1965
SUMMARY OF RESULTS
FROM
OHIO PLANT ANALYSIS LABORATORY
FOR
FRUIT CROPS
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Horticulture Mimeograph Series No. 325, January 19, 1966

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The information presented on the following pages is a summary of the results from samples sent to the Ohio Plant Analysis Laboratory during 1965 for fruit crops. The recommended July petiole or leaf content represents the sufficient range within which the tissue can vary and still have a desirable content of that element. Satisfactory progress has been made in applying these standards so that, within reason, they are a very useful tool in diagnosing the nutrient status of fruit crops. However, they stand subject to modification when challenged by more recent findings in our research program.

Several additional terms are used to describe the relative nutrient content of plant foliage outside the "sufficient range." To better understand their meaning, the following definitions are included.

## Range

Deficient: Plants are in the deficient range if (1) they show visable leaf symptoms or, (2) distinct yield decreases and/or quality reductions result. A significant increase in the application rate of this element is recommended.

Low: Plants are in the low range if the amount of the element present in the plant is inadequate to produce the most acceptable yields and/or quality. Because of the absence of visual symptoms, general observation may not reveal that yield and/or quality is being depressed. Use of this term frequently means that the plant is approaching the deficient range and continued production without applying this element or fertilizing with some other element may produce a deficiency.

Sufficient: Plants are in the sufficient range if it is doubtful that further additions or reductions of the element will result in a desirable increase of growth, yield, or quality. Somewhere within this range is the absolute optimum, which together with the combination of the other elements present, will produce the most desirable product.

High: Plants are in the high range if the level of the element present in the plant is higher than necessary to produce optimum yields, growth and/or quality. This amount may also indicate unfavorable quality relationships or an imbalance of other nutrients.

Excess: Plants contain an excessive or toxic amount of an element if (1) visable leaf symptoms are present or, (2) definite reductions in yield, vigor and/or quality result. At this level the deficiency of another essential element may be induced.

1965 PLANT ANALYSIS LABORATORY
Summary of Apple Samples

Percent Dry Weight
PFM Dry Wt.
Recommended July
Leaf Content*
1965 Lab. Average $\begin{array}{llllllllllllllllllllll} & 2.13 & .20 & 1.59 & 1.44 & .30 & 93 & 128 & 30 & 9 & .8 & 32 & 330\end{array}$

| N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | $10 / 20$ |  |  | - |

Total Apple Samples Analyzed: 57
1964 Total: 30
Counties Represented: Mahoning-17, Jackson-6, Monroe-5, Erie-4, Logan-4, Geauga-3, Huron-2, Clermont-2, Hamilton-2, Belmont-2, Montgomery-2, Jefferson-2, Fulton-l, Carroll-1, Stark-1, Ashtabula-1, Sandusky-1, Medina-1.

Total Growers Represented: 26

Of the total number samples analyzed,

| there were: | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | Al |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Deficient | 2 | 3 | 2 | 2 | 4 | 1 | 0 | 4 | 1 | 0 | 6 | - |
| Low | 12 | 28 | 7 | 13 | 3 | 0 | 0 | 16 | 37 | 29 | 17 | - |
| *Sufficient | 33 | 21 | 30 | 31 | 41 | 50 | 45 | 37 | 19 | 19 | 22 | - |
| High | 10 | 5 | 18 | 11 | 9 | 6 | 12 | 0 | 0 | 9 | 12 | - |
| Excess | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |

Total
57
Symbols

$$
\begin{aligned}
\mathrm{N} & =\text { Nitrogen } \\
\mathrm{P} & =\text { Phosphorus } \\
\mathrm{K} & =\text { Potassium } \\
\mathrm{Ca} & =\text { Calcium }
\end{aligned}
$$

| $\mathrm{Mg}=$ Magnesium | $\mathrm{Cu}=$ Copper |
| :--- | :--- |
| $\mathrm{Mn}=$ Manganese | $\mathrm{Mo}=$ Molybdenum |
| $\mathrm{Fe}=$ Iron | $\mathrm{Zn}=$ Zinc |
| $\mathrm{B}=$ Boron | $\mathrm{Al}=$ Aluminum |

## 1965 PLANT ANALYSIS LABORATORY

Summary of Grape Samples

|  | Percent Dry Weight |  |  |  |  | PPM Dry Wt. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | Al |
| Recommended July Petiole Content* | -9/ | $.16 / 30$ | $1.5 / 2$ | $1.0 / 1$ |  |  | $30 / 50$ | $25 / 50$ | $10 / 15$ | $.3 / 1.5$ | $30 / 50$ | - |
| 1965 Lab. Average | .97 | . 22 | 1.73 | 1.05 | .43 | 219 | 70 | 29 | 25 | 2.0 | 40 | 46 |

Total Grape Samples Analyzed: $45 \quad 1964$ Total: 6
Counties Represented: Ashtabula-5, Lake-4, Erie-2, Geauga-1, Lorrain-1, Montgomery-1, Ottawa-l, Jackson-l, Richland-l.

Total Growers Represented: 17

Of the total number

| there were | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | Al |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deficient | 1 | 9 | 3 | 10 | 2 | 1 | 1 | 0 | - | 0 | 0 | - |
| Low | 17 | 5 | 8 | 15 | 10 | 0 | 14 | 8 | 19 | 15 | 10 | - |
| *Sufficient | 25 | 20 | 31 | 17 | 18 | 10 | 12 | 37 | 15 | 17 | 27 | - |
| High | 1 | 11 | 3 | 3 | 15 | 34 | 18 | 0 | 11 | 13 | 8 | - |
| Excess | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ? | 0 ? | 0 | - | Total 45

# 1965 PLANT ANALYSIS LABORATORY <br> Summary of Peach Samples 

|  | Percent Dry Weight |  |  |  |  | PPM Dry Wt. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | A1 |
| Recommended July Leaf Content* |  | $.30$ |  |  |  | 35 150 | 50/ 150 | $25 / 50$ | $10 / 20$ | $.5 / 2.0$ | $20 / 50$ | - |
| 1965 Lab. Average | 2.47 | . 17 | 2.11 | 2.06 | . 46 | 137 | 182 | 28 | 8 | . 7 | 21 | 290 |

Total Peach Samples Analyzed: 71964 Total: 6

Counties Represented: Jackson-2, Ashland-2, Carroll-1, Belmont-1 Mahoning-1.
Total Growers Represented: 5

| Of the total number samples analyzed, there were: | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | Al |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deficient | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Low | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 2 | - |
| *Sufficient | 2 | 1 | 3 | 6 | 1 | 4 | 2 | 7 | 2 | 5 | 5 | - |
| High | 0 | 0 | 4 | 1 | 6 | 3 | 5 | 0 | 0 | 0 | 0 | - |
| Excess | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
|  | mi |  |  |  |  |  |  |  |  |  |  |  | Total 7

1965 PLANT ANALYSIS LABORATORY
Summary of Cherry Samples

Percent Dry Weight PPM Dry Wt.


Total Cherry Samples Analyzed: 7
1964 Total: 3
Counties Represented: Sandusky-4, Carroll-1, Jackson-1, Erie-1.
Total Growers Represented: 4

| Of the total number samples analyzed, there were: | N | P | K | Ca | Mg | Mn | Fe | B | Cu | Mo | Zn | Al |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deficient | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Low | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | - |
| *Sufficient | 4 | 4 | 6 | 7 | 5 | 7 | 2 | 7 | 7 | 1 | 4 | - |
| High | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 5 | 0 | - |
| Excess | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Total | 7 |  |  |  |  |  |  |  |  |  |  |  |

Summary of Pear Samples
Percent Dry Weight PPM Dry Wt.

1965 Lab. Average $\begin{array}{lllllllllllll}2.27 & .14 & 1.42 & 1.63 & .28 & 73 & 158 & 23 & 10 & .15 & 58 & 208\end{array}$
Total Pear Samples Analyzed: 2
1964 Total: 0
Counties Represented: Geauga-2.
Total Growers Represented: I

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