

# Pack 109, Item 12

Type: Script

August 2018

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**Handling animal manure**

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**Notes to broadcasters**

Soil fertility has been defined as “the capacity of soil to supply sufficient quantities and proportions of essential nutrients and water required for optimal growth of specified plants as governed by the soil’s chemical, physical, and biological attributes.”

Agriculture is the main source of both food and income for the majority of the population of sub-Saharan Africa. Poor soil fertility is a major constraint to increasing the production of all types of crops. And with reductions in the size of farms because of increasing population pressure, and with the disappearance of fallow lands, applying practices that maintain soil fertility is key.

Animal manure and urine are effective sources of soil nutrients, and especially suitable on smaller farms.

The following script gives lots of tips for more efficient use of livestock manure and urine, including how best to collect and store it so that it retains its nutrients.

You could use this script as inspiration to research and write a script on using animal manure and urine as fertilizer. Or you might choose to produce this script on your station, using a voice actor to represent the speaker. If so, please make sure to tell your audience at the beginning of the program that the voice is that of an actor, not the original speaker.

If you choose to use this script as background material or as inspiration for creating your own program, you might consider the following questions:

* How common is it in your listening area for farmers to use animal manure as fertilizer? Animal urine?
* What is their attitude towards using animal manure?
* Do they use the practices mentioned in this script to enhance manure and urine effectiveness?
* Are there barriers to using these practices? Perhaps animal manure is used for other purposes, or farmers think using animal manure is old-fashioned.

Apart from interviewing farmers and other experts, you could use these questions as the basis for a phone-in or text-in segment in your regular farmer program. You could also invite farmers and other experts into the studio for a discussion panel.

Estimated running time for this script, with intro and extro is about 6-10 minutes.

**NARRATOR:** If you keep livestock or poultry, we have some hints for you. Here's Barbara Peacock.

**PEACOCK:** Today, I'd like to talk about using animal manure and urine as fertilizer for crops.

We all know that animal manure is good fertilizer. It improves the soil by adding organic matter and essential nutrients for good plant growth. You can't see the nutrients that make up this plant food, but plants must have them to grow properly. They get them from the soil, through their roots. Animal manure and urine contain a lot of valuable plant foods. So when you mix them with the soil, your crops grow better.

Now if you use your animal manure to help your crops, there may be some things you could do with the manure and urine so your crops can use it efficiently and grow even better. That's because some plant nutrients are easily lost if you don't collect your animals' manure and urine and store it properly, and if you don't apply it properly to your crops.

For instance, nitrogen is an important plant nutrient that's in both manure and urine. But if the animal manure just lies around in small lumps on the ground in the sun and wind and rain, much of the nitrogen in it will be lost to the air, and the other nutrients in it will be wasted. It's much better to collect the manure while it's still fresh and rich in plant nutrients, and keep it all heaped together in a tightly‑packed pile until you want to use it.

It's best to build this pile on a hard surface if you can, so that nutrients won't seep or trickle down into the ground below and be lost. A cement floor is best—or ground that’s fairly hard and waterproof, like clay.

You could surround the pile with a small ridge of soil to catch any liquids that might otherwise flow away from the pile and be lost. This will also prevent water from getting into the pile and washing away some of the good nutrients you want for your crops. If you cannot do this, you should at least try to plant some crops or fruit trees near the run-off from the pile so that these crops or trees can use the nutrients in the run-off.

You should cover the manure pile, if possible, to protect it from being dried out by the hot sun, and to keep off heavy rains that would wash plant nutrients out of it.

Some people cover their manure pile directly with a sheet of plastic, or banana leaves, or banana leaves and soil. Or you could build a shelter to protect the pile—just a simple thatched roof supported by poles would keep off rain and sun. If you can't build a shelter, you should at least make the manure pile under a large tree so it won't be dried out so much by the sun.

Now what about your animals' urine? How can you collect urine? It's easy if the animals spend much of their time in a fairly small area, for example, a small compound or a shed where they sleep. Just spread dry grass, chopped straw or other plant stems, dry leaves, or even clean, dry soil on the ground in this area to soak up the urine the animals produce. You can also use the coarse maize or grass or hay stems that your animals won't eat.

Maybe you noticed I said "chopped straw." That's because chopped straw soaks up more urine than straw that isn't chopped. Chopped straw makes good bedding for your animals if you have it.

Now, before this bedding gets too wet and dirty, take it away and add it to the manure pile, and put down more dry grass, straw, or leaves as bedding for the animals. If you do this regularly, it will help your animals stay cleaner and healthier too.

Whenever you add more to the manure pile, pack it all firmly together, because if there's too much air in with it, more nitrogen will be lost.

Also, keep the pile moist—not too wet and not too dry. If it's so wet that liquid trickles away from it, add more dry material such as chopped straw, dry leaves, or dry soil. If, on the other hand, the pile starts to dry out, sprinkle it with a little water to moisten it.

Finally, the time will come to apply your manure to your field or garden. Remember I said that if manure lies uncovered on top of the ground, it will lose much of its nitrogen. That wastes valuable plant nutrients.

Your plants will get much more nitrogen if you dig the manure right into the soil as you apply it—as soon as you can after spreading it.

So it's really best to take your manure to the field just when you're ready to cultivate. Then, as soon as you've spread the manure, you can cultivate and mix it into the soil. That way, all the plant nutrients in it will go directly into the soil, and help your crops grow well.

## Acknowledgements

This script was originally distributed in 1985 as Package 10, script 3. It was updated and then re-reviewed by John VanLeeuwen, Professor of Epidemiology and Ruminant Health Management, Chair - Veterinarians without Borders-Canada, Dept. of Health Management, Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PEI, Canada.

**Source of information**

Agriculture Canada Publication 868 (17 pages), Manures and Compost.

<http://publications.gc.ca/collections/collection_2013/aac-aafc/agrhist/A53-868-1979-eng.pdf>

 The original script was undertaken with the financial support of the Government of Canada through Global Affairs Canada (GAC)