P.O. Box 515429
Dallas, Texas 75075
Ph: (972) 669-3390
Fax: (469) 241-0896
Email: oseicorp@msn.com
Web: www.osei.us

# *Manure from Horses, chickens, cows, and hog production calculations*

**Oil Spill Eater II has been cleaning up animal manure, since 1989. OSE II emulates natures own process however OSE II speeds up the process of converting animal waste as well as hydrocarbons, hydrocarbon-based material, human, and trash leachate to a safe end point of CO2 and water, with no haul off or secondary processes required when utilizing OSE II.**

**Animal waste information needs to be interpreted into pounds or tons in order to know how much manure is being taken to the field with each load. The following approximate weights can be used; one cubic foot of manure equals sixty pounds, one bushel weighs seventy-five pounds and one gallon weighs eight pounds.**

**•In respect to this, what does one yard of manure weigh?**

**•That is if a cubic yard of manure weighs 650 lbs.**

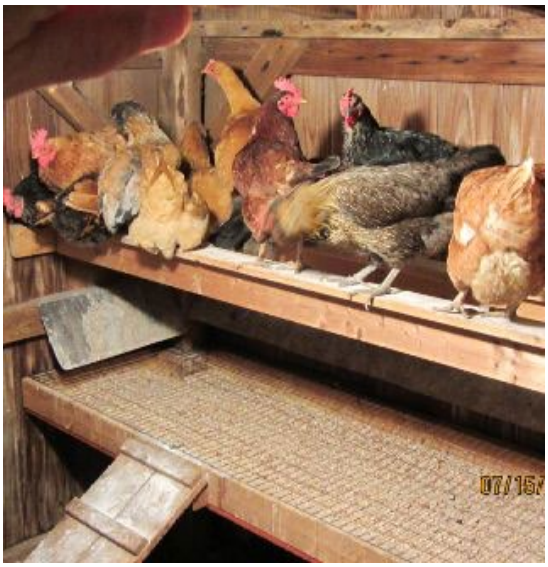
**•Subsequently, question is, what does chicken litter weigh?**

**The averages of 0.55 lb wet litter, or 0.42 lb dry weight, per lb bird weight, represent the litter produced by annual cleanouts. Chicken litter is relatively lightweight, in this case weighing between 30.5 and 41.5 lbs per cubic foot (Table 3).**

**•Then, how much does manure weight per gallon?**

**Liquid manure density can vary from 8-9 lb/gal, but will typically have a density around 8.3 to 8.5 lb/gal.**

**Manure density can be easily estimated with a 5 gallon bucket and a set of scales.**

# How to calculate
# English Standard

**•Convert your density to lb/yd 3. 85 lb/ft 3 = 2295 lb/yd 3 (1 pound per cubic foot equals 27 pounds per cubic yard) If you're in the US, divide 2295 by 2000 (there are 2000lb in a US ton)**

**•There are 240 gallons of water in a ton**

**•Manure is less dense than water, however we will use the water weight.**

**•1 Ton equals 240 gallons divided by 4000 equals 7.6 ounces of OSE II a day to handle one ton of horse or cow manure.**

**•1 horse produces 31 lbs of manure a day, 1 ton of manure production means there are 65 horses**

## How to Calculate

## Metric

**•1 metric ton equals 1000 kilograms or a kilogram is 2.2 lbs**

**•1 ton equals 1016 liters or 268 gallons**

**1 ton or 1016 liters divided by 4000 or 1,000,000 milliliters divided by 4000 equals 250 milliliters per day for 1 ton of horse manure 6.6 ounces.**

**•<u>How many pounds of manure are in a cubic yard?</u>**

**•Manure is fine. A cubic yard of compost often weighs over 700 pounds depending on how moist it is.**

**•<u>How many pounds are in a bushel of manure?</u>**

**•This information needs to be interpreted into pounds or tons in order to know how much manure is being taken to the field with each load. The following approximate weights can be used; one cubic foot of manure equals sixty pounds, one bushel weighs seventy-five pounds and one gallon weighs eight pounds.**

**•<u>How much does a gallon of hog manure weight?</u>**

**A typical gallon of hog manure weighs approximately 8.34 pounds? Because a 400 pound gestation sow is on limited calories to keep her from obesity, the manure and urine output is around. 75 lb per day total, not counting wash water, water leaks or feed waste.**

**•<u>How much does a cubic foot of manure weight?</u>**

**•Manure weighs 0.4 gram per cubic centimeter or 400 kilogram per cubic meter, i.e. density of manure is equal to 400 kg/$m^3$.**

**In Imperial or US customary measurement system, the density is equal to 25 pound per cubic foot [lb/$ft^3$], or 0.2 ounce per cubic inch [oz/$inch^3$] .**


**<u>How much dung does a cow produce in a day?</u>**

**Manure - A cow produces 65 lbs. (29.5 kg) of feces or manure daily - that is 12 tons (908 kg) a year. A cow can poop up to 15 times a day.**

- **How much nitrogen is in a ton of chicken manure?**

- **35% of N is inorganic (all available) = 19.3 lbs/ton. 65% of N is organic (1/4th available in**

**year 1) = 8.9 lbs/ton. Total N available in year 1 = 28.2 lbs/ton.**

**•<u>Will chicken manure hurt horses?</u>**

**•Poultry litter is routinely spread on horse pastures as they share no parasites with horses. The biggest problem with poultry litter is the weed infestation that occurs due to weed seed found in poultry manure. Also, salmonella may a concern with non-composted manure from both poultry and ruminants.**

**•<u>What does chicken litter have in it?</u>**

**•Poultry litter. In agriculture, poultry litter or broiler litter is a mixture of poultry excreta,**

**spilled feed, feathers, and material used as bedding in poultry operations. The materials used for bedding can also have a significant impact on carcass quality and bird performance.**

## OSE II is the answer to allowing an animal production or breeding operation to become a turnkey operation handling all of its wastes on site producing no environmental wastes that have to be hauled off.

**The reason OSE II is superior to other products, is due to the fact OSE II when applied first reduces toxicity of the waste by breaking down the molecular structure of the waste, and at the same time decreases clumps, and increases surface area through the biosurfactants in OSE II, and reduce the oil and grease, eliminating its adhesion properties, in order for remediation of the waste to more quickly occur.**
**The Enzymes then attach to the broken-down molecules of the increased surface area of the waste, which act as catalyst to speed up the bio-chemical reactions, to further reduce the waste. OSE II also enhances the bacteria in the pond, increasing its numbers dramatically each minute, which increases the bacteria digesting the waste to CO2 and water.**
**OSE II's ability to quickly breakdown the molecular structure of the waste also helps nitrates to be used up completely, through the balanced nutrients of Nitrogen Carbon and Phosphorous, which allows the entire nitrogen/nitrates and carbon and phosphorus to be used as cellular building blocks, since balance N, C, P, can be fully utilized for cells, and this utilization helps prevent nitrates from becoming nitrites, and causing the increase in nitrites due to the extended time they require to be broken down, with nitrogen fixing bacteria.**
**Some products discuss foaming as adversarial, however with OSE II's bio surfactants, if you are creating a large amount of foaming this is an indication to just reduce the volume of OSE II being applied, if the**

**foaming starts to completely disappear then this is an indication to adjust the application of OSE II upwards slightly. No system is static, there are always increase in volumes of waste and decreases in waste as well as rains that effect the ponds environment, OSE II allows you to monitor this and save on application, instead of using the same amount of a product even when it is not required.**

## Pond or retention area overflow or release:

**The other great thing with OSE II is if there was an overflow of the effluent pond, it would not cause any harm downstream, since OSE II has no harmful chemicals, through toxicity tests in 11 countries see link https://www.osei.us/toxicity-tests OSE II is safe for the environment and will protect and recover the benthic layer see link https://www.osei.us/wp-content/uploads/Republic-of-Korea-Shoreline-Clean-with-recommendations-from-ITOPF-for-shoreline-clean-ups-2022.pdf OSE II is safe for humans see link https://www.osei.us/tech-library-pdfs/2011/9-OSEI%20Manual_OSHA.pdf in fact OSE II will act as a fertilizer for plants downstream from where the effluent escapes the retention pond. This would eliminate fish kills/marine species kills as well as any plant dis-colorizations, which in turn eliminates fines, and would eliminate any downstream clean-up costs as well.**

**OSE II has been tested by Rio De Janeiro, University as a fertilizer, showing that OSE II produces a plant that is 33% more dense, and 30% taller, than plants with traditional fertilizers. OSE II applied to a pond/retention area mixed with manures. Will produce a great fertilizer for crops, gaining in yield.**

# OSE II is also more economical reducing animal production or breeding operations cost by as much as 50 % in regard to waste handling from animals.

# OSE II has been used in the Global environment since 1989, making our world a cleaner safer place to inhabit.


## Steven Pedigo
## CEO OSEI Corporation