

3454. M. 26

To be filled up, and sent on the first of each month, in an envelope, addressed to the "Commissioner of Agriculture, Washington, D. C."

# REGISTER OF METEOROLOGICAL OBSERVATIONS, UNDER THE DIRECTION OF THE SMITHSONIAN INSTITUTION, ADOPTED BY THE COMMISSIONER OF AGRICULTURE FOR HIS ANNUAL REPORT.

265 154

Place of Observation: Northampton Mill, County of King George, State of Virginia

Latitude 38° 13'; Longitude 77° 12'; Height above the sea: 150 feet

Name and address of Observer: David P. Dwyer, Comm. King Geo. Co. Va.

For the month of July, 1886

| DAY OF MONTH. | THERMOMETER IN THE OPEN AIR. |         |         |       | RAIN AND SNOW.                     |                                 |                                                    |                           | CLOUDS.               |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            | WINDS.     |        |            |        |            |        | DAY OF MONTH. |
|---------------|------------------------------|---------|---------|-------|------------------------------------|---------------------------------|----------------------------------------------------|---------------------------|-----------------------|-----------------|--------------------------|------------|-----------------------|-----------------|--------------------------|------------|-----------------------|-----------------|--------------------------|------------|------------|--------|------------|--------|------------|--------|---------------|
|               | 7 A. M.                      | 2 P. M. | 9 P. M. | Mean. | Time of beginning of rain or snow. | Time of ending of rain or snow. | Amount of rain or melted snow in gauge, in inches. | Depth of snow, in inches. | 7 A. M.               |                 |                          |            | 2 P. M.               |                 |                          |            | 9 P. M.               |                 |                          |            | 7 A. M.    |        | 2 P. M.    |        | 9 P. M.    |        |               |
|               |                              |         |         |       |                                    |                                 |                                                    |                           | Amount of cloudiness. | Kind of clouds. | MOTION OF HIGHER CLOUDS. |            | Amount of cloudiness. | Kind of clouds. | MOTION OF HIGHER CLOUDS. |            | Amount of cloudiness. | Kind of clouds. | MOTION OF HIGHER CLOUDS. |            | Direction. | Force. | Direction. | Force. | Direction. | Force. |               |
|               |                              |         |         |       |                                    |                                 |                                                    |                           |                       |                 | Velocity.                | Direction. |                       |                 | Velocity.                | Direction. |                       |                 | Velocity.                | Direction. |            |        |            |        |            |        |               |
| 1             | 80                           | 89      | 83      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 1      |               |
| 2             | 80                           | 90      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 2      |               |
| 3             | 83                           | 90      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 3      |               |
| 4             | 81                           | 93      | 89      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 4      |               |
| 5             | 82                           | 93      | 88      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 5      |               |
| 6             | 82                           | 89      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 6      |               |
| 7             | 82                           | 90      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 7      |               |
| 8             | 82                           | 90      | 90      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 8      |               |
| 9             | 86                           | 95      | 91      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 9      |               |
| 10            | 86                           | 95      | 84      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 10     |               |
| 11            | 88                           | 92      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 11     |               |
| 12            | 82                           | 92      | 88      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 12     |               |
| 13            | 81                           | 92      | 82      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 13     |               |
| 14            | 82                           | 87      | 82      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 14     |               |
| 15            | 82                           | 82      | 82      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 15     |               |
| 16            | 77                           | 88      | 83      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 16     |               |
| 17            | 74                           | 87      | 83      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 17     |               |
| 18            | 77                           | 90      | 87      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 18     |               |
| 19            | 81                           | 90      | 86      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 19     |               |
| 20            | 84                           | 92      | 84      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 20     |               |
| 21            | 82                           | 86      | 82      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 21     |               |
| 22            | 74                           | 85      | 80      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 22     |               |
| 23            | 77                           | 83      | 75      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 23     |               |
| 24            | 67                           | 74      | 69      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 24     |               |
| 25            | 64                           | 80      | 76      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 25     |               |
| 26            | 69                           | 81      | 74      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 26     |               |
| 27            | 71                           | 82      | 78      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 27     |               |
| 28            | 77                           | 85      | 76      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 28     |               |
| 29            | 76                           | 83      | 76      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 29     |               |
| 30            | 76                           | 79      | 72      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 30     |               |
| 31            | 70                           | 74      | 72      |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | 31     |               |
| Sum.          | 2430                         | 2702    | 2539    |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | Sum.   |               |
| Mean.         |                              |         |         |       |                                    |                                 |                                                    |                           |                       |                 |                          |            |                       |                 |                          |            |                       |                 |                          |            |            |        |            |        |            | Mean.  |               |

THE OBJECT of these observations is to enable the Smithsonian Institution, in connection with the Department of Agriculture, to prepare a series of maps to illustrate the face of the sky, &c., over the United States, for each day in the year, and thus to study the rise, progress, and course of American storms. Observers who have a Barometer, Psychrometer, etc., will be supplied with other blanks, and also full directions for using all the instruments, by the Smithsonian Institution.

## EXPLANATION OF THE ABOVE COLUMNS.

### THERMOMETER IN THE OPEN AIR.

This is intended for the register of the thermometer, and for the daily mean or average of the three observations.

### RAIN AND SNOW.

Under this head are entered the time of beginning and ending of the fall of rain or snow, and the amount, in inches and hundredths, of rain or melted snow collected in a gauge at the surface of the ground; also the depth of the snow. Rain to be indicated by R, and snow by S. When there is no rain or snow, mark 0.

### CLOUDS.

Under this general head are entered three daily observations on the aspect of the sky, &c. 1st. The "Amount of cloudiness," designated by figures, 10 being entire cloudiness; 5 half cloudiness; 0 entire clearness; and intermediate numbers in proportion. 2d. "Motion of the higher clouds," which pass directly over the head of the observer, as given to eight points of the compass. The direction from which they move is to be given. This observation is important, as the course of the higher clouds is sometimes different from that of the *myfane* wind, which is given in another column. 3d. The "Velocity," or rate of motion, 10 being the highest, and 0 apparent rest. 4th. The description or "Kind of clouds," to be entered by means of the following abbreviations: St. Stratus; Cu. Cumulus; Cir. Cirrus; Nim. Nimbus; Cir. st. Cirro-stratus; Cu. st. Cumulo-stratus; Cir. cu. Cirro-cumulus.

### WINDS.

This is for the record of the direction from which the wind is blowing as indicated by a vane, and its force by estimation. The direction is entered in eight points of the compass: N., N.E., E., S.E., S., S.W., W., N.W. The force is to be estimated and registered by figures from 1 to 10, as in the first column of the following table. The figures in the last column, expressing the number of miles per hour, are not to be used in the register:

|                            |                   |
|----------------------------|-------------------|
| 1. Very light breeze       | 2 miles per hour. |
| 2. Gentle breeze           | 4 do. do.         |
| 3. Fresh breeze            | 12 do. do.        |
| 4. Strong wind             | 25 do. do.        |
| 5. High wind               | 35 do. do.        |
| 6. Gale                    | 45 do. do.        |
| 7. Strong gale             | 60 do. do.        |
| 8. Violent gale            | 75 do. do.        |
| 9. Hurricane               | 90 do. do.        |
| 10. Most violent hurricane | 100 do. do.       |

IF SEE OTHER SIDE.