



South Saskatchewan River Watershed AEGP

South Sask River AEGP Technicians

Leah Tallis

306-254-4463

306-291-7499

leah_tallis@hotmail.ca

Kerry Lowndes

306-463-4942

306-460-4987

kerry.wssk@sasktel.net

We can direct you to technical support and help with applications for the **Farm Stewardship Program**, the **Farm & Ranch Water Infrastructure Program**, and the **Invasive Plant Control Program**.

**CONTACT US
TODAY!**

Variable Rate Treatments: Good for the Producer, Good for the Environment

More and more Western Canadian producers are adopting precision agriculture practices. With the use of a global positioning system (GPS) to track the location of equipment in the field, producers can apply the necessary input – such as fertilizer – in the precise amount needed and only where it is needed. This has potential benefits for the producer's bottom line as well as for the environment.

Making variable rate fertilizer applications can be complicated in that there are a number of factors and methods involved. Two of the essential elements in the process are: **1)** identifying fields that have significant nutrient variability; and **2)** determining what you hope to achieve by variable rate applications on those fields. Generally producers wish to increase or decrease input use with the goal of increasing yield and ultimately improving their profit margin. However as variable rate technology advances and our understanding about the science behind it increases, benefits such as reduced crop lodging, even maturity, decreasing disease pressure, and managing protein levels may be achieved.

Nutrient variability can be due to topography, soil texture, salinity or previous management practices. Different methods – such as soil conductivity maps, satellite images of vegetation and topographic maps – can be used to record the variations within the fields. This information is then used as the basis for developing management zones that require different treatments.

After making a variable rate fertilizer application, it is essential to record the cost of the treatments and the resulting crop yield in order to evaluate whether there is a net benefit to using these management practices in future years. Compare the results in each management zone against a check or constant rate that normally would have been used in that zone. By using this method, you can evaluate the results of the treatment in the management zones to determine if you have met your objectives. A learning curve can be expected when implementing new practices or technology on farm. It is therefore recommended a producer start with a manageable portion of land to minimize the effect of a potential unforeseen or disappointing result.

By: John Ippolito, Regional Crop Specialist, Ministry of Agriculture

Funding for Variable Fertilizer Rate Technology is available under **Growing Forward 2**. This BMP assists producers in purchasing equipment and services to target application rates to maximize plant utilization and minimize risk of nutrient loss to the environment. The benefits of variable rate fertilizer application include protected ground and surface water, improved nutrient management, and reduced volatilization.
See reverse for details.

The **South Saskatchewan River Agri-Environmental Group Plan** is a producer based group dedicated to raising watershed awareness among local area farmers and ranchers. Producers within the boundaries of the South Sask River Watershed are able to access the **Canada-Saskatchewan Farm Stewardship Program.**

The CSFSP provides **cost-shared funding** to encourage the implementation of **Beneficial Management Practices.** The BMPs help address issues of water quality, nutrient management



Beneficial Management Practices

- Irrigation Management Planning
- Irrigation Equipment Modification
- Variable Rate Irrigation Technology
- Natural Waterway Erosion Control
- Creek and Stream Crossings
- Protect High Risk Erodible & Saline Soils
- Native Plant Establishment
- Shelterbelt Establishment
- Used Oil, Filter and Fluid Storage
- Relocation of Livestock Confinement Facilities
- Fencing to Protect Surface Water
- Farmyard Runoff Control
- Riparian Area Grazing Management , Fencing
- Manure Application Equipment & Technologies
- Manure Storage Enhancements
- Integrated Pest Management
- Variable Rate Fertilizer Equipment
- Variable Rate Mapping

Variable Rate Fertilizer Equipment

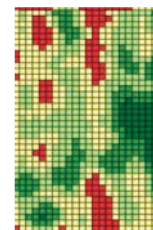
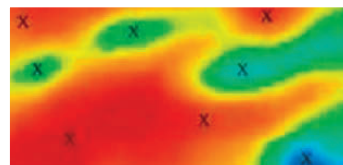
When purchasing a new piece of machinery, only the eligible component(s) will qualify for funding.

Eligible equipment includes: GPS linked in-cab variable-rate monitors and unlock codes, electronic controllers and associated flow control devices. Modification or upgrades of existing equipment is eligible if there is an enhanced environmental benefit compared to existing equipment. These upgrades will be evaluated on a case by case basis.



Variable Rate Mapping (Dryland and Irrigation)

Consulting services and associated costs for purposes of creating zone maps for variable rate fertilizer and variable rate irrigation application. This cost is a one-time consulting service for the initial zone map creation.



Variable Rate Irrigation Technology

Purchase and installation of new Variable Rate Irrigation equipment on new or existing irrigation systems.

Conversion of single speed electric irrigation pump motors to variable frequency drive (VFD) motors, including related control systems.

Sprinkler control valves complete with electrical and related components to control the individual sprinklers or groups of sprinklers.

Speed control system to vary the speed of the lateral allowing different water depths to be applied.

Electronic control panel including wiring and equipment to signal the control valves along the lateral length to apply the desired amount of water.

Lateral positioning system to locate the exact position of the lateral in the field so that the water can be applied in the appropriate places.

Remote communications technologies (e.g. telemetry that communicates with the center pivot panel).

Soil and plant moisture monitoring equipment (e.g. soil and leaf moisture sensors).



Please refer to <http://www.agriculture.gov.sk.ca/GF2-FarmStewardship> for up to date information

The Ministry of Agriculture has been holding a series of Invasive Weed Webinars.

These webinars can be accessed on the Ministry of Agriculture website and viewed at any time.

To find these and other Ministry of Agriculture webinars go to:

www.agriculture.gov.sk.ca/webinars