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**REVIEW OF CROP CONDITIONS IN VIRGINIA DURING
 THE SEASON OF 1899.**

S EEDING, in the fall of 1898, was made under generally favorable conditions. Winter wheat, clover and grass made good progress, although some injury was sustained from freezing weather. At no time was there sufficient snow on the ground to afford adequate protection.

JANUARY.—Freezing and thawing weather without snow protection was unfavorable for crop growth and germination. Many fields were reported thin and some entirely winter-killed. In a few localities wheat sown early got a good start and came through the month very well.

FEBRUARY.—The condition of winter wheat and clover improved slowly during the month, though the weather was much colder than usual in all parts of the State. Abundant snow protection obtained throughout the last half of the month. Farm work was much delayed from the same cause.

MARCH.—Cold, wet weather, prevailed throughout the month, retarding plant growth and farm work. Early-sown wheat in some portions showed better progress than the late-sown, but in the northern half of the State both the early and late-sown fields were reported to be in poor condition. Very little of the usual spring plowing was done, and no gardening of consequence. Winter oats were also backward. The preparation of plant-beds for tobacco, which is usually completed by the close of the month, was hardly begun then. Generally, crop conditions were more backward than for years.

APRIL.—Winter wheat began the month in a very backward condition, but the early-sown gained steadily. Winter oats improved some. Weather generally more favorable, and seeding of tobacco was rapidly carried forward. The young plants came up well in the beds, and at the close of the month had made good growth. Corn planting, which began on the high lands during the latter part of March, was mostly finished at the end of the month, and some of the earlier-planted was up. Clover, grass and pastures, were well advanced. Planting of Irish potatoes was carried on, mostly in the Tidewater section. Sweet potato beds backward. Fruits, except peaches, generally promise to yield

well. Though a perceptible improvement in crop growth took place during the month, its close still found them backward for the season.

MAY.—Winter wheat and winter and spring oats, while not up to the average for the time of year, made noticeable improvement. Winter oats headed short in stalk, and the stand was thin. Corn generally had a good stand, and the crop was under cultivation. Tobacco transplanting was vigorously prosecuted. Potatoes and truck crops made excellent progress. Shipments of native strawberries, spring peas and early cabbage were made. Fruit fell off from its indicated yield earlier in the season. On the whole, the month was quite favorable for crop growth, the condition of which was generally good at its close.

JUNE gave abundant moisture and many warm, bright days, the effect of which was to promote a fine growth in all classes of crops. Harvesting of the wheat crop began about the 10th, and continued throughout the month. The yield, though light, was of fine quality. Winter and spring oats harvest also began during the month, with light yields of each. The weather was unusually favorable for tobacco, which made excellent progress, with indications for a full average yield. The condition of corn was also much improved. Apples reported falling from the trees in the first half of the month.

JULY.—This month saw the completion of wheat and oats harvest, and its stacking and threshing. Of the former the yields were light, as indicated, but the quality unusually good; of the latter the yields were light and the quality variable. The month was droughty locally, but the temperature favorable, except at night, when it was somewhat cool for tobacco and corn, and checked the growth of these staples to some extent. The crop of Irish potatoes was poor, but the sweet potatoes were promising. The field work of the month was mainly harvesting of the wheat and oats crop, threshing, saving hay, and, in the latter part, preparing the ground for the fall seeding.

AUGUST.—The general weather conditions prevailing throughout the month were quite favorable for the progress of the crops. Corn was quite promising, and tobacco was more than ordinarily good. Outdoor work was carried on under favorable auspices. Cutting, housing and curing of tobacco was in progress, and fallowing and saving of fodder under way.

SEPTEMBER.—Full average crops of tobacco, corn and fodder were secured. Some of the late-planted tobacco was still outstanding, but was maturing nicely. General and heavy rains fell in the last decade. They were beneficial to pastures, and put the ground in good condition for plowing and fall seeding.

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GENERAL SUMMARY FOR THE YEAR 1899.

JANUARY was somewhat colder than usual, the average daily deficiency being 1.4 degrees. Both maximum and minimum temperatures were recorded in the first decade, the warmest weather occurring between the 4th-6th, and the coldest on the 2d. The precipitation was also below normal, the deficiency being 1.02 inches. Its character was generally rain, though unusually heavy sleet storms occurred on the 12th to 14th and 16th to 18th, and snow prevailed on the 28th and 31st. Thunderstorms prevailed on the 24th and 25th. Average number of rainy days, 10. Flood water prevailed in the lower courses of the James river on the 7th. Maximum gauge reading at Richmond, 13.5 feet. Prevailing wind direction, W.

FEBRUARY gave exceptionally cold, severe weather, the average daily deficiency being 8.1 degrees. The maximum temperatures were recorded between the 22d and 25th, and the minimum generally on the 10th-11th. At several places in the State the cold weather record was broken. Twenty-nine degrees below zero at Monterey, Highland County, was the lowest recorded temperature. The precipitation was decidedly in excess of the normal, and came as rain, sleet and snow. The sleet storms were very severe, causing much damage to trees. In the matter of snowfall the month was a notable one. By far the greater portion was deposited during the passage of one storm, and this was of such long duration and so excessive in quantity as to entitle it to rank among the remarkable storms of the last half century. No reliable record approaching it has yet been made public. It caused a suspension of travel by rail, and an immediate and absolute stoppage of ordinary business pursuits. With the melting of the great quantity of snow, flood water of unusual magnitude prevailed in the James river from the upper waters to tide water. An ice jam occurred at Richmond, doing damage to bridges and other property. Thunderstorms were reported over the State on the 8d and locally on other dates. Prevailing wind direction, W.

MARCH, though about the average in respect to temperature, gave abnormally cold weather for a short period early in the month. The warmest days were generally the 12th and 31st, and the coldest the 7th and 8th. The precipitation, as in the preceding month, was decidedly above the normal, the excess being 2.61 inches. Snow occurred over the State on the 6th and 7th and in the Valley counties in the last decade. Thunderstorms were frequent. The heavy rains of the 4th-5th and the 19th each produced freshet water in the James river. The first of these was the greatest in volume occurring here for many years past. Average number of rainy days for the State, 12. Prevailing wind direction, W.

APRIL gave temperatures very nearly normal for the month. Fluctuations were gradual and moderate. The coldest weather occurred on various dates in the first decade, and the warmest generally on the 14th and 30th. Frosts were frequent during the cold weather, and tender vines and early fruit blooms were damaged. Precipitation was deficient about 1.36 inches for the State. It came mainly as rain, but snow of generally inconsiderable amounts prevailed on the 4th. Thunderstorms occurred on various dates, though not so frequently as in March. Average number of rainy days, 4. Prevailing wind direction, W.

MAY, in respect of temperature, was a little above normal, the excess being 1.0 degree. The percentage of clear and fair days was quite high, and during the major part of the month and until the unseasonably cold weather of the last decade, the departure from the normal was greater than 1.0 degree. The coolest period was the 24th to 26th, and the warmest the 28th to 31st. During the prevalence of this cold

weather frosts were general over the State. The precipitation was deficient, being about 1.00 inch below the normal. Thunderstorms were general on the 3d, 8th, 29th and 31st; hailstorms were reported on the 8th. Average number of rainy days, 11. Prevailing wind direction, SW.

JUNE was also 1.0 degree above the normal. It opened with fairly high maximum temperatures, which culminated on the 7th-8th in readings of 90 to 104 degrees. A general tendency toward cooler weather then set in, and the lowest temperatures were recorded mostly on the 17th-19th. The nocturnal temperatures were notably cool and refreshing. Precipitation was about normal. Thunderstorms were frequent. Hail fell locally on several dates. Average number of rainy days, 8. Prevailing wind direction, W.

JULY temperatures averaged 1.1 degrees above the normal. The opening days of the month were cool, but warmer weather followed, yielding maximum records of from 95 to 101 degrees on the 16th and moderating slowly thereafter. The precipitation was slightly in excess of the normal. The rainiest portion of the month was the period 24th to 30th. Thunderstorms prevailed on many dates. The average number of rainy days was 10. Prevailing direction of wind, S.

AUGUST gave practically normal temperatures. To the casual observer the month would have seemed rather cooler than usual, there being many relatively cool days and a constant condition of comparatively low nocturnal temperature. There were many clear days. Warmest day, 5th; coolest day, 17th. In respect to precipitation, there was a slight excess over the normal, though moderately droughty weather prevailed in the Tidewater and Valley divisions. Average number of rainy days, 8. Prevailing wind direction, NE.

SEPTEMBER was a cool month, the average daily deficiency being about 2.0 degrees. The warmest weather occurred on the 6th, and the coolest on several days in the last decade, the 28th being the most frequent. Light frosts were general, and heavy frosts occurred in the Valley, during the last ten days. The precipitation was about normal. Thunderstorms occurred on many dates, and hail on the 25th. Average number of rainy days, 7. Prevailing wind directions, SE., and SW.

OCTOBER mean temperature was 58.5 degrees, or about normal. The coolest weather occurred in the first and last decades, producing light to heavy frosts, and the warmest generally in the second decade. Month quite sunny and pleasant. The precipitation was somewhat deficient. Thunderstorms occurred locally on the 30th and 31st. Average number of rainy days, 5. Prevailing wind direction, NE.

NOVEMBER was a month of many bright, pleasant days, with just sufficient crispness in the morning and evening temperatures to make the weather bracing and invigorating. The mean for the month was about normal. Warmest days, 11th and 19th; coolest, 26th and 27th. Precipitation was decidedly below normal, the deficiency being 1.54 inches. The first snow of the season came on the 3d. Thunderstorms were reported on the same date. Average number of rainy days, 4. Prevailing wind direction, SW.

DECEMBER was sunny and mild until the last decade, when cold weather set in. Warmest days, 11th and 12th; coldest, 30th and 31st. The precipitation was nearly 1 inch below normal, but the amount falling as snow was greater than usual. A thunderstorm occurred on the 12th. Average number of rainy days, 6. Prevailing wind direction, NW.

ERRATA.—Annual report, 1898: Alexandria, mean temperature, Nov., 41.0, should be 44.5. Ashland, total precipitation, Nov., 1.95, should be 1.93; annual, 41.36, should be 43.34. Buckingham, annual mean temperature, 55.8, should be 55.7. Clifton Forge, annual mean temperature, 54.0, should be 54.1. Dowell, total precipitation, Nov., 2.27, should be 2.47. Marion, annual mean temperature, 52.2, should be 52.1; total precipitation, Nov., 2.20, should be 2.30; annual precipitation, 48.30, should be 48.40. Petersburg, annual mean temperature, 58.7, should be 59.1. Rocky Mount, annual mean temperature, 57.9, should be 59.1. Stauntonville, annual mean temperature, 56.1, should be 54.9.