MEASURES FOR SOIL WATER CONTROL IN POLAND

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Key words: drainage, irrigation, soil water retention, subirrigation, water management, water resources

Abstract

Polish water resources depend on precipitations, which are variable in time and space. In dry years the water balance is negative in central parts of Poland but sudden thaws and downfalls may result in periodical water excess and dangerous floods almost in the entire country. The retention capacity of artificial reservoirs in Poland permits to store only 6% of the average annual runoff, which is commonly considered insufficient. Another method to increase retention is soil water control. About fifty percent of soils in Poland consist of light and very light sandy soils with low water capacity. Loams and organogenic soils cover approximately 25% and 8.5% area of the country, respectively. Almost half of agricultural lands (48%) have relatively good water conditions, but the rest requires soil water control measures. An increase of the soil water content could be achieved by changes of soil properties, water table control and soil water management. Modernization and reconstruction of drainage and irrigation systems, which were built mainly in the period 1960-1980, is needed.