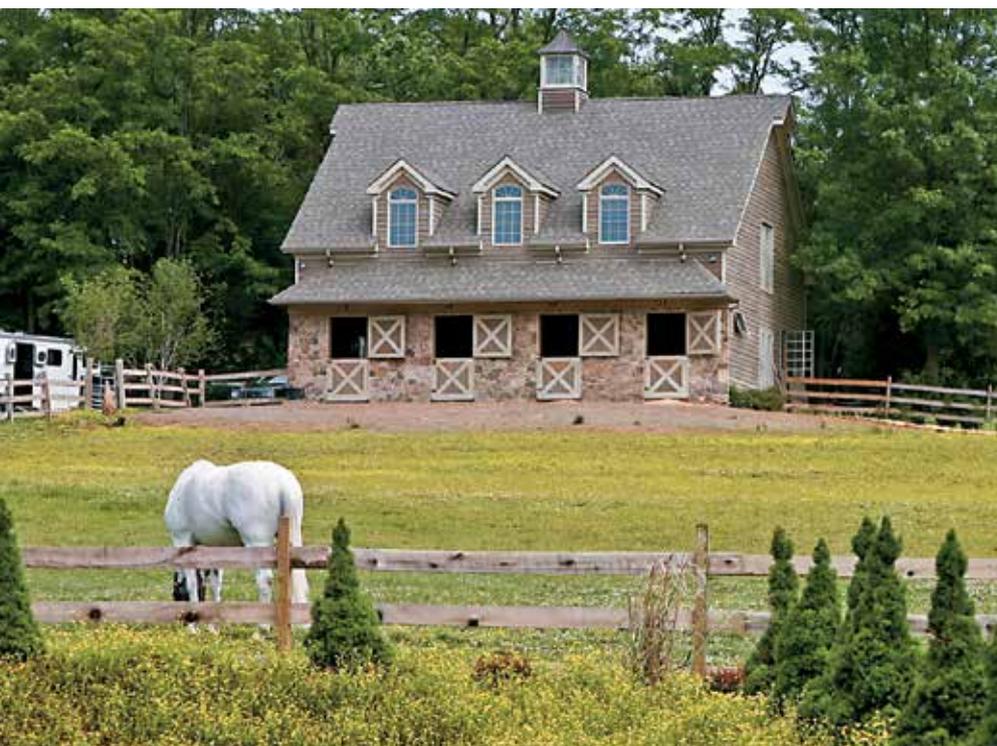


Tight Spaces

How to lay a horse farm out strategically on limited acreage



Farm design and layout are critical to maximizing your time and resources on limited land.

When you're constructing a horse farm and have limited land, design and layout are critical to maximizing your time and resources. You might be constrained by existing fencing and buildings. You might have to work around natural obstacles such as streams and hills.

"Often, new horse property owners come from urban settings and are unfamiliar with a rural lifestyle," says Alayne Blickle, founder of the horse and property management program Horses for Clean Water, in Nampa, Idaho. "They don't know that you shouldn't put your ... sacrifice area over your septic system's drain field," for instance.

Then there are those who are familiar with living with horses but are, perhaps,

getting their first property and have a blank slate and no idea where to start.

Either way, here's how to design a functional farm on what land you have.

Make a Map

If you're starting from scratch with a piece of property that has no buildings or fences, take the time to map it out.

"I suggest getting a Google map of your land, hopefully one that shows the topography," says Bob Coleman, PhD, PAS, equine extension specialist with the University of Kentucky, in Lexington. Print it out, and "draw on it with a ruler and pencil to figure out where to place everything. Draw multiple scenarios and possibilities, to see what might work best.

"If you are in a suburban area, think

about where your neighbors are and how to keep them happy by building appropriately to begin with, rather than trying to figure out how to resolve a problem later," he adds. "You don't want your compost pile near your neighbor's well, for instance."

Google maps will also show existing buildings and fences. "Then you can figure the best place to put a road, if you need one," says Coleman. "If there are no buildings yet, where is the best place for everything, relative to the lay of the land? How close to the main road should the house or barn be? In an area that doesn't get snow, it's not an issue. If you get a lot of snow, however, you want to be able to get in and out without having to spend a lot of time plowing or blowing snow out of a long driveway."

Think practicality over aesthetics. While the prettiest spot on your property to place a barn might be at the back, can you realistically perform chores there in a foot of snow? Plan access routes and turnarounds wide enough to get plow equipment in, navigate a truck and trailer, have hay and bedding delivered, and accommodate the veterinarian or farrier. Make driveways wide enough for emergency vehicles, and build paddock gates wide enough for a truck. Are overhead power lines going to be a problem? Evaluate existing buildings and fences based on their usefulness, safety, and appropriateness for horses, and note any improvements you'd like to make.

"If there are already buildings and facilities, are there things you can do to make it work better?" Coleman asks. "You might want to change the gates to the paddocks or build a run-in shed facing away from the prevailing winds."

If you lay the farm out on paper first, you can change things around until you get it just right. "It's a lot easier to move

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buildings with a pencil and eraser,” Coleman says.

When Blickle talks to horse owners designing small farms, she suggests considering soil types when deciding where to place structures. “An organic soil will get wet or boggy during rainy seasons,” she says, so choose dry, well-drained spots for buildings, confinement areas, arenas, and other structures.

“If it’s gravelly, there won’t be as many mud issues, but it may be harder to keep pastures wet enough for good growth,” she adds. (Same goes for soils that are too wet/don’t drain well, such as clay.) “If you have a choice, put confinement and high-traffic areas on the gravelly soils and pastures on the more organic soils,” such as sandy loam with a fair amount of organic matter.

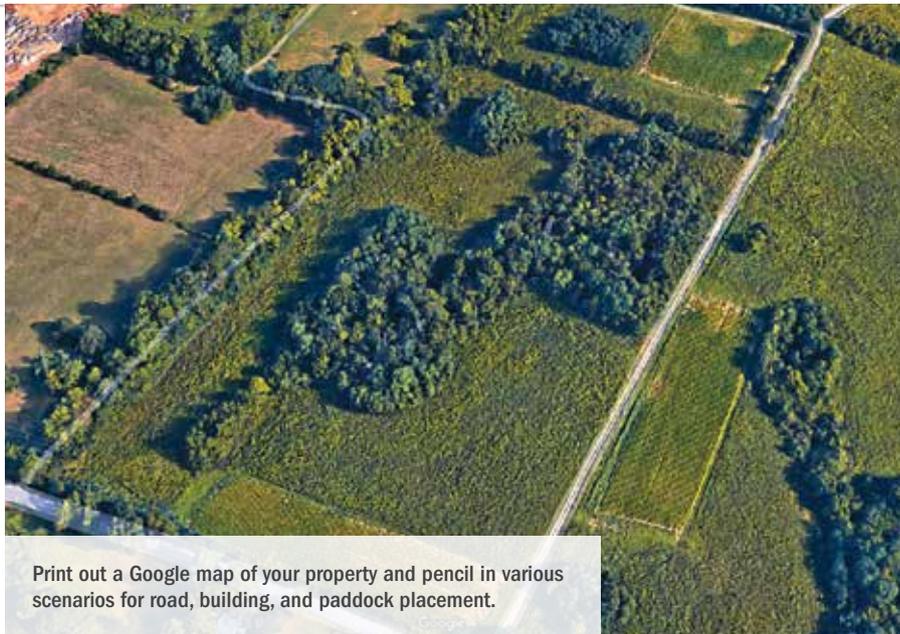
Assess your prospective property’s soil during the rainy season or a storm event to observe topography and drainage. Monitor how and where the water runs. If it all flows right where you want to build your barn or arena, then you’ll know to choose a better location for them.

“It’s best to have confinement areas and high-traffic areas on higher ground (with better drainage) and pastures (with soil that can absorb and utilize runoff) at the bottom of the hill,” she says. “Also think about natural features like ponds, wetlands, or streams. Put your horse facilities as far away from these as possible. Think about where your (septic tank’s) drain field and wellhead are (or will be). State laws usually require wellheads to have a buffer zone 100 feet in diameter to protect the water supply. Drain fields should not be under roads, driveways, confinement areas, or pastures. The best place for the drain field is probably in your yard (by the house).”

Pasture Puzzles

When dealing with limited space, one of the most important things to avoid is overstocking pastures with too many horses.

“This is a common mistake,” says David Preston, owner of Kentucky-based Preston Construction Group. “You can stretch things a little by using more stored forages (hay) and less pasture. But regardless of the size of the place, every horse owner needs a paddock where horses can be outdoors instead of in a barn.



You might have to improve footing in that pen so it won’t turn to mud—maybe put in some sand or ground limestone or something else—so the horses are not up to their ankles in muck part of the year.”

Install material that won’t create dust or mud or erode. If using gravel, choose a variety that’s no bigger than ⅝ inch around, says Blickle. “About ½ inch is comfortable for horses to stand and walk on and easy to sift through a manure fork,” she says.

If you are limited on space, your pastures are going to be more like paddocks. In this case, consider adjoining them to the barn for efficiency.

“It’s a lot easier to move buildings with a pencil and eraser.”

DR. BOB COLEMAN

“You want everything laid out to be chore-efficient, horse-healthy, with easy access from barn and pastures,” Blickle says. “With limited pasture area, your horses will spend most of their time in paddocks. You want paddocks easy to access from the pasture and for manure management—so you can clean them daily and get the manure into your compost bins or manure pile.”

Manure Management

Speaking of manure, you’ll need a place and a plan for handling the 50 pounds each horse produces daily.

“My favorite option is to compost and then apply it to the pasture,” says Blickle.

Coleman says the Natural Resources Conservation Service has guidelines accessible through county extension services on where to build a composter. Make sure to locate it (or your manure pile) in a place that’s accessible to machinery, such as along the driveway or road, and easy to get to when you’re cleaning the barn. Avoid low spots or anywhere runoff could end up in a watershed.

“Map this out before you start laying out your place,” says Blickle. “If the manure pile is in the back of your place or you have to go through a wet area to get to it, this won’t work.”

As for its appearance and odor, “You can build a composter, cover it up, and people won’t notice it’s there,” says Coleman. (See TheHorse.com/17205 for composting tips.)

Where to Water

Think about the best way to water your horses. Will you be running underground waterlines to waterers or hand-filling troughs in each paddock?

“If you need year-round water availability for horses outside, consider putting in a watering system and burying waterlines, using waterers that aren’t likely to freeze,” says Coleman. “If you use a tank heater, you need access to electricity.

“If having water in every pen is not feasible, you might put a frost-free hydrant in a convenient spot and run a hose to water tubs,” he adds. “There are good water tubs and tanks that have valves

in the bottom that you can connect to a garden hose. For summer pastures these work nicely.”

If you have adjacent paddocks that you don't need to double-fence—which some farms do for safety and biosecurity purposes—save on costs and convenience by splitting a waterer or tank at the fence line. “This can minimize infrastructure,” says Preston. “Sooner or later you will have a leak, so you need it simple, with fewer problems to chase down.”

Building the Barn

Your barn should be a reasonable distance from your house, but close enough to see what's going on. “Then you don't have to wonder if you left the lights on or forgot to close the gate or wonder if that lightning strike did something you need to deal with,” says Preston. “Our barn is 500 feet from the house, which is okay, but there are days when I wish it was 200 feet. I think 100 feet would be a logical minimum,” he says. Figure out what



SHELLEY PAULSON

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works best for your situation.

Blickle also likes to have her horse facilities near her house. “In the old days, many people recommended having it far

away, so you won't have odors and dust, but I think it's more important to manage the odors and dust and have the horses closer,” she says.

Having the horses nearby allows you to monitor them more easily and see or hear if something's amiss.

You, again, want the barn on high ground, not only for drainage but also for airflow and ventilation. Place a barn appropriately in regard to prevailing winds. Coleman suggests getting a wind map from your cooperative extension service to see which direction the prevailing winds come from on that property. “If you get snow, it helps to know the wind pattern and where the snowdrifts will be, so you can plan around that,” he adds.

The barn's size depends on your space, finances, and goals. “I tend to be a minimalist,” says Preston. “I designed a barn for a friend in North Carolina who was thinking about a traditional aisle-down-the-center with stalls on each side, tack room, wash stall, etc. The climate there is very forgiving, however, and I talked her into a less expensive L-shaped facility. We could forget about one side and leave it open, with enough roof overhang to protect yourself from rain when doing chores and with the horses turned out most of the time.”

Consider building your main hay and bedding storage building separate from the barn, with room to store just enough in the barn to make chores easy. “I like some hay and bedding in the barn,” says

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Preston. “Depending on where you live and the weather, you won’t want to be hauling hay and bedding through snow, rain, or mud. It’s nice to have some in the barn for convenience, but it’s not safe from a fire standpoint to have it all in the barn.”

“If I were building a barn with limited resources (or space), I might design it so hay storage would be over the center alley and not over the horses,” says Coleman. “I’d want ventilation over the stalls. When you only have budget to build one roof and also need to store hay, having hay in the barn may be your only option, but you can position it so dust won’t filter down into the stalls. If the barn has a good pitch on the roof, this will allow good airflow.”

If you do have room in the budget for a separate storage shed, place it where it’s accessible for delivery and for bringing hay or supplies into the barn. And if your region gets snow, again, consider the

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DAVID PRESTON

wind so you don’t end up with snowdrifts blocking shed access.

Also consider drainage and what to do with water coming off your hay shed or barn.

“Even in our region, which only gets 7 to 10 inches of annual precipitation, it is clay soil, and any moisture turns it into boot-sucking bottomless muck where horses can sink up to their knees or hocks,” says Blickle. “You want gutters and downspouts on all buildings, direct-

ing the water away from high-traffic and confinement areas. Divert it to some other part of your property, such as a vegetated area or corner of a pasture where it can soak into the natural hydrology.”

Before you finalize your farm layout, Coleman recommends visiting area horse properties to see what they’ve done, looking for good ideas as well as mistakes to avoid. “They might tell you they wished they’d made their alleyway 14 feet wide instead of 10 or 12,” he says. “Though it makes your barn wider and is more expensive to build, if it makes your life easier for many years, it would be worth it.”

Take-Home Message

Housing horses on small acreage can be challenging. Take time to design your farm and plan where you’re going to place all the necessary facilities. This will make the end result safer for your horses and more chore-efficient and pleasing for you, the horse owner. 🐾



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