

DESCRIPTION AND CLASSIFICATION OF SOME SOILS FROM  
THE MERIDA REGION, SPAIN

- E1** Classification : FAO-Unesco: Orthic Luvisol  
USDA : Typic Haploxeralf
- Location : 2½ km SE of Valverde de Merida; elevated part in the alluvial flat of the river Guadiana.
- Parent material: loamy river deposits
- Profile : A1 0- 20 Brown (10YR 5/3, dry), sandy loam, weak blocky/massive  
AB 20- 80 Pale brown (10YR 6/3, dry), loamy sand, massive, fibers of loam at 35, 43, 55 cm.  
B2 80- 130 Dark yellowish brown (10YR 3/4, moist), silt loam, moderate blocky, very porous, many cutans.  
BC 130- 145 same as B2, but less clayey, less cutans.
- E2** Classification : FAO-Unesco: Chromic Luvisol  
USDA : Typic Palexeralf
- Location : 1½ km E of Torremegia; nearly level plain (glacis).
- Parent material: very stony heavy clay (Raña deposit), thickness 70 cm. underlain by "arkose".
- Profile : Ap 0- 20 Dark yellowish brown (10YR 4/4), silt loam, weak blocky/structureless.  
A2 20- 30 Dark yellowish brown with dark brown and brown mottles, silt loam, moderate blocky.  
B1 30- 40 Dark brown (7.5YR 4/4) with mottles of reddish brown and dark red, silty clay, many stones, pressure faces frequent.  
B2 40- 60 same as B1, clay, strong angular blocky, pressure faces frequent.  
B3 60- 70 Brown (10YR 4/6), clay, strong angular blocky, many pressure faces.  
R 70+ Very heterogeneous colours, strong brown dominant; clay, strong angular blocky, many pressure faces.
- E3** Classification : FAO-Unesco: Chromic Vertisol  
USDA : Typic Chromoxerert
- Location : 4½ km WSW of Torremegia; depressed part in gently undulating landscape
- Parent material: Miocene clay
- Profile : Ap 0- 10 Dark yellowish red (5YR 3/6), clay, granular and fine subangular blocky, very plastic, very sticky, very friable moist, hard dry  
A1 10- 70 Dark yellowish red (5YR 3/6), clay, many pressure faces some CaCO<sub>3</sub> concretions, at 50-70 many wedge-shaped structural elements breaking into fine angular blocky, slickensides prominent.  
AC 70- 90 Dark yellowish red (5YR 3/6) with pale and dark red mottles, clay, many CaCO<sub>3</sub> concretions, many wedge-shaped structural elements breaking into fine angular blocky.  
C 90+ Dark yellowish red, dark red and reddish yellow mottled clay, strong fine angular blocky.

- E4 Classification :** FAO-Unesco: Vertic Luvisol  
USDA : Vertic Haploxeralf
- Location :** 1 km W of Torremegia, middle slope in a gently undulating landscape.
- Parent material:** "Arkose"
- Profile :**
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|----|--------|---|
| Ap | 0- 12  | Dark brown (7.5YR 4/4) sandy loam, weak platy/massive.  |
| A1 | 12- 16 | Dark brown sandy loam, weak subangular blocky, porous.  |
| B1 | 16- 16 | Dark brown (7.5YR 3/4) with dark reddish brown mottles, clay, very coarse prismatic, extremely firm, clay skins along channels and ped faces. |
| B2 | 26- 52 | Same as B1, more clayey and more clay skins   |
| B3 | 52- 75 | Dark brown (7.5YR 4/6) clay, some parallel-epiped structural elements, pressure faces, firm, hard.  |
| BC | 75+    | Strong brown clay, with many whitish fragments of parent material.  |
- E5 Classification :** FAO-Unesco: Calcic Cambisol  
USDA : Petrocalcic Xerochrept
- Location :** 4½ km WSW of Torremegia, high part in gently undulating landscape.
- Parent material:** Miocene clay
- Profile :**
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|-----|--------|---|
| Ap1 | 0- 12  | Yellowish red (5YR 3/8), moist), clay, massive, with pockets of fine crumb, very plastic, very sticky, very hard, friable. Abundant fragments of limestone. |
| Ap2 | 12- 25 | same as Ap1, moderate subangular blocky structure.  |
| Cca | 25+    | White, indurated calcic horizon, top 20 cm laminated and very hard (petrocalcic). Induration decreasing with depth.   |
- E6 Classification :** FAO-Unesco: Eutric Regosol  
USDA : Lithic Xerorthent
- Location :** 6 km SE of Merida, middle slope in a gently undulating landscape.
- Parent material:** Schists
- Profile :**
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|----|---------|--|
| A1 | 0-14/20 | Yellowish red (5YR 4/8) silt loam with moderate subangular blocky structure, many fragments of weathering parent rock. |
| C  | 14/20+  | Weathering parent rock (schists).  |
- E7 Classification :** FAO-Unesco: Dystric Cambisol  
USDA : Dystric Xerorthent
- Location :** 6 km N of Merida (Proserpina)
- Parent material:** Solifluction material derived from weathering granite.
- Profile :**
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|----|-------|---|
| A1 | 0- 2  | Dark brown (10YR 3/3), gravelly loamy sand, loose, granular many plant roots. |
| B  | 2- 75 | Brown (7.5YR 4/4), gravelly loamy sand, weak subangular blocky, very friable. |
| R  | 75+   | Granite   |

- E8 Classification :** FAO-Unesco: Chromic Luvisol  
USDA : Typic Haploxeralf
- Location :** 1 km NW of Don Alvaro; middle slope in gently undulating plain.
- Parent material:** Solifluction masses derived from weathering granodiorite.
- Profile :**
- |    |        |  |
|----|--------|--|
| Ap | 0- 26  | Brown (7.5YR 4/0), gravelly loamy sand, weak subangular blocky/loose, very friable, slightly sticky, slightly plastic. |
| B2 | 26- 45 | Yellowish red (5YR 4/8) gravelly sand, moderate subangular blocky, many clay skins in pores and on ped faces.          |
| BC | 45- 60 | Yellowish red heterogeneous mixture of clay and fragments of weathering parent material.                               |
- E9 Classification :** FAO-Unesco: Chromic Luvisol  
USDA : Typic Haploxeralf
- Location :** 2 km NW of Don Alvaro, lower part of slope in gently undulating landscape.
- Parent material:** "Spillite"
- Profile :**
- |     |        |   |
|-----|--------|---|
| Ap  | 0- 8   | Yellowish (5YR 4/6) gravelly sandy loam, crumb, and fine subangular blocky, slightly plastic, slightly sticky, friable, many very fine pores. |
| A12 | 8- 14  | Yellowish red, gravelly sandy loam, fine subangular blocky, fine pores common.  |
| AB  | 14- 26 | Yellowish red, gravelly sandy loam, fine subangular, clay skins along large structural faces.   |
| B2t | 26- 30 | Dark reddish brown (5YR 3/6) gravelly loam, strong subangular blocky structure, many fine pores.  |
| BC  | 30- 45 | Same as B2, many weathering stones.   |
- E11 Classification :** FAO/Unesco: Calcaric Regosol  
USDA : Lithic Xerorthent
- Location :** 5 km S of Arroya de San Servan; higher part of slope in gently undulating landscape.
- Parent material:** Miocene clay
- Profile :**
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|-----|--------|--|
| Ap  | 0- 6   | Yellowish red (5YR 4/6), sandy loam, weak crumb structure, massive crust on top, very friable, plastic and sticky, hard, many fragments of CaCO <sub>3</sub> . |
| Cca | 6- 40+ | Pink, dull brown and brown calcareous silt, very heterogeneous, weathered parent material.   |
- E12 Classification :** FAO-Unesco: Chromic Vertisol  
USDA : Typic Chromoxerert
- Location :** 4 km NE of Merida, lower part of slope in gently undulating landscape
- Parent material:** Diorite
- Profile :**
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|----|--------|---|
| Ap | 0- 15  | Dark reddish brown (2.5YR 3/3) clay, crumb and weak subangular blocky structure, very plastic, very sticky, very friable, hard.             |
| A1 | 15- 55 | Dark reddish brown (2.5YR 3/3) clay, moderate fine angular blocky structure, many slickensides, wedge shaped elements, pressure faces.      |
| AC | 55- 79 | Same as A1, with red mottles  |
| C  | 70+    | Yellowish red, reddish yellow, bright reddish brown, dark reddish brown mottled clay, concretions of CaCO <sub>3</sub> , pieces of diorite. |