United States Department of Agriculture

2020

January

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 New Year's Day	2 ◐	3	4
5	6	7	8	9	10 ○	11
12	13	14	15	16	17 ◑	18
19	20 Martin Luther King, Jr.	21	22	23	24 ●	25
26	27	28	29	30	31	

February

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 ◐
2	3	4	5	6	7	8
9 ○	10	11	12	13	14	15 ◑
16	17 Washington's Birthday	18	19	20	21	22
23 ●	24	25	26	27	28	29

March

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 ◐	3	4	5	6	7
8 Daylight Saving Time Begins	9 ○	10	11	12	13	14
15	16 ◑	17	18	19 Vernal Equinox	20	21
22	23	24 ●	25	26	27	28
29	30	31				

April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 ◐	2	3	4
5	6	7 ○	8	9	10	11
12	13	14 ◑	15 Hugh Hammond Bennett's Birthday	16	17	18
19	20	21	22 ● 50th Anniversary of Earth Day	23	24	25
26	27 Soil Conservation Act Signed	28	29	30 ◐		

May

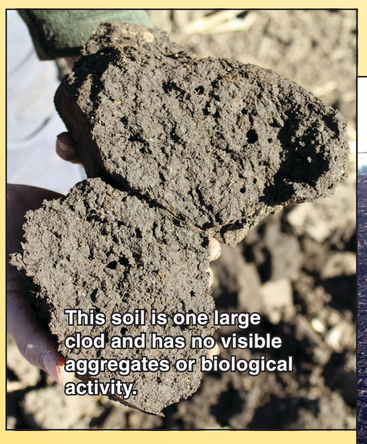
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7 ○	8	9
10	11	12	13	14 ◑	15	16
17	18	19	20	21	22 ●	23
24 / 31	25 Memorial Day	26	27	28	29 ◐	30

June

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4 Dedication of Dr. Charles E. Kellogg Soil Survey Laboratory	5 ○	6
7	8	9	10	11	12	13 ◑
14	15	16	17	18	19	20 Summer Solstice
21 ●	22	23	24	25	26	27
28 ◐	29	30				

Soil Is Dynamic!

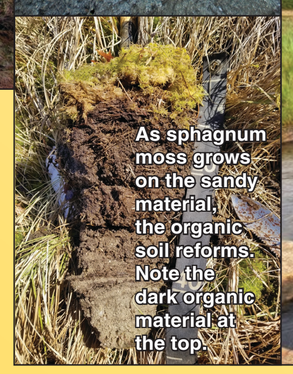
Soil changes over time. Although it can take hundreds of years to form a single inch of new soil, some critical properties of soils can change over much shorter periods. Those properties of the soil that change within the span of a single human lifetime are known as **Dynamic Soil Properties.** How we manage the soil can **improve or degrade the soil.** The United States Department of Agriculture, **Natural Resources Conservation Service** has established divisions that focus on soil investigation and classification, soil health, and the capacity of the soil to provide ecosystem functions. The **Soil and Plant Science Division** has a program focused on measuring, interpreting, and disseminating data and information regarding dynamic soil properties.


This soil is one large clod and has no visible aggregates or biological activity.

Waukegan Soils in Minnesota. Tillage and cover crops cause dramatic differences in soil biology.


This soil has many small aggregates and has roots and fungal hyphae.


The soil has a level, even surface and layers of sand and organic material from over 100 years of management for cranberries.


As sphagnum moss grows on the sandy material, the organic soil reforms. Note the dark organic material at the top.

Freetown Soils in Massachusetts. These images show an area of cranberry bog restoration.


Cores taken with a hydraulic probe and laid horizontally on a table. These cores are from a conventionally tilled corn field.


Cores from a grazed pasture with perennial grass. Note the dark colors and crumbly, granular structure.

Keith Soils in Western Kansas. These soils formed in windblown, silt-sized sediments and have no rock fragments.

NRCS Chief
Matthew Lohr

Matthew "Matt" Lohr serves as the 16th Chief of USDA's Natural Resources Conservation Service (NRCS). As Chief, Lohr provides leadership for NRCS and its mission to support America's farmers, ranchers, and forestland owners in their voluntary conservation efforts. NRCS has a network of more than 3,000 service centers in communities nationwide.

Lohr was raised on a family farm in Virginia's Shenandoah Valley. The fifth-generation farmer has spent his life promoting the betterment of agriculture and stewardship on working lands.

His family's operation includes poultry, beef cattle, row crops, and sweet corn.

SCS Chief 1935–1951
Hugh Hammond Bennett

Bennett's speeches inspired action for soil conservation around the country: at farm-field demonstrations, at scholarly gatherings, and in Congress.

In the spring of 1935—during the height of the Dust Bowl—his testimony before a congressional committee helped with the passage of the Soil Conservation Act and the subsequent formation of the USDA Soil Conservation Service (SCS), now the NRCS.

Bennett is considered the "Father of Soil Conservation." His efforts were instrumental in the development of conservation partnerships between USDA, local conservation districts, and State conservation agencies.

Natural Resources Conservation Service
Soil and Plant Science Division

United States Department of Agriculture

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July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 ○ Independence Day
5	6	7	8	9	10	11
12 ◑	13	14	15	16	17	18
19	20 ●	21	22	23	24	25
26 SWCS Conference Starts	27 ◐	28	29	30	31	

August

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3 ○	4	5	6	7	8
9	10	11 ◑	12	13	14	15
16	17	18 ●	19	20	21	22
23 / 30	24 / 31	25 ◐	26	27	28	29

September

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 ○	3	4	5
6	7 Labor Day	8	9	10 ◑	11	12
13	14	15	16	17 ●	18	19
20	21	22 Autumnal Equinox	23 ◐	24	25	26
27	28	29	30			

October

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 ○	2	3
4	5	6	7	8	9 ◑	10
11	12 Columbus Day	13	14	15	16 ●	17
18	19	20	21	22	23 ◐	24
25	26	27	28	29	30	31 ○

November

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Daylight Saving Time Ends	2	3	4	5	6	7
8 ◑ SSSA Conference Starts	9	10	11 Veterans Day	12	13	14 ●
15	16	17	18	19	20	21 ◐
22	23	24	25	26 Thanksgiving	27	28
29	30 ○					

December

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5 World Soil Day
6	7 ◑	8	9	10	11	12
13	14 ●	15	16	17	18	19
20	21 ◐ Winter Solstice	22	23	24	25 Christmas Day	26
27	28	29 ○	30	31		

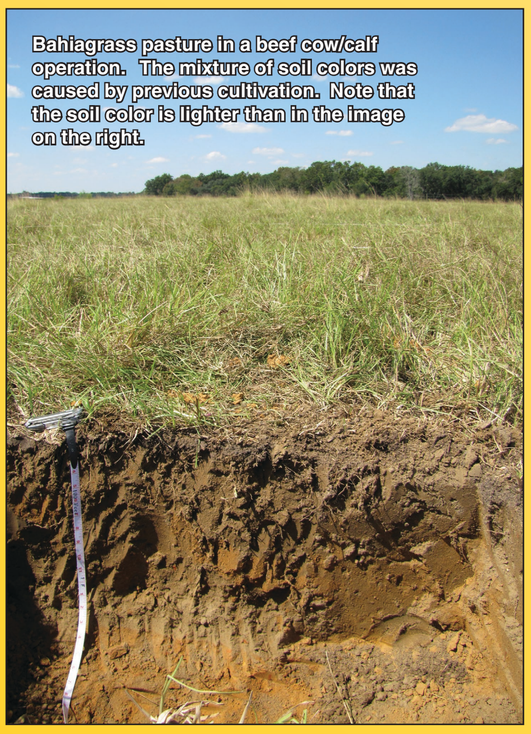
PA–2253

Dynamic Soil Properties

Dynamic Soil Properties change when land use or management changes. The change in use or management can be dramatic, such as installing a water-control structure, or subtle, such as switching the type of tillage. Soil color and structure are two properties that show relatively clearly in photographs. Dark soil colors may indicate high levels of **organic matter**, which is important for the physical, chemical, and biological functions of soil and is an important food for microbes. **Soil organic carbon** is the most easily measured part of organic matter and is an important part of global carbon budgets. **Soil structure** includes the type, size, and strength of individual soil units. Soils that have good structure allow rapid **infiltration** of water, reducing the risk of erosion and increasing the capacity for long-term water storage.

Manchester Soils in Connecticut. These soils have different layers depending on how the soil is used.

Palouse Soils in Eastern Washington. These soils formed in silty, windblown material under grasses.



Tifton and Dothan Soils on the Gulf Coastal Plain. These soils formed in loamy marine sediments under fire-dominated ecosystems of longleaf pine with diverse understories. They are commonly on flat uplands.

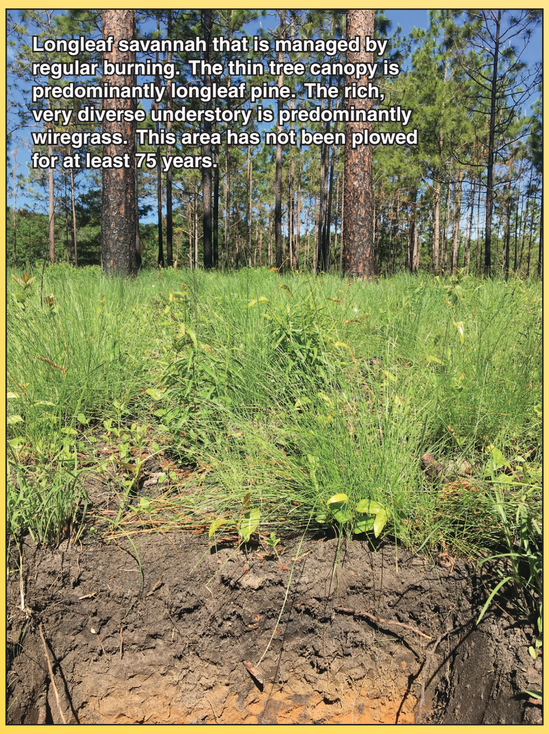


Photo Credits

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Soil Survey and the Kellogg Soil Survey Laboratory

Dr. Charles Edwin Kellogg was head of the Soil Survey at the United States Department of Agriculture (USDA) from 1934 to 1971. He emphasized the importance of interpretations, which are the assessment of soils for specific uses based on available soil data. He wrote and spoke widely on world soil resources, advising domestic and international research and agricultural organizations. He advocated for farming systems that promote efficient production, soil conservation, and high standards of rural living.

Dr. Kellogg wrote the first edition of the USDA "Soil Survey Manual," published in 1937, and directed the expanded 1951 edition, which was adopted by soil survey organizations worldwide. He oversaw the expansion of soil survey interpretations for farm and non-farm uses, initiated an internationally renowned soil geomorphology research program, and directed the development of a new soil classification system. The new system was published in 1975 as "Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys."

On June 4, 2012, the National Soil Survey Laboratory in Lincoln, Nebraska, was dedicated and renamed the Dr. Charles E. Kellogg Soil Survey Laboratory in honor of Dr. Kellogg's commitment to assisting land users through the knowledge of soils.

Derived from the "Charles Edwin Kellogg Papers." Accessed April 15, 2019. https://specialcollections.nal.usda.gov/guide-collections/charles-edwin-kellogg-papers.

Natural Resources Conservation Service
Soil and Plant Science Division