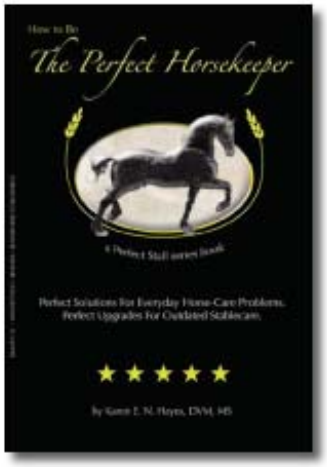
How To Be The Perfect Horsekeeper

Perfect Solutions for Everyday Horse-Care Problems
Perfect Upgrades for Outdated Stablecare



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Excerpts from Chapter 1 - The Perfect Manure Management System

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The Problem

One 1100-pound horse passes manure, on average, seven to ten times per day, adding up to a total daily output of about fifty pounds. A small operation housing only ten horses accumulates almost seven tons of manure in just one month. And that's just the manure. The muck pile also contains soiled, urine-soaked and wasted stall bedding, which – depending on what type of bedding you use – can double or even triple the volume and weight of stuff that goes onto the pile.

Thanks to years of trial and mostly error, I used to think there weren't any alternative manure management systems that delivered what we need – a way to eliminate the muck pile, without seeding pasture with parasites and weeds. I was wrong. There's a foolproof, earth-friendly, nearly maintenance-free way to manage horse manure, whether you have two horses or two hundred.

First Impressions

Even if you have only one horse, the pile mounts up to an amazing degree. Many horse facilities are part of somebody's home property. Some are well-appointed and relatively fancy commercial places where the tack rooms are full of saddles that each probably cost more than your first car. In either context, the muck pile is an eyesore that stinks, and it detracts from the esthetics of the property. So, sheer volume is one factor. The muck pile takes up premium space, and it does so in an offensive way.

Pathogen Load

Even a healthy horse passes millions of potential pathogens in its manure – bacteria, protozoa, fungi, and parasites. As long as his body maintains a healthy balance between the pathogens and friendly beneficial organisms, the potential disease-causers (which I call nasties) don't make him sick.

But once the manure and the nasties are on the ground, and the manure begins to accumulate, the nasties start to add up to numbers that could overwhelm even a healthy immune system. Your horse's ability to resist disease was never designed to stand up to such a concentrated germ load.

Some of the bad pathogens succumb to the heat of summer, the ultraviolet rays of the sun, and the cold winter. But don't kid yourself. Many go into a dormant state and become semi-permanent residents in the soil, waiting for favorable conditions. The numbers of pathogens on the property increase with every lift of your horse's tail, and with every passing year. As the manure load accumulates on the property, the health risk goes up for any horses living there.

Fecal Matters

Each defecation contains millions of a particular category of bacteria called coliforms. Coliforms are a notorious bacterial family that includes tetanus as well as other dangerous and often fatal disease-producers such as Rhodococcus, E. coli, and Salmonella species. The open prairie, which is the horse's natural environment, is sparsely dotted with horse manure that's easy to sidestep. Not the domestic, fenced-and-cross-fenced domestic horse facility.

That's why your risk of tetanus, as well as your horse's, is higher if a flesh wound happens when on horse property. With every year horses inhabit a particular piece of land, the soil becomes more and more dominated by their natural fecal organisms – so much so that horse facilities become, over time, high-risk havens for outbreaks of certain diseases.

At breeding farms, for example, if foals are nearby when the wind blows over bare patches in the pasture, their risk of a particular deadly kind of pneumonia skyrockets. That's because fecal Rhodococcus equi bacteria have become a major component of the dust, thanks to years of accumulated manure that dried and disintegrated there. Outbreaks among the year's foal crop are more common in dry years, when there's more dust kicked up into the air, which the foals breathe in.

Treatment (of Rhodococcal pneumonia) is months-long, expensive, fraught with side effects, and even when done exactly right it often fails.

Parasite Paradise

Wild horses in their natural environment wouldn't dream of grazing within sniffing distance of a manure pile, and they never stay in one grazing area long enough for manure to accumulate and become a health problem for them. In that way, their natural lifestyle automatically protects them against excessive parasite exposure.

Compare that to modern horse facilities – even high-end ones with big, beautiful pastures – where horses are confined. Remember, horses were never designed to stay in one geographic area, eating and relieving themselves and unable to put meaningful distance between the two. With every passing year, the amount of parasite-infested land on the modern horse farm increases, and the amount of pristine land, free of manure, increasingly disappears.

To make matters worse, there are still lots of horse farm managers whose method of eliminating the muck pile is to spread it on the pastures and hayfields. They should be arrested. Many of the parasites that infect horses can survive in those fields in a dormant state for up to 40 years, through all kinds of weather. They lie in wait, locked and loaded, for their next victim to nibble nearby.

Flies

Manure is a breeding ground for flies. If you have a typical muck pile, then every year, your fly population increases, in spite of diligent use of larvicides, insecticides, and repellents. It starts up as a nuisance, and escalates to a health issue and a problem that quite literally ruins the summer days, with you and your horses swatting and stomping.

Chemical Warfare

If you've spent much time at horse facilities, you know that the use of fly killers and repellents is an act of desperation, and an exercise in futility. They actually make the fly problem worse thanks to collateral damage: They kill the beneficial insects that naturally prey on flies. What locks you and your horses in fly purgatory is the fact that fly predators – the good bugs – take longer than flies do to replenish their populations after being devastated by insecticides. So, when you use insecticides, you give the pest fly population the upper hand. The more you use them, the more you feel the need to use them, and the problem gets worse and worse.

The Environment

There are two ways to look at the environmental issue. One is, even if the esthetics and the fly problems and the heightened risk of disease don't bother you, the horse facility that doesn't deal responsibly with its muck pile is vulnerable to being sued for contaminating ground water and surface water. This was a small risk 20 years ago. Today it's inevitable.

Another way to look at it is, our horses suffer from being made to live among filth. It threatens the health of their gastrointestinal tract, their respiratory tract, their skin, their nervous system, their eyes, their hooves, their offspring and their quality of life. Horse facilities are part of the environmental problem, and the classy and ethical response is to do the right thing because it's the right thing to do, not because somebody is making us do it.

The Trouble with Composting

"Trouble" is precisely what composting has been for me. In theory, it's the perfect solution for the manure management problem. But in my hands, despite my strange and inexplicable fascination with it, composting has been frustrating and unsatisfying. Part of the problem is, I've been looking not only for a solution I can maintain on my own horse facility, but one I can recommend to horse owners everywhere, and be reasonably confident they'll actually do it. That means it has to be practical and adaptable to everybody's individual abilities, conditions, requirements and willingness to commit to the rules that determine whether or not a pile "cooks" properly.

Humus Humiliation

Despite a fistful of college degrees and 35 years of on-again, off-again earnest effort at the art and science of composting, with and without expert consultation, I failed to compost the facility's horse manure reliably. I never felt confident enough about even my best batches to spread them in the fields, because there were always parts of the heap that didn't seem to decompose, and I feared that what I'd be spreading would be a devilish mix of things that would not be good for a horse property. Still, I had this enduring love for the idea of compost. It could be such a perfect solution, if someone could make it a practical process. And, I finally found the person who did just that.

The Perfect Solution: From the Top of the Heap

The king of the manure mountain is an engineer named Peter Moon. In addition to degrees in geology and geotechnical engineering, Moon's got experience, enthusiasm, and a nose for a good compost pile. More than any so-called expert I've ever consulted, he "gets" compost and is anxious to spread the word. His environmental consulting firm, O2Compost, specializes in designing and setting up compost facilities to process agricultural, corporate, and municipal organic waste on a very big scale, with efficient, EPA-approved, profitable methods. Notice I didn't say affordable, I said profitable.

Aeration without Turning

It all comes down to oxygen. That's the key to successful composting. The bacteria in the compost heap need to be able to depend on a steady supply of it. That's why traditional composting practices require that you turn the heap. Moon's work has shown that within about 30 minutes after turning the heap and raising the oxygen levels, the levels quickly plummet – often to levels as low as 1 percent, even lower than they were before turning.

The Perfect Horse Manure Composting System

The foolproof O2Compost system is based on the aerated static pile principle. Although from the outside it appears to be the usual series of three composting bins, Moon's magic is in the behind-the-scenes details. Ordinary compost bins are nothing more than a designated, contained place to stack stall muck to the proper depth. Moon's design provides the missing link – air – by designing the floor and walls to admit just enough air for good passive ventilation and adding a network of ventilation holes and pipes underneath the floor, connected to an electric blower that's controlled by a timer. When the timer triggers the blower, the blower breathes air into the heap, evenly infusing every corner and pocket with life-giving oxygen.

The beauty of the system is that it'll work for a one-horse enclosed bin operation as well as it'll work for a 2,000 horse mega facility's mountain of manure. All it takes is the engineering know-how to design the aeration system specifically for horses. Thanks to Peter Moon, there's a growing number of horse facilities drawing great assets from what used to be a costly liability.

To obtain a bound copy or an e-copy of Karen Hayes' book:

"How to Be The Perfect Horsekeeper"

I encourage you to visit her web site: **www.theperfectstall.com**

For more information about horse health and related topics, also visit her educational forum: **www.integralhorse.com**