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8-1963

Agronomy Notes, no. 1

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Phillips, S. H.; Miller, Harold F.; and Finkner, Verne C., "Agronomy Notes, no. 1" (1963). *Agronomy Notes*. 231.
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AGRONOMY NOTES

SOILS • CROPS

Prepared by Department of Agronomy, University of Kentucky Cooperative Extension Service

No. 1
August, 1963

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This is the first issue of "Agronomy Notes." The Agronomy Department, University of Kentucky, expects to use this publication to inform county agents, other agricultural workers, and leaders on current progress in soils & crops work. The Kentucky Experiment Station will be an important source of information. Information may be drawn from other research. Field trials and observations that show useful information may be reported. The emphasis will be on short timely topics.

It is not now planned to have regular times for publication. Each issue will be numbered, for possible help in reference. The paper is punched for a 3-ring binder. An Agronomy Notebook may be preferred to a file folder

Jones H. Smiley - Extension Tobacco Specialist

Jones H. Smiley, a native of Casey county, Kentucky joined our extension specialist staff July 1, 1963. He received his B. S. degree from the University of Kentucky in 1959, and his M. S. degree in 1960. He has just completed all requirements for a Ph.D. degree from the University of Wisconsin. His research while working toward his M. S. degree here was under the direction of Dr. G. W. Stokes, so he has had both practical and scientific experience relating to tobacco production and its problems.

(To simplify information in this publication, trade names of some products are used. No endorsement is intended, nor is criticism implied of similar products not named.)

Cooperative Extension Work in Agriculture and Home Economics: College of Agriculture and Home Economics, University of Kentucky, Lexington, and the United States Department of Agriculture, cooperating. William A. Seay, Director. Issued in furtherance of the Acts of May 8 and June 30, 1914.

Plant Pathology Department

In case you missed the announcement in the newspapers, a department of Plant Pathology has been created effective July 1, 1963, with Dr. R. A. Chapman as head. Their headquarters will be the tobacco laboratory on Washington Street until the new Agricultural Science Building is completed. Other members of the new department include Stephen Diachun, R. E. Hampton, Lawrence Henson, E. M. Johnson, R. A. Reinert, G. W. Stokes (joint appointment with the Agronomy Department), W. D. Valleau (special assignment), and C. C. Litton (U.S.D.A.).

Soybean Problems

Manganese deficiency has been reported in a few Kentucky counties. Daviess and Hopkins counties have the largest frequency, with deficiencies occurring within a small area and a relatively small percentage of growers affected.

The symptoms are characterized by a yellowing of the leaves over the entire plant. Veins in the leaves maintain a darker green color with a striking contrast of yellow to whitish cast in the adjoining leaf area. This condition should not be confused with potash starvation, which is contrasted by the yellowing occurring on the lower leaves of the plant with the associated rim binding and leaf roughness.

Effect on yield is from slight to moderate, with severely affected fields having possible 5-7 bu decreases. Less affected areas tend to recover as plants enlarge root systems.

Present recommendations include foliar spraying with 3 to 10 pounds of manganese sulfate, after deficiencies become apparent. The cost of this application will average approximately 60-75¢ per acre and immediate color

change is evident. Banded manganese will also be used to prevent deficiencies from occurring.

Heavier clay soils with pH levels above 6.3 and having a long soybean production history should be the first problem areas.

S. H. Phillips
H. F. Miller

Wheat Varieties - 1963

Wheat variety recommendations have been changed completely in the past 5 to 10 years. Recent improvements in disease and insect resistance associated with other increased yield efficiencies are important to wheat growers. This discussion of several wheat varieties may prove helpful to growers in selecting varieties for 1963.

Wheat Varieties of Interest to Kentucky Growers

Monon: A short-strawed, beardless, white chaffed, soft red winter. Early maturing - equal to or superior to other commercial varieties in milling and baking qualities. Monon is very similar to Knox in plant height and maturity. It has a good yield record and is winterhardy. Monon is resistant to soil-borne mosaic and leaf rust, and is moderately resistant to powdery mildew in the mature plant stage. It is susceptible to traces of loose smut; but loose smut doesn't appear to build up in Monon as rapidly as it does in Knox. It is resistant to hessian fly.

Knox: A short-strawed, beardless, white-chaffed, soft red winter wheat, with compact heads. Early maturing; has excellent milling and baking qualities. Averages 10 inches shorter and heads 2 weeks earlier than Vigo. The short straw and early maturity may be helpful in aiding the establishment of grass and legume stands. Has a good yield record; is winterhardy

and usually escapes leaf and stem rust because of its resistance and early maturity. Resistant to soil-borne mosaic but not resistant to hessian fly. Susceptible to loose smut and Septoria.

Vermillion: A beardless, white-chaffed, soft red winter wheat, with compact heads. In tests was slightly more winterhardy and higher yielding than Knox. Somewhat stiffer strawed than Knox and averages about 2 days later in heading and is 2 inches taller. Heads are larger than Knox and more uniform in shape. Usually escapes leaf and stem rust disease damage because of its resistance and early maturity. Resistant to soil-borne mosaic. Susceptible to powdery mildew, loose smut, and Septoria. Loose smut has not increased so rapidly in Vermillion as in Knox. Not resistant to hessian fly.

Dual: A beardless, white-chaffed, soft red winter wheat, with semicompact heads. Winterhardy and high yielding in Kentucky tests. Has excellent strength of straw; heads 2 days earlier than Vigo. It is 4 to 6 inches taller than Knox, but its test weight averages about 2 pounds per bushel less. Dual has good resistance to leaf rust and adult plant resistance to mildew, but was susceptible to mildew in the seeding stage. Resistant to soil-borne mosaic but susceptible to Septoria and loose smut. Resistant to hessian fly.

Newer Varieties of Interest

Knox 62: About the same varietal characteristics as Knox but is hessian fly resistant and has moderate resistance to loose smut.

Red Coat: Released in 1962 and recommended for production under high fertility condition where lodging is a problem. Tends to shatter under certain conditions but has hessian fly resistance and increased disease resistance.

Gaines: A white wheat creating interest in Western Pennyroyal - observations in Kentucky during 1963 harvest year show it to be completely unadapted with low yields and poor quality

Summary of Varietal Characteristics

Variety	Maturity (compared with Knox)	Plant height	Standing Ability	Test weight	Winter hardiness	Leaf rust	Powdery mildew	Loose smut	Hessian fly
Monon	-1	36	Good	Good	Good	Excellent	Fair	Low	Excellent
Knox	0	37	Fair	Excellent	Good	Excellent	Good	Low	None
Knox 62	0	37	Fair	Excellent	Good	Excellent	Good	Moder.	Excellent
Vermillion	+1	38	Good	Good	Excellent	Excellent	None	Moder.	None
Dual	+8	42	Good	Fair	Good	Excellent	Fair	Low	Excellent
Redcoat	+7	41	Excellent	Good	Good	Excellent	Excell.	Moder.	"

S. H. Phillips
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