PENNSTATE
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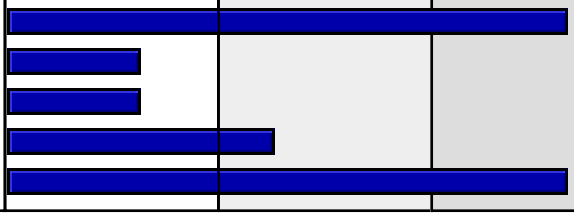
| SOIL TEST REPORT FOR: | ADDITIONAL COPY TO: |
|---|---|
| JOHN JONES<br>JONES FAMILY FARM<br>HARMONY LANE<br>GREENVILLE PA 22222 | SAM COOK<br>TOP GROW ENTERPRISES<br>111 ALFALFA RD.<br>SMITHVILLE PA 11111 |

| DATE | LAB # | SERIAL # | COUNTY | ACRES | FIELD ID | SOIL |
|---|---|---|---|---|---|---|
| 06/11/2014 | S01-19627 | 55 | Centre | 40 | Back 40 | |

**SOIL NUTRIENT LEVELS**

| | | | | Deficient | Optimum | Exceeds Crop Needs |
|---|---|---|---|---|---|---|
| **Soil pH** | | 7.0 | | | | |
| **Phosphate** | **($P_2O_5$)** | 160 | **lb/A** | | | |
| **Potash** | **($K_2O$)** | 240 | **lb/A** | | | |
| **Magnesium** | **(MgO)** | 332 | **lb/A** | | | |
| **Calcium** | **(CaO)** | 4448 | **lb/A** | | | |



**RECOMMENDATIONS FOR:** ***Apples-Maintain***

**Limestone:** NONE

**Magnesium (Mg):** NONE

**Phosphate ($P_2O_5$):** 100 lb/A

**Potash ($K_2O$):** 80 lb/A

**MESSAGES**

Nitrogen should be applied based on leaf analysis and shoot growth. In absence of a current season's leaf analysis, shoot growth on bearing trees should be 12 to 18 inches. Another general guideline is to apply 0.02 lb of actual N per tree per year of tree age. If following this guideline, do not exceed 0.30 lb of actual N per tree per year.

If terminal growth was excessive, fruit color was inadequate or major renovative pruning was performed, a reduction in the rate of N application is in order.

**LABORATORY RESULTS:**

| [1]pH | [2]P lb/A | Exchangeable Cations (meq/100g) | | | | | % Saturation of the CEC | | | Optional Tests: | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [3]Acidity | [2]K | [2]Mg | [2]Ca | [4]CEC | K | Mg | Ca | Organic Matter % | Nitrate-N ppm | Soluble salts mmhos/cm |
| 7.0 | 70 | 0.0 | 0.3 | 0.8 | 8.0 | 9.1 | 2.8 | 9.2 | 88.0 | | | |

Test Methods: [1]1:1 soil:water pH, [2]Mehlich 3 (ICP), [3]Mehlich Buffer pH, [4]Summation of Cations

TIME OF APPLICATION: lime and fertilizer materials, except for N, may be applied anytime during the year. Apply N four to six weeks before bloom. Additions of manganese, zinc, or copper may be applied as dormant sprays and boron sprays may be applied during bloom or petal fall or after the fruit has been harvested but while the leaves are still active.

If soil test is for a pre plant situation, the pH should be adjusted to a minimum of 18 inches. This means it will be necessary to take a soil sample at the 8 to 12 inch depth and one at the 12 to 18 inch depth.

To obtain the maximum benefit from a soil testing program in your orchard, it is best to take soil and leaf analysis from the same block during the same year. The comparison of both results will give the best picture of nutritional status of your orchard. Contact your local county Extension office for information on the proper method and timing of leaf analysis.

Soil nutrient levels exceeding crop needs can be as bad as deficient levels. High soil nutrient levels not only might represent an economic loss, but they may also result in crop, animal or environmental problems. Very high P levels (above about 310 lbs $P_2O_5$/acre or 140 lbs P/acre) in the soil may lead to nutrient deficiencies, especially of iron and zinc. If K, Mg and/or Ca levels are high, serious nutrient imbalances can occur. When K levels are above about 5% saturation; Mg levels 15%; and Ca levels 80%, soil nutrition is beginning to get out of the optimum range. Use best management practices to avoid increasing nutrient levels that exceed crop needs.