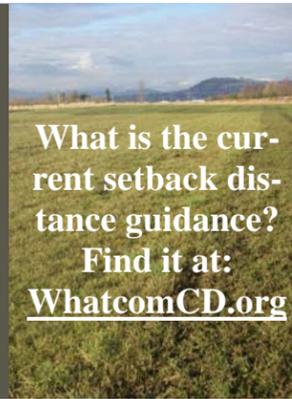


Manure Application Setback Distances

When applying manure, remember to follow *all* manure application setback guidance throughout the year. These distances are in place to help you avoid applying too close to a waterbody or sensitive area when the risk of runoff is high. The table below gives a summary of the distance you should be stay back from all waterways or sensitive areas throughout the year. During the low risk growing season, you can apply up to **10 ft** from waterways. That distance increases during high runoff risk times to **40 ft** (Mar, Apr, Sept) and **80 ft** from Oct 1-Feb 28. A Big Gun should NEVER be closer than **40 ft** due to drift. These guidelines apply to liquid and solid manures.



What is the current setback distance guidance?
Find it at:
WhatcomCD.org

Jan	Feb	Mar	Apr 1/15	May	June	July	Aug	Sept	Oct	Nov	Dec
80'	80'	40'	40'/10'	10'	10'	10'	10'	40'	80'	NA	NA

What is T-Sum 200 and How Should it be Used?

TSum200 was developed as an economic tool to gauge when ammonium nitrate fertilizer (not manure) should be applied to match the start of forage growth. It is the sum of the average of the high and low temperature units (daytime high minus low temperature) in Celsius starting January 1. Once it reaches 200, it is assumed that grass growth has begun.

The limitation is that it does not account for weather conditions, which can be very unfavorable for manure application

at T-Sum; nor does it consider that manure nitrogen needs time to be transformed by soil microbes into a plant usable form. When T-Sum is utilized for manure application timing, it is typically misused. Therefore, **T-Sum200 should be used as a tool to help you gauge forage growth, not necessarily as a date for manure application timing.**

Manure should be applied based on your soil type, weather forecast, field conditions, and crop condition. Be safe!



6935 Hannegan Rd
Lynden, WA 98264

«AddressBlock»

In This Issue:

- Water Quality Sampling
- New Forage Guide and Talk
- Dairy Speaker Series
- Manure Application by Soil Type
- Cover Crops for Water Quality



Winter/Spring
2014



Connecting with the Whatcom Dairy Community

Whatcom Dairy News

New Forage Guide is Out! Advanced Management of Temperate Forages

The folks at Farm West have put out a new forage guide, "Cool Forages: Advanced Management of Temperate Forages", as a follow up to their very successful Advanced Forage Management.

This new guide has information on new forage varieties for wet climates, understanding grass growth for better fertilization timing and harvesting, benefits of manure application, grazing rotation by grass variety, and more!

Co-author **Dr. Shabtai Bittman** will be coming to the **Whatcom Speaker Series on February 20th** to talk about forage management concepts from the new guide and answer any questions you may have related to forage production. **Free guides will be handed out to the first 40 attendees.**

Coming to Whatcom County
February 20th
Dr. Shabtai Bittman
Ten Mile Grange
12:00-1:30

Water Quality Sampling Sampling can be a strong farm management tool

Water quality sampling is conducted by various organizations throughout Whatcom County. Typically they look for fecal coliform as an indicator of manure runoff. However, livestock is not the only source of fecal coliform. Wildlife, septic systems, dogs, WWTP, and other sources cannot be easily differentiated from livestock and may also be a contributor.

The best defense and self assessment tool you have is to take your own water quality samples on your land for comparison.

How To Properly Take a Sample

If you are considering taking your own samples there are a few things you need to know.

First, follow a standard operating protocol (SOP) that allows you to procedures you took a good sample. Whatcom County has a manual on this that can be found on our website.

Take point-source or upstream and downstream samples for comparison, and be consistent with your sampling location and method.

Second, be sure to get sample bottles from the lab. Different types of samples require specific sample containers. Be sure you use a sampling bottle specific to fecal coliform.

Practice clean and sterile sample techniques. You don't want to contaminate your sample and get a false result.

Third, know how to properly store and transport samples. Fecal coliform samples need to be taken in special containers, chilled immediately, and transported to the lab within 4-6 hours for accurate results.

Lastly, take your samples to an accredited lab. Call and ask the lab if they are certified and what their sample handling procedures are. They may even pick up samples at a location near you. This will save you time and money.

More info

Go to **WhatcomCD.org** for more information and links to water sampling SOPs, labs, and current sampling programs in your watershed.

Whatcom Dairy Speaker Series

The Whatcom Dairy Speaker Series has been going on for a year now with great success.

Ask your neighbors what they think about it. We have had great feedback and brought in speakers to answer your questions and address production and economic issues you face daily.

We have had good attendance during the winter months, but will need to discontinue the Series if this falls too low. To ensure the Series continues, come once monthly and gain new information to increase your knowledge and better your practices.

Through your active participation and collaboration, this speaker series will continue!

Upcoming Topics

- ◆ Waste Storage Structures
- ◆ Soil Quality and Management
- ◆ Crop Production
- ◆ Animal Production/Welfare
- ◆ Manure Application Strategies
- ◆ Dairy Nutrition
- ◆ Cover and Relay Crops
- ◆ Pastures Optimization
- ◆ Information Technologies
- ◆ Animal Herd Health
- ◆ And more!

Want to request a topic or speaker? Let us know and we will make it happen!

To see who this months speaker is, go to: www.whatcomcd.org/dairy-speaker-series

Meeting Information

- Meetings are on the Third Thursday of the month.
- There is no charge for the event and a free lunch is provided!
- More information on upcoming speakers and topics is sent out via postcards and email. If you're not on our mailing list, let us know and we will sign you up.
- You can also check our website under "Dairy Speaker Series" for the latest information on speakers and upcoming topics.
- Miss a talk? All speakers are recorded and videos are available on our website.

Customizing Manure Application by Soil Type

Manure application can lead to surface and ground water pollution if not timed correctly, but this doesn't have to happen. By knowing your soil types, you can customize application and maximize crop production while minimizing pollution.

There are a lot of factors to assess before applying manure to your crop fields to ensure good nutrient uptake.

The first is agronomics: applying the right amount of nutrient at the right time to meet your crops needs.

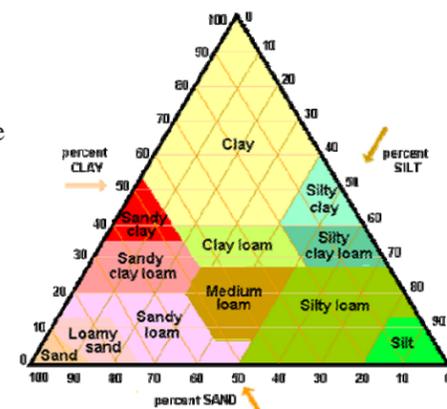
The second is weather: applying at times when weather events will not cause a movement of nutrients and pathogens from your field via surface water, groundwater, and/or air.

And the third is soil type: matching application timing and rate with soil condition and characteristics for maximum yield and minimum loss. As long as you know a few things, it is this third factor that you can use to plan ahead and customize your annual manure application strategy.

Soil Type

There are three main soil types, sand, silt and clay, which determine the texture and properties of your soil (Table 1). Each of your fields likely has a combination of one or more of these three soil types, the knowledge of which can help you better understand and manage each field.

In particular, we are most interested in the soil properties of infiltration, permeability, and water holding capacity as they relate to water management on your farm.



Your farm map should have all your soil types defined. If you don't have a map, or can't tell what the soil types are, contact WCD and we will print one out for no cost.

Infiltration and Runoff

Infiltration rate is the ability for water to move from the soil surface into the soil profile. This is the property that most closely predicts the surface runoff potential of a soil type. A soil with poor infiltration, such as clay, will be prone to ponding and standing water at the surface and will tend to be saturated for a greater part of the year. Fields that have been compacted, no matter the soil type, will also show these characteristics. Avoid these fields in the early season (Jan-Mar) and instead apply to your more permeable soils.

Property	Sand	Silt	Clay
Infiltration/Drainage	High	Medium-Low	Low
Runoff Potential	Low	Medium	High
Permeability (Leaching Rate)	High	Medium	Low
Water Holding Capacity	Low	Medium-High	High
Nutrient Storage/Supply	Low	Medium-High	High
Compaction Potential	Low	Medium	High
Manure Application Timing	Jan-Aug	Jan-Oct	Apr-Oct

Table 1. Rating associated with property of sand, silt, and clay type soils. Individual soils may be a combination of soil types and thus have a different rating.

Permeability and Leaching

Permeability is the rate at which water moves vertically through the soil profile. This is the property that helps determine the leaching potential of a soil type. Soils with large particle sizes and/or pore space, like sand, will have the greatest permeability rates and are prone to nitrogen leaching in the fall. These fields may need less nutrients after August, but may be candidates for mid-January application to maximize forage production.

Management Matters

No matter the soil type, if you are mis-managing your soil, you will have problems. Compaction leads to lower infiltration and permeability and increased runoff risk. Having vegetation such as grass and cover crops, and a higher organic matter content, can increase your soils infiltration rate and reduce runoff.

Think Before You Apply

Before you apply manure or fertilizer, think about your soil types. Are they on the sandy side and thus have a low runoff rate, or are they clay type soils and have a higher chance of runoff but lower leaching concern? This information will help you maximize crop production and minimize potential runoff and leaching issues.

Before You Apply Manure:

1. Determine your soil type
2. Calculate the agronomic rate for nutrient application
3. Check the **Manure Spreading Advisory** and weather forecast
4. Follow the current **Manure Application Setback Distance**
5. Check current field conditions (i.e., soil moisture, ponding, water table) before you apply

For more information on these tools, go to www.whatcomcd.org.

Don't Forget the Relay/Cover Crop this Year

A new campaign to show that relay/cover crops benefit you and Puget Sound

You may have seen new signs popping up around the county lately highlighting good farm practices. These signs are starting a conversation in the community about the good things that dairy farms are doing to enhance their watersheds. One of the easiest and most effective practices you can do to protect water quality is to plant cover/relay crops.

Cover/relay crops benefit both you and your community. Cover/relay crops, planted in conjunction with annual crops, such as corn, provide:

- **Surface cover that reduces sediment (soil) loss from your field, reducing the need for ditch clean out;**
- **Vegetation to take up excess nitrogen and limit losses to surface and ground water;**
- **Enhanced soil quality, infiltration (breaks up soil compaction), and organic matter for better crop yields;**
- **A harvestable or grazeable feed source that can supplement your animals ration (can get up to 1 ton/acre of extra feed at 18% CP).**

Be sure to take the time and plant your relay crop at sidredress or cultivation for a great cover crop next winter. You will be enhancing your watershed, community, and your bottom line.

Financial assistance may be available to help you get started.

If you plant your field with a cover crop, we will plant the sign this fall and take it down for you next spring. Just give us a call at (360) 354-2035 x 126 or stop by and get your name on the list.

Be part of a positive growing direction in your community!

