# The Manure Exchange Program

The Okanogan Conservation District would like to assist livestock owners and gardeners by linking those who have excess animal waste with those who seek an organic soil amendment.


If you are interested in donating manure to the community to improve soil quality, or in relieving a livestock owner of stockpiled manure please contact us so that we can add you to the list. *(contact Laura Clark at (509) 422-0855 or at laurac@okanogancd.org)*

## DONATE MANURE!

If donating, providing us with the following information would benefit those seeking manure:

- Name and contact info, including best time to contact
- Approximate location of manure
- Manure type, and whether it is fresh, composted, or both
- Approximate amount
- Ability and willingness to load
- Willingness to have this information posted on our website in order for others to contact you directly
- Any other notes of interest to the potential receiving party

## RECEIVE MANURE!

If seeking manure, providing us with the following information will help us assist you:

- Name and contact info, including the best time to contact
- Your manure needs and/or wishes
- Approximate quantity and date when needed
- Any additional information

## Manure Benefits

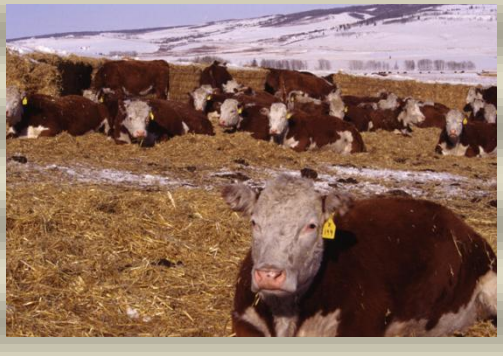
Manure can be a valuable soil amendment that can improve soil function and increase crop production. Manure is a great source of nutrients for plant growth. Also, it will increase the soil organic matter, which in turn improves soil tilth, soil structure, and water holding capacity.

## Why Donate Manure

Without proper management, manure can have detrimental effects. We all know that manure piles up quick when livestock are kept in confined areas. If this waste is not regularly removed from these areas, it can cause an unhealthy environment for the animals, as pathogens may be present in manure.

The nutrients and pathogens from manure can be readily transported to water bodies. This movement occurs from surface runoff, leaching through the soil, and wind. This can be detrimental to aquatic ecosystems and human health.

In addition, air quality issues such as odors, particulate matter, and aerial pathogens may also arise from improper manure management. This could affect human health and possibly your friendship with the neighbors.



## USING MANURE ON YOUR CROP OR GARDEN

**Before using manure on your crop or garden, there are some things that you should consider.**

### Apply manure to meet the agronomic rate of the crop.

- ✓ How many nutrients are required to meet your crop goal? (Seek out area Land Grant University agronomy info)
- ✓ What nutrients are already in the soil? (get a soil test)
- ✓ How many nutrients are in a specified unit of manure (have the manure sampled, especially if using a significant amount of manure).
- ✓ Calculate the nutrient budget and apply only the amount of manure that will meet the nutrient deficit for your crop goal.

| TYPE | N | $P_2O_5$ | $K_2O$ | SOLIDS | BULK DENSITY |
|---|---|---|---|---|---|
| | lb per ton as-is (as-is is typical moisture content for manure stored under cover). | | | Percent % | Lb/cu yard |
| BROILER WITH LITTER | 73 | 64 | 66 | 70 | 900 |
| LAYING HEN | 37 | 57 | 47 | 40 | 1400 |
| SHEEP | 18 | 9 | 35 | 28 | 1400 |
| RABBIT | 15 | 10 | 14 | 25 | 1400 |
| BEEF | 12 | 6 | 17 | 23 | 1400 |
| DRY STACK DAIRY | 9 | 4 | 19 | 35 | 1400 |
| SEPARATED DAIRY SOLIDS | 5 | 2 | 3 | 19 | 1100 |
| HORSE | 9 | 6 | 16 | 37 | 1400 |

Nutrient guide of uncomposted manure – WSU Extension
(manure contents may vary significantly)

## Minimize risk of air and water pollution.

- ✓ Incorporate manure into the soil immediately after applying it, especially after fall applications
- ✓ Avoid spreading or storing manure near critical areas (water bodies, areas where runoff and erosion is likely, wells, adjacent properties, etc.)

## Manure may contain weed seeds.

- ✓ Plan for weed monitoring and weed control as weed seeds may be carried in manure.
- ✓ Proper composting of manure will kill most of the weed seeds.

## Fresh manure may carry pathogens that are harmful to humans and animals.

- ✓ Well-aged or thoroughly composted manure has a lower risk of pathogen contamination. Use special caution on crops such as greens or root crops.

## Fresh manure could carry residual herbicides that could affect your crop.

- ✓ Ask the manure provider about chemicals used on forage the potential for herbicide contamination in the manure. Some herbicides are more persistent than others.
- ✓ Composting will assist in the breakdown of most chemicals.
- ✓ Using manure from animals fed forage treated with the products clopyralid, picloram, and aminopyralid are of increased concern.

*Persons participating in this program are solely responsible for manure content, handling, use, transport, and storage of the product. The OCD assumes no liability for any negative impacts associated with the participation in this program. The OCD's sole responsibility is to act as a point of contact in order to organize the exchange of materials among individuals*