AGRI-FOOD LABORATORIES IS NOW PART OF SGS,
THE WORLD’S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY
FROM ACRES
TO THOUSANDS OF HECTARES
FEED AND INGREDIENT PACKAGES

INGREDIENTS AND FINISHED FEEDS

Package I
Crude protein, moisture

Package II
Crude protein, moisture, calcium, phosphorus,
kennium, magnesium, sodium

Package III
Type II plus zinc, manganese, copper

Package V
Crude protein, moisture, calcium, phosphorus,
Ca/P ratio, sodium,

Proximate I
Crude protein, moisture, crude fat, ash, carbohydrate
(calculated)

Proximate II
Proximate I with fat by acid hydrolysis instead of crude fat

Options
(If no base package is selected, a $10 base fee will apply)
Crude Fibre
Crude Fat
Hydrolyzed Fat
Salt
Ash
pH
ADF
NDF
Iron

Same Day Protein
Applies to samples received before 11am and can be reported “as is”

MINERAL PREMIX PACKAGES

Mineral I
Calcium, phosphorus

Mineral II
Calcium, magnesium

Mineral III
Calcium, phosphorus, sodium, potassium,
magnesium

Mineral IV
Zinc, copper, manganese, iron

Mineral V
Calcium, magnesium, phosphorus, sodium,
potassium, copper, zinc, manganese, iron

Any Single Element

TOXIN SCREENS

Vomitoxin
Zearalenone
T-2
Aflatoxin

MICROBIOLOGICAL

Yeast
Mold
Salmonella
Salmonella Confirmation
FATS AND OILS

MIU
Peroxide Value
Free Fatty Acids
20 Hour AOM
Iodine Value

OTHER ANALYSES

Feed Particle Size

Mixer Study
Mixer Na / Mn / Zn
Mixer Salt
Minimum 9 replicates. HACCP recommends Sodium. Other elements can be requested, contact the lab for more details.

MANURE ANALYSES

Liquid
Dry matter, nitrogen, phosphorus, potassium, total salt, ammonium nitrogen

Dry
Dry matter, nitrogen, phosphorus, potassium, ammonium nitrogen

Options
(If no base package is selected, a $10 base fee will apply)
Calcium and Magnesium
Zinc, Manganese, Copper, Iron
Total Salt
Carbon/Nitrogen Ratio
pH

HEAVY METALS

Arsenic
Lead
Mercury
Selenium
Please allow 10 days for results

LIVESTOCK WATER

AFL Mineral Analysis
pH, nitrate nitrogen, phosphorus, potassium, magnesium, calcium, chloride, sulphate, total salt (EC), bicarbonate, sodium, total dissolved solids, total hardness, zinc, manganese, copper, iron, boron, silicon

Minimum sample size: 500 ml
Samples in a microbiological bottle cannot be used for mineral analysis.
Samples for human consumption will not be analyzed based on the Safe Water Drinking Act 2002.

MICROBIOLOGICAL TESTS

Total Coliform
E. Coli
Faecal Coliform
Listeria
Faecal Streptococcus

Minimum sample size: 250 ml
Sterile bottle required.
Microbiological analysis will be on a separate report. Please submit your sample at the beginning of the week. Samples will not be accepted on Fridays.
# FEED AND FORAGE PACKAGES

## WET CHEMISTRY PACKAGES

<table>
<thead>
<tr>
<th>Type</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Moisture, crude protein</td>
</tr>
<tr>
<td>II</td>
<td>Moisture, crude protein, calcium, phosphorus, Ca/P ratio, potassium, magnesium sodium</td>
</tr>
<tr>
<td>III</td>
<td>Type II plus copper, zinc, manganese</td>
</tr>
<tr>
<td>IV</td>
<td>Type II plus acid detergent fibre, net energy lactation, total digestible nutrients</td>
</tr>
<tr>
<td>V</td>
<td>Moisture, crude protein, calcium, phosphorus, Ca/P ratio, sodium</td>
</tr>
</tbody>
</table>

**Swine ME**
Type II plus fat, ash, crude fibre, metabolizable energy

**Poultry ME**
Type II plus fat, starch, total sugar, metabolizable energy

**NCPS—Non-Forages**
DM, CP, Ca, P, K, Mg, Na, SP, ADF-CP, ADF, NDF, lignin, NDF-CP, fat, ash, starch

Calculations for: TDN, NEL, NEG, NEM, NFC, UIP (est.), RFV, OARDC energy calculations.

**AFL Excel Basic**
DM, CP, ADF, NDF, Ca, P, K, Mg, Na, TDN, NEL

**AFL Excel Plus**
DM, CP, SP, UIP, ADF, NDF, Ca, P, K, Mg, Na, TDN, NEL

## NIR FORAGE PACKAGES

<table>
<thead>
<tr>
<th>Package</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW40</td>
<td>NW40 with copper, zinc and manganese, iron by wet chemistry</td>
</tr>
<tr>
<td>NIR 20</td>
<td>NW40 with all results by NIR</td>
</tr>
<tr>
<td>NW41</td>
<td>NW40 with copper, zinc and manganese, iron by wet chemistry</td>
</tr>
<tr>
<td>NIR 40</td>
<td>Fermented forages only</td>
</tr>
<tr>
<td></td>
<td>CP, SP, ADF-CP, ADF, NDF, lignin, NDF-CP, fat, ash, starch, 24 hr and 48 hr NDF digestibility (for haylage and corn silage) (RFQ where applicable), calcium, phosphorus, potassium, magnesium, pH, digestibility rate, potentially digestible NDF with all the results by NIR</td>
</tr>
<tr>
<td>Milk 2006</td>
<td>Similar to NCPS Forage. All results using NIR. Package includes NDFD (48hr) as well as calculated milk per tonne and milk per acre.</td>
</tr>
<tr>
<td>Rapid Scissor Cuts</td>
<td>DM, by NIR: CP, ADF, NDF, RFV</td>
</tr>
<tr>
<td></td>
<td>Quick turnaround results to evaluate forage stand quality.</td>
</tr>
<tr>
<td>Options</td>
<td>(If no base package is selected, a $10 base fee will apply)</td>
</tr>
<tr>
<td></td>
<td>Starch (NIR)</td>
</tr>
<tr>
<td></td>
<td>24 hr or 48 hr NDF Digestibility (forages only)</td>
</tr>
</tbody>
</table>

## ADDITIONAL FORAGE PACKAGES

**AFL Excel Dry Cow**
Forages only

*By NIR:* crude protein, soluble protein, ADF-CP, degradable protein (est.), acid detergent fibre, neutral detergent fibre, lignin, total digestible nutrients, net energy lactation, non-fibre carbohydrates, relative feed value.

*By Wet Chemistry:* dry matter, calcium, phosphorus, potassium, magnesium, sodium, chloride, sulfur, pH, dietary cationic-anionic balance index

**CPM**
Fermented forages only

*By NIR:* CP, SP, ADF-CP, ADF, NDF, lignin, NDF-CP, fat, ash, starch, 24 hr and 48 hr NDF digestibility (for haylage and corn silage) (RFQ where applicable) Potentially digestible NDF

*By Wet Chemistry:* dry matter, calcium, phosphorus, potassium, magnesium, sodium, copper, zinc, manganese, pH, digestibility rate
NCPS—Forages
By NIR: CP, SP, ADF-CP, ADF, NDF, lignin, NDF-CP, fat, ash, starch
By wet chemistry: DM, Ca, P, K, Mg, Na
Calculations for: TDN, NEL, NEG, NEM, NFC, UIP (est.), RFV, OARDC energy calculations.

MEASURE

Equine DE
NW41 plus total digestible nutrients and digestible energy for horses

Equine Complete
NW41 plus fat, NDF-CP, ash, starch, sugar, total digestible nutrients and digestible energy for horses.

PHYSICAL TESTING

Penn State Particle Size
For TMR, corn silage, haylage

Physically Effective NDF
By Penn State Particle Separator (Lammers 1996)
Calculated from physically effective factor which has been determined as the sum of the dry matter retained on two sieves of the Penn State particle Separator (for forages) or as the sum of dry matter retained in two sieves of PSPS plus dry matter retained on 1.18mm screen (TMR).

Options
(If no base package is selected, a $10 base fee will apply)
Degradable Protein or UI
ADF-CP
NDF-CP
Soluble Protein
Acid Detergent Fibre
Neutral Detergent Fibre
Crude Fat
Crude Fibre
Iron
Lignin
pH
Sulphur
Salt
Sodium
Starch (Enzymatic)
Molybdenum
Nitrate Nitrogen (Nitrates)
Metabolizable Energy*
(for swine or poultry)

Corn Silage Processing Score
Percentage of total starch that passes through a 4.75 mm screen
*All required tests for this calculation must be selected before the option can be selected.

Supplies and Forms
If you require sample containers or submission forms, please contact the laboratory.

Our submission forms are also available in a writable PDF format on our website.
SOIL PACKAGES

**AFL Package I**
pH, phosphorus, potassium, magnesium
(includes buffer pH, if pH is less than 6.5)
OMAFRA Recommendations

**AFL Package II**
Basic I plus zinc and manganese
OMAFRA Recommendations

**AFL Package III**
Basic I plus organic matter, calcium, base saturation, cation exchange capacity
AFL Recommendations

**AFL Package IV**
Basic I plus organic matter, calcium, base saturation, cation exchange capacity, zinc, manganese, copper, iron, boron AFL Recommendations

**Options**
(If no base package is selected, a $10 base fee will apply)
Boron
Total Salt
Bray Phosphorus
Sulphate Sulphur
Organic Matter
Zinc and Manganese
Aluminum
Nitrate Nitrogen (12” or 24” depth)
Atrazine
Nematode Count
Soybean Cyst Nematode

**Physical Analysis**
%Sand, %Silt, %Clay
Sand Fraction
Bulk Density*
Hydraulic conductivity/permeability

**TOPSOIL PACKAGE**

**Top Soil Basic**
Texture (%sand, %silt, %clay), total salts, pH, buffer pH, phosphorus, potassium, magnesium, calcium, cation exchange capacity, chloride, sodium, sodium absorption ratio, organic matter.
Written recommendations for amendments

**HOME, LAWN AND GARDEN**
pH, phosphorus, potassium, magnesium calcium, sodium, organic matter and total salts, with lime requirements and fertilizer recommendations

**SOIL PACKAGES**

**GPS Grid Sampling**
Includes: GPS field mapping, soil sampling and soil analysis. Colour maps and soil reports in a binder.

*Soil tests:* pH, organic matter, phosphorus, potassium, magnesium, calcium, cation exchange capacity, zinc, manganese

**Rates on a per acre basis**

1 Ha Grids
(2.47 acres) (330’ X 330’)

0.40 Ha Grids
(1.0 acres) (208’ X 208’)

**Field Perimeter Maps**
Calculation of workable acres - $50 minimum charge

**Zone Sampling**
Includes maps and sample extraction. Soil analysis extra. Samples are taken from pre-determined management zones

**Composite Plus Sampling**
Includes maps and sample extraction. Soil analysis extra. GPS boundary map with geo-referenced random bulk composite samples every 25 acres.

**Regular Sampling**
Plus sample analysis. Random bulk composite samples pulled every 25 acres. No GPS mapping included.

**HEAVY METALS**

Heavy Metals
Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, zinc

This package is designed for agricultural use in obtaining a Certificate of Application from the Ministry of the Environment for application of bio-solids and NASMs.

**FERTILIZERS**

N, P2O5, K2O
Nitrogen, available phosphorus, soluble potash
N
P2O5
K2O
Agricultural Lime
Dry matter, calcium, magnesium, neutralizing value, particle size, agricultural limestone index.
PLANT TISSUE PACKAGES

Basic
Nitrogen, phosphorus, potassium, magnesium, calcium

Complete
Basic plus zinc, manganese, copper, iron, boron, sulphur

Options
(If no base package is selected, a $10 base fee will apply)
Sulphur
Nitrate Nitrogen
Molybdenum
Chlorides
Aluminum

MANURE ANALYSIS

Liquid
Dry matter, nitrogen, phosphorus, potassium, total salt, ammonium nitrogen

Dry
Dry matter, nitrogen, phosphorus, potassium, ammonium nitrogen

Options
(If no base package is selected, a $10 base fee will apply)
Calcium and Magnesium
Zinc, Manganese, Copper, Boron, Fe
Total Salt
Carbon/Nitrogen Ratio
pH

GREEN ROOF PACKAGE

Rooftop Substrate
Sand fraction, bulk density, water content, total pore space, maximum water capacity, air filled porosity, hydraulic conductivity/permeability, organic matter, largest grain size

COMPOST PACKAGES

Compost I
Dry matter, nitrogen, organic matter, organic carbon, C/N ratio, pH, calcium, phosphorus, potassium, magnesium, total salt, sodium

Compost II
Compost I plus cadmium, cobalt, chromium, copper, mercury, molybdenum, nickel, lead, selenium, zinc, arsenic, manganese

Options
(If no base package is selected, a $10 base fee will apply)
PCB
Foreign Material
Solvita Test
Faecal Coliform
Salmonella
Salmonella +ve confirmation
CO2 evolution
Available Soil Nutrient
Available Nutrients by SME
GREENHOUSE PACKAGES

GREENHOUSE MEDIA

**Basic**
- pH, nitrate nitrogen, phosphorus, potassium, calcium, magnesium, total salt, sodium, chloride, sulphate

**Complete**
- Basic plus ammonium nitrogen, iron, zinc, manganese, copper, boron, molybdenum, Aluminum

**Options**
(If no base package is selected, a $10 base fee will apply)
- Ammonium Nitrogen
- Organic Matter

DNA MULTISCAN

This analysis can detect the presence of plant pathogenic and beneficial organisms in various mediums quickly and simultaneously. Levels are reported as high, medium, low and not detected.

**Basic Scan**
- Best suited to monitor and detect the presence of 25 common plant pathogens in soil, water and plant tissue including Pythium, Phytophthora and Verticillium.

**Diagnostic Scan**
- Best suited as a diagnostic tool; can detect the presence of 66 pathogens and beneficial organisms.

**Additional Tests**
- Bacterial Tomato Canker only

GREENHOUSE SOLUTION

**Complete Water**
- For water without fertilizer
- Total salt, pH, nitrate nitrogen, phosphorus, potassium, calcium, magnesium, sodium, chloride, sulphate, zinc, molybdenum, manganese, copper, iron, boron, silicon, total hardness, bicarbonate, total dissolved solids

**Complete Solution**
- For fertilizer solutions
- Total salt, pH, nitrate nitrogen, phosphorus, potassium, calcium, magnesium, sodium, chloride, sulphate, zinc, molybdenum, manganese, copper, iron, boron, silicon, bicarbonate, ammonium nitrogen

PLANT TISSUE PACKAGES

**Basic**
- Nitrogen, phosphorus, potassium, magnesium, calcium

**Complete**
- Basic plus zinc, manganese, copper, iron, boron, sulphur

**Options**
(If no base package is selected, a $10 base fee will apply)
- Sulphur
- Nitrate Nitrogen
- Molybdenum
- Chlorides
- Aluminum
**COMPOST PACKAGES**

**Compost I**
Dry matter, nitrogen, organic matter, organic carbon, C/N ratio, pH, calcium, phosphorus, potassium, magnesium, total salt, sodium

**Compost II**
Compost I plus cadmium, cobalt, chromium, copper, mercury, molybdenum, nickel, lead, selenium, zinc, arsenic, manganese, aluminum

**Options**
(If no base package is selected, a $10 base fee will apply)
- PCB
- Foreign Material
- Solvita Test
- Fecal Coliform
- Salmonella
- CO2 evolution
- Available Soil Nutrient
- Available Nutrients by SME

**GREEN ROOF PACKAGES**

**Rooftop Substrate**
Sand fraction, bulk density, water content, total pore space, maximum water capacity, air filled porosity, hydraulic conductivity/permeability, organic matter, largest grain size.

**Physical Properties**
Total porosity, total air space, water holding capacity, bulk density, moisture.

**FERTILIZERS**

**N, P2O5, K2O**
Nitrogen, available phosphorus, soluble potash

**MICROBIOLOGICAL TESTS**

- Total Coliform
- E. Coli
- Faecal Coliform
- Listeria
- Faecal Streptococcus

Minimum sample size: 250 ml
Sterile bottle required — Microbiological analysis will be on a separate report.
Please submit your sample at the beginning of the week to ensure accurate results.

**SUPPLIES AND FORMS**

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**CONTACTS**

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