

.....Original Message.....

From: Warner

To: Dave Sr – WoodyPet

Sent: Monday, August 11, 2000 10:10 AM

Subject: Re: Woody Pet Products (Report by Dancing by the Bey Farm)

Dear David,

Although we are quite aware of the fact that John Lyons has had your Green Machine at his ranch in Parachute, CO for over two years now, and although he has submitted an article on his findings in The Perfect Horse Magazine, we found that his article did not reflect the use of the Green Machine to the average person working in stables on a day-to-day basis. For that main reason is why we are submitting a report to you.

Here is the working draft of the article I am preparing for Yahoo's ImagineaHorse group and for distribution to training centers where the sorting of bedding will be or is mechanized. I would appreciate your commentary on the article as it represents our wish to help others in their barn management decision making. The name Albert LeLoup is the name by Dancin by the Bey for messaging on the internet.

Sincerely,

Warner Johnson

Life after the Green Machine

(This is a comprehensive report on how mechanized sorting of stall bedding has altered stall cleaning practices and barn management).

This report was commissioned by Dancin by the Bey Farm (DBBF) for posting in the files section of the horse training group, training-horses@yahoogroups.com. Dancin by the Bey Farm and its employees are completely independent from the company, Woody Pet Products Inc., makers of the Green Machine. It is hoped that the report will alert barn managers, equestrian centers, and horse owners to the reality of the new world caused by mechanized sorting of stall bedding. For permission to reproduce this report or any portion of this report, in any form whatever, contact B.K. Clifford, General Manager, Dancin by the Bey Farm, Ada, Michigan.

Albert LeLoup, Author

Trainer, DBBF

Outline.

- * Introduction
- * Life after the purchase
- * Taking delivery
- * Implications for barn management
 - A. Less bedding needed
 - B. Different hand tools; different procedure
 - C. Increased labor productivity
 - D. Improved disease control
- * Minor problems, easy solutions
- * Non problems
- * Side benefits

Introduction: We got our Woody Pet Products Green Machine to help with sorting bedding in the horse stalls at Dancin by the Bey Farm. We don't plan to house more than five horses in the barn, but we opted for the machine because we were desperate to shorten the time we were spending on mucking out stalls and minimize the need for hired help. After seeing John Lyons' Green Machine article in The Perfect Horse Magazine last year we were anxious to get started.

After several months of daily use of the machine, the honeymoon is over – the machine has a promising future in our stable bedding operation. This report may persuade you one way or another about getting one for your farm. If you get one, you can get a jump on the learning curve as to getting the most out of your investment by reading this report. We acknowledge two unknowns in this report. The first is, we do not know if the Green Machine is able to effectively sort bedding materials other than saw dust, saw dust pellets, and wood chips. We can state that the machine is unsuitable for sorting feces from the straw if that is the bedding material. There is a second, unknown. This would be the long-term hardiness of the machine and the related issue of product support.

How good is product support by Woody Pet Products for this machine? One time that we called about a maintenance question, we were told that the service center was shut down do to a Canadian holiday. We informed the Woody Pet operator that our horses keep defecating in their bedding, Canadian holiday or no Canadian holiday. We have made phone contact with Woody Pet to help us deal with actual breakdowns on three occasions. On each of these calls the service representative quickly identified the cause of our problem. It seems that debris had clogged the vibratory shuttle mechanism and we had the machine back to normal operation in short order. We estimate that at least 80 hours have been logged on the machine and thus far it has run without a major glitch. During the first week of August 2000, the machines vibratory action failed to activate. I removed the protective

metal bonnet from the motor and drive mechanism and inspected the area for debris: There was none. I toggled the on/off switch and saw that the motor was receiving electricity and that its output shaft was rocking slightly. When I tugged on the pulley belt, the vibratory action activated and I was able to continue sorting bedding with the machine. However, in order to resume the vibratory action after the machine was shut off, it was necessary to repeat the process of manually tugging the pulley belt. Of course, this is unacceptable and I contacted the Customer Service Representative, David Ringland Jr., at Woody Pet Products in Canada to help resolve the problem. He referred me to the Green Machines Operations President, Mr. Michael Burian, who was in Pennsylvania at a horse show at the time of my call. The service representative promised to have Michael Burin call me from Pennsylvania. [I informed David about this article and offered to send him a preliminary draft for his comments and evaluation. He was very interested and wanted Michael Burian to see it also.]

It remains an open question, therefore, as to how well the company will stand behind its product should a part give out or malfunction.

Life after the purchase: Importantly, the MORE we adjust our barn management decisions to the reality of this innovation, the MORE disruptive it will be should the machine be put out of service. It's like coming to depend on a tractor rather than a beast of burden. Life on the farm after putting the Green Machine to regular use just isn't like it used to be. Here is why.

Taking delivery: We send Woody Pet Products \$1,499.00 for our machine and that included delivery by Fed Ex to the big sliding door to the barn. It took two old guys just 20 minutes to bolt the legs of the machine on to its main body and have the machine ready to plug in and turn on.

We discovered that the machine cleans up easily after use with a leaf blower or a garden hose. Once in a while we use a power washer if it is handy. But most of the time all we do is broom the thing off after use to keep it operational. Its moving parts should be oiled after every 20 hours of running.

Implications for barn management: Barn management is altered. You will rethink your muck out routine once you start using the Green Machine. Four factors will cause you to do things differently than before.

A. Less bedding is needed. The machine sorts even the tiniest of particles of feces from the bedding. Also, slivers, shards, straw and hay are gleaned from the bedding, whether the bedding is wood chips, sawdust, or palletized saw dust. Not only does the machine spare usable dry bedding from ending up in the muck bucket, it fluffs the bedding to maximize its loft (volume). Otherwise packed down, compress bedding is now aerated and fluffed to restore its insulation potential and enhance drying. Your need for replacing bedding with new wood chips and sawdust is much less than if you just continue the old practice of sprinkling new material on picked out but packed down bedding.

The Green machine is so very thorough as a sorter, that if you HAVE the time to scoop up piles of droppings and soaked areas of bedding before they get tracked around the stall, you may decide to use the machine only once every two or three days. Importantly, wetness in the bedding becomes the most important thing to monitor. Far less, perfectly usable bedding is going to be discarded into the muck bucket as a percentage of what ended up there when sorting was done with a pitch fork or rake, - so much less that your budget for bedding materials will be dramatically slashed, and that's not all. You won't need to keep as much fresh bedding in your inventory! This frees up floor space that can be used for such things as a wash stall, another horse stall, a larger tack room, an office, etc., etc. The Green Machine itself requires but a fraction of the floor space otherwise taken up by piles of sawdust or bales of wood chips and other types of bedding materials.

B. Different hand tools; different procedure. The extremely high sorting rate has given importance to certain hand tools and made others relatively unimportant. The muck rake seldom leaves its hook on the wall. But the 'chicken claw', broom, and three kinds of snow removal tools are now very important. The modified pitchfork becomes THE tool of choice. We call ours the 'chicken claw' because it mimics the way a chicken scratches the ground. The idea is to expend minimum physical energy in order to quickly locate the wet spots and then remove the soaked bedding,

and ONLY the soaked bedding before turning on the Green Machine. We don't want to pass soaked bedding through the sorting table of the machine.

C. Increased labor productivity. The machine processes soiled bedding at a phenomenal rate. Two adults with wide scoop shovels, working at a comfortable pace, can just keep up with the machine's capacity to sort. As a result, in order to maximize the efficient use of the machine several changes are made in the muck out routine. First of all, when one employs the routine described in A. above, the first thing you notice is that cleaning the stalls is much LESS PHYSICALLY DEMANDING. The stalls bedding is sorted better than could be done by hand and the fatigue level in the back, shoulders and arms of the stall worker is so low that he is ready to take on other chores. There is another important change in routine that results from the machine's high capacity sorting rate. LESS TOTAL LABOR TIME is required of two workers with the machine to do two or more stalls than one person alone even though just one person also uses the machine. Two people working as a team are more efficient. How is this possible? Well, the idea is to maximize the time the machine is actually sorting bedding. Thus, the second (and even third) person can be working ahead of the machine by removing wet spots, clearing a drop zone, sweeping and treating the floor, dragging the water hose, etc., while the co-worker(s) concentrate on moving the machine from stall to stall and lifting soiled bedding onto its activated sorting table. We have not documented that three people working as a team are more efficient than two, but it is logical to assume this would be the case because the machine will process bedding faster than just one person can comfortably feed it with soiled bedding. Therefore, when workers are hired to muck out stalls, we have A PAIR be on duty and train them to work as a team.

D. More emphasis on stall hygiene. As we said above, one learns to locate and remove the wet spots prior to turning on the machine, simply as a matter of timing to optimize the running time on the machine. [True, much wet bedding can, in fact, be sorted by the machine, but not enough to keep the sorted bedding net of urine.] The ammonia is what causes the bedding to sour and compromise healthy respiration for people and horses. On the other hand, dry bedding is less apt to harbor thrush, mold, and other bacteria. The point is, one doesn't have to wait until time to 'tear down' the stall to get at the floor. You get to inspect and treat the stall floor EACH TIME THE MACHINE IS USED! For example, it is easy to inspect and treat the exposed stall floor for mold and insect infestation. Because the entire stall floor is exposed during the muck out routine, drying agents such as granulated lime, or even much better yet if you can get it is Zeolite, can be spread quickly in those areas where the stall floor is damp.

Not only wet bedding, but also build up of old dust can harbor bacteria and insects. [It is also a fallacy that the dust has utility as a material for soaking up moisture.] Furthermore, it is a source of respiratory problems in the horses and the barn workers. We instituted the routine of sweeping up all the dust from the exposed stall floors mainly to cut down on the tendency of the Green Machine to make the dust particles airborne. As it has evolved in our Life with the Green Machine, before spreading the drying agents we routinely sweep the exposed stall floor to scour up all particles of wet bedding and dust. Sweeping the stall floor as a consistent part of the mucking out routine ensures maximum removal of soiled particles of bedding and dust. Because the floor and adjoining walls are routinely exposed, one has opportunity to power wash these surfaces, inspecting, sweeping, washing, using disinfectants, and using drying agents become the 'usual' instead of the 'occasional' in stall cleaning due to the way the Green Machine is employed.

If you ever watched our crew go about mucking out a stall, here is what you would observe: Here's how we do it at Dancin by the Bey Farm. For starters, sacrifice a long handled pitchfork in order to get at wet bedding. Simply remove the handle from the ferrule of the pitchfork. Rotate the tines 180 degrees so that they curve downwards, toward the stall floor and reattach the handle in the ferrule; viola, the 'chicken claw'. (A 3/16 – inch bolt ensures that the assembly will remain secure.) With only a light drag of the tips of the tines across the soiled bedding, one can speedily expose where the dark, wet areas in the bedding are defined. Just the soaked bedding is then scooped and tossed into the muck bucket. We use a long handled, flat scoop shovel with an aluminum blade that is about 8 inches wide. This is important because the relatively narrow blade does not scoop up dry bedding along with the wet. We eliminate all bending by attaching a Spring Lake handle grip to this shovel. [We like forks and shovels with 60 – inch handles for greater reach.]

After removal of the wet bedding, what remains is pushed into a pile with a snow blade. This leaves most of the stall floor exposed for inspection prior to bringing the Green Machine into the stall. This is the time for sweeping

the exposed floor clear of dust and urine soaked particles. Before bringing in the Green Machine, the swept floor can be treated with drying agents, insect repellent, etc. The machine is then situated in the stall so that its sorting table is directly over the place where a pile of sorted bedding will be most easy to distribute in the stall. The machine is then turned on and the soiled bedding is shoveled onto the vibratory sorting table.

When the machine is turned on, all of the soiled bedding is processed through its vibratory shuttle tray and ends up in a pile below the machine. The lightweight, long handle scoop shovel with a 12 – inch blade that is equipped with a Spring Lake extension handle makes light work of getting the soiled bedding off the floor and onto the sorting tray. The stall worker never has to bend over because of the extension handle. Furthermore, when it comes time to spread the freshly sorted bedding back onto the stall floor, NO lifting is required. He simply pulls a wide rake across the pile and drags the loaded blade of shavings to where it's needed.

[SIDE NOTE ON DUST CONTROL: Dust is a serious health problem. For that reason, we do not replace hay in the stalls or refill water buckets until the machine has been used and the stables are air blasted and / or vacuumed. Workers wear dust masks. But the dust problem is greatly minimized by sweeping the exposed stall floors as described above. In addition, we routinely mist the stall bedding prior to processing it through the Green Machine. We have since equipped each stall with a misting nozzle connected to PVC pipe that is plumbed to the ceiling of each stall. We are currently experimenting with misting the stall bedding with a light mineral oil to cut down on dust. Thus far the oil seems promising as a measure of dust control, but we need more evaluation time to be sure that there are no down sides to this method.]

Once the sorted bedding is deposited below the machine's vibratory shuttle tray, the Green Machine is wheeled out of the stall. Usually, we just use a broom or leaf blower to clean the Green Machine before moving it to its place of storage. We find the quickest way to distribute the pile of sorted bedding is with a wide rake. [We plan to install an electrical outlet in each stall to eliminate the need for dragging around an extension cord.]

Minor problems, easy solutions: Such an enormous amount of bedding being processed all at once does set up a cloud of dust. The mist sprayer eliminated most of this annoyance.

The connecting cord on the machine is just long enough to get trapped under a tire when the machine is moved. We solved this by linking the power cord to a bungee cord and then hooking the other end of the bungee cord to the motor's hood.

The angle legs bury into a dirt floor and sometimes dance sideways on an asphalt floor. We slide a 3/16 – inch strip of plywood covered with rubber stair tread under the legs. End of problem.

The vibratory motion causes the machine to “dance” forward on an asphalt stall floor and eventually rattle the machine against the stall wall. A 1 – inch square by 3 – foot long piece of wood wedged against the tires stops this completely.

The Green Machine converts to a movable cart, (See, ‘Side benefits’ below), and when not in use, it is left in the mode of ‘cart’ at DBBF. Two minor problems have thus evolved: The first is that of unauthorized use. We had to wrestle it away from the ferrier who assumed it was available for HIS convenience when we were trying to muck out stalls. The second problem is more serious: It is NOT a scaffold for a painter or electrician, etc. We painted a warning in the middle of the plywood top that converts the Green Machine into a cart that reads, “WARNING, DON'T STAND ON CART!”

The handle of the Green Machine is painted, square tubing. This is fine in the summer. But if you grab the handle with your bare hands in the dead of winter, it is not so comfortable. We wound heavy waxed, cotton cord around the handle and coated it with ‘GOOP’ so that it is soft, smooth and warm to the touch.

The Green Machine is extremely maneuverable and light if the handle is lifted high enough to put the center of gravity over the axle. However, it is awkward to use the handle as provided in the original design. This problem was solved by the use of two motorcycle foot pegs. The pegs are mounted on the square tubing frame of the Green

Machine, near the bottom of the sorting table housing. They are mounted upside down so that when not used as handles for moving the Green Machine about, they fold down and out of the way. The center of gravity is nicely centered over the axle when these add on handles are employed.

The phenomenon of bedding materials flowing backwards was puzzling. The vibratory action of the sorting table converts the bedding into a flux, (plasticized solid that behaves according to the physics of a fluid). The slope of the sorting table and the vibratory motion are intended to make this flux move towards the ejection chute. However, we observed the opposite behavior from time to time. The cause of this problem turned out to be under inflation of one of the tires.

Being an idiot: It seems logical to locate the muck bucket under the discharge shoot so that it would be nearest to the stall door and thus hand to empty into the manure spreader. But this meant that the extension cord had to pass around the machine to get at the male plug. It also meant that one needed to remove the sorted pile of shavings from underneath the sorting table before the machine could be conveniently wheeled out of the stall. Solution: Turn the machine around, i.e., wheel the Green Machine into the stall with the discharge shoot facing AWAY from the stall door opening!

Non-problems: The machine does not make enough noise to bother horses in the adjoining stalls. [That said, it would be impractical to leave a horse IN THE STALL where the machine is being used.]

We have not yet found a way to hurt ourselves on the machine. There are no parts that are sharp or dangerous to touch, EVEN WHEN THE MACHINE IS RUNNING.

Side Benefits.

We no longer have to get upset because somebody has less talent for picking out road apples than others. No matter who is mucking out the stalls, we get a superior job of sorting. For those who manage boarding facilities, this benefit is incalculable. One of your Prima Dona boarders is always going to think her horse's bedding is less carefully picked out than the other horses. The Green Machine puts a definitive end to this carping.

'Bench' mode. When not in use the machine acts as a handy worktable for sawing boards or making repairs. We have a piece of light weight, 1/4 - inch plywood fit and painted green like the machine and ready to rest on top of the machine to convert it to a table. The plywood rectangle is bordered with a 3/4 - inch by 6/4 - inch strip that overlaps the edges of the Green Machine to keep the plywood top in place. My daughter likes to clean her saddle and bridles on the 'table'. It is my favorite place to work on the weed whacker and other power equipment on the farm. For example, it is just the right height to work on the chain saw (i.e., cleaning and adjusting the chain, and replacing chain oil and fuel.) This configuration is far superior to a stationary workbench. We can move it where it is most handy.

'Cart' mode: We use the cart for laying out grooming tools and supplies when grooming the horses. We use it for carrying tack out to and back from the outdoor arena. Some of you trick riders like to use a pedestal in your act. You can carry more than one at a time of these heavy pedestals into the arena and back on this handy 'cart'. You have one guess where the vet likes to lay out his equipment when working on a horse. Have you ever been around when a horse is gelded in the shade of an oak tree in the barnyard? It's a lot easier and more sanitary organizing the meds and tools needed on a nice flat bench that is near at hand than working on one's knees from a tarp thrown over the dirt. The same is true when dealing with a horse that has had a wreck out in the pasture. In the 'Cart' mode, the Green Machine has become an INDISPENSABLE CONVENIENCE! If we had to surrender the Green Machine for some reason we would buy or have made a cart of the same size and with the same wheels and handle.

We realize that the Green Machine could sort raw sawdust that is full of wood chunks, splinters, wrappings, and other debris. We can get this raw sawdust FREE from many sources, (e.g., the local high school wood shop, several lumber companies, etc.). One pass through the Green Machine and the sawdust is safe for stall bedding.

Feces content in manure is much higher. It makes for better fertilizer. It composts faster. The volume of manure is less. You can get by with a smaller spreader, or not have to use your spreader as often. This is important in Michigan when a three-day blizzard is wracking the barn.

‘Buffet’ mode. You read correctly, ‘BUFFET’! Saturday night barn parties are held at Dancin by the Bey Farm in September and October. When the trail riders return to the farm, they get from their vehicles various dishes to pass around. We discovered that all we needed to do is throw an oilcloth over the plywood panel that converts the Green Machine into a table. Viola! A perfect buffet. Sometimes we make it function as a wet bar. Thus far nobody has had a problem with dishes displayed on a muck out machine because “out of sight, out of mind”. We don’t need to waste floor space in the barn with a built in serving counter. And we don’t have to drag folding tables out from the house. (These were too low, anyway). We wheel our ‘buffet’ out to the fire pit, put it under a colorful Chinese lantern from the barn, or place it by the bleachers of the outdoor arena for serving cold drinks. Its big balloon tires make it easy to roll over sod and uneven ground without disturbing the containers on its tabletop. [Oh quit laughing and just shut up about eating food served from a muck out machine! You eat off from an outdoor picnic table where squirrels, pigeons, and God only knows what all have pooped. What’s the big deal? Anyway, after we power wash it, the Green Machine is completely sanitized. Besides, if you walked into our barn you wouldn’t even notice the machine much less realize what its primary function was. Grow up!]

We tested this Green Machine extensively and found that using it saved time, effort and bedding. We found the dirtier the stall, the more you see the advantage over hand-picking. We found we ended up with a cleaner stall. We know that the more stalls you have the faster the machine will pay for itself, and many times over.