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Soil
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NATIONAL SOILS TAXONOMY HANDBOOK
430-VI
ISSUE NO. 7

Purpose. To distribute current amendments to Soil Taxonomy, Agriculture Handbook 436.

Effective Date. These amendments and revisions are effective when received.

Filing Instructions. File this copy of the changes in the 3-ring binder with Issues No. 1, 2, 3, 4, 5, and 6. It is suggested that you keep this binder with the Soil Taxonomy volume for easy reference.

Replace 615 contents dated August 1985 with the enclosed contents dated September 1985. Replace pages 615-2e and 615-2f dated August 1985 with the enclosed pages 615-2e and 615-2f dated September 1985. Replace page 615.45 dated August 1985 with page 615.45 dated September 1985 and file pages 615.46-615.50 following.

Supplementation. States and NTC's may not supplement the handbook.

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(Next page is 615-2m)

- Page 363, first column, line 8. Change Al to A.

- Page 372, first column, profile description. Change B21t to Bt1, B22t to Bt2, B31 to BC1 and B32 to BC2.

- Page 376, first column, line 3. Change Al to A, line 7 change ca to k.

- Page 379, second column, line 15. Change ca to k. line 16, change Al to A.

- Page 391, first column, lines 27 and 28. Change ca to k.

615.31 Add implied subgroup of Alfic Cryorthents

A proposal to add the implied subgroup of Alfic Cryothents is approved. The following changes in Soil Taxonomy will accomodate this amendment.

(a) Page 195, second column, Distinctions between Typic Cryorthents and other subgroups, add: Alfic Cryorthents are like Typic Cryorthents except for e.

(b) Page 195, second column, Description of subgroups, add: Alfic Cryorthents - These soils have lamellae in which clay has accumulated and which meet all requirements for an argillic horizon except thickness. The uppermost lamellae are commonly within 75 cm of the soil surface, but others may be deeper. These soils are mostly in the mountains of the Western United States and are under Coniferous forests.

615.32 Change the determinant fraction for Quartzipsamments

Approval is given to a proposal to amend Soil Taxonomy to change the determinant fraction to 0.02 to 2mm, and to more than 90 percent resistant minerals for Quartzipsamments. The effect of this amendment will be to place most Psamments with siliceous mineralogy into Quartzipsamments, and those with mixed mineralogy into other Psamments.

The following changes are required in Soil Taxonomy to accomodate this amendment.

(a) Page 202, first and second columns. Key to great groups. JCC, change to read: JCC. Other Psamments that have, in the particle size control section, more than 90 percent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals in the 0.02 to 2mm fraction that are resistant to weathering.

(b) Page 203, second column. Definition, Item 3 change to read: Have more than 90 pecent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals in the 0.02 to 2mm fraction that are resistant to weathering.

615.32(c)

(c) page 205, second column. Definition (Tropopsamments) Item 3, change to read: Have less than 90 percent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals in the 0.02 to 2 mm fraction that are resistant to weathering.

(d) Page 206, first column, third line, delete: "(>5 percent) in the sand fraction." Insert: (>10 percent in the 0.02 to 2 mm fraction).

(e) Page 206, first column. Definition (Udipsamments) Item 3, change to read: Have less than 90 percent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals in the 0.02 to 2 mm fraction that are resistant to weathering.

(f) Page 207, first column. Definition (Ustipsamments) Item 3, change to read: Have less than 90 percent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals in the 0.02 to 2 mm fraction that are resistant to weathering.

(g) Page 208, first column. Definition (Xeropsamments) Item 3, change to read: Have less than 90 percent silica minerals (quartz, chalcedony or opal) in other extremely durable minerals in the 0.02 to 2 mm fraction that are resistant to weathering.

(h) Page 267, first and second columns. Distinctions between Typic Haplumbrepts and other subgroups. Quartzipsammentic Haplumbrepts, delete beginning at the top of second column to end of paragraph. Insert the following: "and have in the 0.02 to 2 mm fraction more than 90 percent silica minerals (quartz, chalcedony or opal) or other extremely durable minerals that are resistant to weathering."

615.33 Add implied subgroup of Lithic Petrocalcic Calicustolls

A proposal to add the implied subgroup of Lithic Petrocalcic Calcuistolls is approved. The following changes in Soil Taxonomy will accomodate this amendment.

(a) Page 302, first column. Distinctions between Typic Calciustolls and other subgroups. Following Lithic Calciustolls insert: Lithic Petrolcalcic Calciustolls are like Typic Calciustolls except for c and e or for c, e, and b.

(b) Page 302, second column. Description of subgroups. Following Lithic Calciustolls insert: Lithic Petrocalcic Calciustoll - soils in this subgroup have a petrocalcic horizon overlying hard bedrock within a depth of 50 cm. Typically, the fractures in the underlying bedrock are filled with cemented secondary carbonates. Most of these soils are drier than Typic Calciustolls. Their slopes are gentle. They formed on surfaces older than Pleistocene. These soils are extensive locally in the Southwestern Great Plains. They are used almost exclusively for grazing.

(c) Page 302, second column, Description of subgroups, Petrocalcic Calciustolls. Change definition to read: Petrocalcic Calciustolls - Soils in this subgroup have a petrocalcic horizon, but are otherwise like Typic Calciustolls in defined properties. In most of them the depth to the petrocalcic horizon is less than 50 cm and they are underlain by loamy, clayey, and in some cases, gravelly materials. Some that have petrocalcic horizons below a depth of 50 cm are underlain by hard bedrock. Their slopes are gentle, and they are on surfaces older than Pleistocene. These soils are extensive locally in the Great Plains. Most of them are used for grazing.

615.34 Changes in subgroups of Haplaquods

Approval is given to allow the Ultic and Alfic Arenic subgroups of Haplaquods to be with or without the Entic feature. Approval is also given to add the subgroup of Arenic Ultic Haplaquods.

The following changes are required in Soil Taxonomy to accomodate these amendments.

(a) Page 337, first column, Distinctions between Typic Haplaquods and other subgroups.

1. Alfic Haplaquods, delete "an albic horizon that tongues into the argillic horizon or have"

2. Alfic Arenic Haplaquods, change " are like Typic Haplaquods except for a, b, and c" to " are like Typic Haplaquods except for a, b, and c, with or without d, and have...."

3. Between Arenic Hapalquods and Entic Haplaquods add Arenic Ultic Haplaquods are like Typic Haplaquods except for a, b, and c with or without d and have base saturation (by sum of cations) of less than 35 percent throughout the argillic horizon and have a mean annual soil temperature of 8°C or higher and the upper boundary of the spodic horizon is between 75 cm and 1.25 m below the soil surface.

4. Ultic Haplaquods, change " are like Typic Haplaquods except for b, with or without a." to "are like Typic Haplaquods except for b, with or without a or d, or both, and .....".

(b) Page 337, second column and page 338 first column, Description of subgroups.

1. Between Arenic Haplaquods and Entic Haplaquods add Arenic Ultic Haplaquods - These soils have an argillic horizon below the spodic horizon and have a thick sandy epipedon, 75 cm, to 1.25 m thick, above the spodic horizon. Most of them have an ochric epipedon, and the spodic horizon may be only weakly expressed. The argillic horizon has low base saturation throughout its thickness. These soils are rare in the United States and are known to occur only on the Southern Atlantic Coastal plain.

615.34(b)

2. Ultic Haplaquods, change to read: These soils have a argillic horizon below the spodic horizon. The argillic horizon has low base saturation throughout its thickness. Most of these soils have an ochric epipedon and some have only a weakly expressed spodic horizon. They are known to occur in Florida in the United States, but they are not extensive.

615.35 Restrict Fragic and Fragiaquic subgroups of Paleudults.

A proposal to remove all soils that would qualify for plinthic subgroups from fragic subgroups is approved. The consensus is that brittleness is a feature commonly associated with plinthite and that plinthic soil should not be in fragic subgroups.

The following changes are required in Soil Taxonomy to accomodate this amendment.

(a) Page 365, first column Distinctions between Typic Paleudults and other subgroups.

1. Change Fragiaquic Paleudults to read: Fragiaquic Paleudults are like Typic Paleudults except for a and q.

2. Change Fragic Paleudults to read: Fragic Paleudults are like Typic Paleudults except for g

(The above changes will omit reference to item c under Typic Paleudults which allows plinthite in fragic subgroups)

3. Change Plinthaquic Paleudults to read: Plinthaquic Paleudults are like Typic Paleudults except for a and c, with or without g

4. Change Plinthic Paleudults to read: Plinthic Paleudults are like Typic Paleudults except for c, with or without g

(b) Page 366, first column Description of subgroups. Fragiaquic Paleudults and Fragic Paleudults, change the statement "The amount of plinthite in any subhorizon is not restricted." to read "The amount of plinthite is restricted to less than 5 percent in any subhorizon within a depth of 1.5 meters."

615.36 Correction in Ochric epipedon and Spodic horizon definitions.

Issue No. 2 of Amendments to Soil Taxonomy, dated September 1982, included an addition to the definition for ochric epipedon which was intended to make the definitions of ochric epipedon on page 18 and spodic horizon on page 32 consistent. This amendment added the words "some spodic horizons and "on page 18, second column line 12. This was in error in that it allowed a spodic horizon in the ochric epipedon. The correction should have been to delete "ochric or" on page 32 to exclude a spodic horizon from the ochric epipedon. To accomplish this the following changes are required in Soil Taxonomy.

(a) Page 18, Ochric epipedon, second column, line 12. After "includes" delete "some spodic horizons and". (added by Issue No. 2 September 1982)

(b) Page 32, second column, Summary of the limits of a spodic horizon, line 3, delete " ochric or".

615.37 Corrections in horizon designations

Issue No. 6 dated August 1985 contained some incorrect horizon designations. To correct these errors, the following changes in Soil Taxonomy are required in place of those given in Issue No. 6.

(a) Page 123, first and second column, profile description. Change B21 to Bw1 and IIB22 to 2Bw2.

- Page 139, first column, profile description. Change Cca to Bk.

- Page 162, first and second column, profile description. Change IIB1t to 2Bt1, IIB2t to 2Bt2, IIB3si to 2Bq, IIICsicam to 3Bqkm and III C2 to 3C.

- Page 172, first column, line 59, Change Cca to Bk.

- Page 182, first column, profile description. Change C2g to Cg1 and C3g to Cg2.

- Page 193, second column, profile description. Change IIC2 to 2C2, IIIC3 to 3C3 and IVC4 to 4C4.

- Page 216, second column, profile description. Change Oi3 to O'i1 and Oi4 to O'i2.

- Page 230, second column, line 19, change A1 to A.

- Page 249, first column, profile description. Change IIC1sim to 2Bqm1 and IIC2sim to 2Bqm2.

- Page 254, first column, profile description. Change B3ca to Bk.

- Page 277, second column, profile description. Change IICg to 2Cg.

- Page 279, first column, profile descripton. Change C1msi to Bqm and C3msi to Cqm.

- Page 284, second column profile description. Change C1ca to Bk1, C2ca to Bk2 and C3ca to Bk3.

- Page 293, second column, profile description. Change C1ca to Bk1 and C2ca to Bk2.

615.37(a)

- Page 334, second column, profile description. Change B22m to Bsm.
- Page 391, first column, lines 27 and 28. Change Cca to Bk.

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