

Rendzina – Soil of the Year 2025

On World Soil Day 2024, 5 December, Rendzina (Rendzic Leptosol or Rendzic Phaeosem) was nominated as Soil of the Year 2025. The name Rendzina is derived from the Polish language, it describes the sound produced when ploughing a shallow soil above the bedrock. The Rendzina develops on limestone, dolomite or gypsum rocks/parent material. The topsoil is humus-rich and highly biological active. Below this joints the parent rock. Depending on the rockiness of the parent rock, massive, or decomposed into stones and grit or consisting of loose diggable material, a Rendzina needs between a few decades and up to 10,000 years to develop. The topsoil of the Rendzina has pH values around 7 and is mostly calcareous. These are excellent conditions for colonisation by soil organisms and higher plants.



Lockerrendzina (Rendzic Phaeosem) made of chalk, Jasmund, Island of Rügen

Under a 20 cm thick humus-rich topsoil follows the diggable rock subsoil made of chalk, a marine sediment from the Cretaceous period about 70 million years ago. © State Agency for the Environment, Nature Conservation and Geology of Mecklenburg-Western Pomerania

Plant litter is therefore quickly converted into humus by the soil organisms. The high biological activity in turn promotes the looseness of the soil, which promotes water absorption, air exchange and the storage of nutrients. Rendzines are often less suitable for arable farming, as the soil is only 10 – 20 cm deep developed. In summer, Rendzines are usually dry, often covered with dry grassland with numerous rare flowering plants.



Juniper-rich dry grassland on dolomite rock of the Devonian period (380 million years ago), Dollendorfer Kalkmulde, Eifel. As landscape conservationists, sheeps keep the area largely free of woods. © Wolfgang Schumacher †.

If the ground cover is somewhat thicker, beech forests develop in our climate area, such as in the Jasmund beech forest reserve on the island of Rügen. Rendzines occur in Germany in the high and low mountain ranges with limestone, dolomite or gypsum, i.e. in the Alps, on the Jurassic limestone areas of the Franconian and Swabian Alb or in the shell limestone areas, for example in Thuringia. But there are also Rendzines in the far north: on the limestones from the Cretaceous period. From the chalk cliffs of the island of Rügen are the place of origin our soil of the year the Rendzina, which is presented on posters and flyers as the soil of the year. Posters and flyers can be downloaded as a digital version or ordered as a printed version from the webpage (www.boden-des-jahres.de/english) or from the webpage of the Federal Environment Agency (www.uba.de).



*Jasmund beech forest reserve, chalk cliffs at the island of Rügen,
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Gerhard Milbert, Steering committee Soil of the Year.