

Soils in art as a teaching tool in soil science

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The representation of soils in the different artistic expressions occurs much less often than that of other naturalistic scientific disciplines, like botany or zoology, due to the minor perception of soils as a natural body since the humans started to express themselves through art. Nevertheless, painters, writers and even musicians and film directors have been forced to deal with soils in their works, as a component of the landscape and as the main actor of the various soil functions. Even if the artists are not aware of soils in the sense of soil science – a study object – their observation of nature invariably leads to express their properties, the problems due to their misuse or degradation and their management practices. These art works have a great value when teaching soil science to students, because the latter can learn to interpret and go beyond the artist's observation and therefore they can appreciate the perception of soils and soil properties along the history of humankind. Paintings from various periods can be used as exercises, mainly those depicting landscapes or agricultural works. Some examples are Dutch landscape painters, as Brueghel the Young showing detailed soil erosion features; or Wijnants (XVII century) depicting very clear podzols on sand dunes. Also the impressionists (Van Gogh, Cézanne, Gauguin), or the landscapes of the romantic nationalists (XIX-early XX century) show forest or agricultural soils that can be used either to deduce soil forming processes and describe horizons, or to discuss the effectivity of soil management practices (deforestation, burning, plowing, terracing). Also some pieces of literature can be used either for illustrating real soil landscapes and soil-water relationships (Steinbeck's "The Grapes of Wrath") or in case of fiction literature, as exercise for soil mapping (Tolkien's Middle Earth in "The Hobbit" and "The Lord of the Rings"). Films as "The field" (Jim Sheridan, 1990) or "Corn Island" (George Ovasvili, 2014), among others, are excellent examples that can be used to comment on soil fertility and land use conflicts. Even some music works (e.g. Stravinsky's "The rite of spring") could give rise to discussions about the value of soils as an essential natural resource.