

An aerial photograph of a rural landscape in the Czech Republic, showing a mix of green, brown, and tan agricultural fields. A winding road or path cuts through the center of the fields. In the background, there are rolling hills and a line of trees under a clear sky.

Overview of legislation in soil protection in the Czech Republic

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Responsibility for soil protection:
Ministry of Environment

but

part of legislative measures issued by
Ministry of Agriculture and Ministry of Health

Acts

- Act on Agricultural Soil Protection 334/1992 Coll.
- Act on Forests 289/1995 Coll.
- Act on Land use planning and construction 183/2006 Coll.
- Act on Fertilizers 156/1998 Coll.
- Act on Wastes 185/2001 Coll.
- Land consolidation Act 139/2002 Coll.

Decrees

- Decree on the protection of agricultural soil 13/1994 Coll.
- Decree on the agrochemical testing of agricultural soil and testing of forest land 275/1998 Coll.
- Decree on use of sewage sludge on agricultural soil 382/2001 Coll.
- Decree on use of sediments on agricultural soil 257/2009 Coll.
- Decree on ecological damage on soil

Methodical guidelines

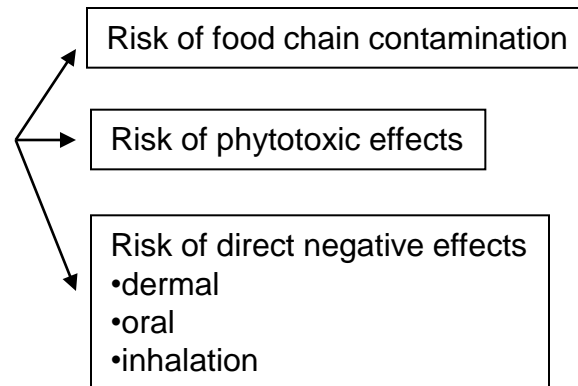
- Methodical guideline for sealing of agricultural soil
- Methodical guideline for risk assessment of soil contamination
- Methodical guideline - criteria for pollution of soil and groundwater

Proposal for the new system of limit values

Limit values

A) Prevention → inputs of substances

B) Indicative (trigger) → possible risks (no measures without risk assessment are possible)



~~C) Clean up~~ → heavy pollution, immediate measures

Proposal for the new system of limit values

Prevention limit values – risk elements

Soil texture	Prevention value (mg.kg ⁻¹ suš.)												
	As	Be	Cd	Co	Cr	Cu	Hg*)	Mn	Ni	Pb	V	Zn	Tl
Normal soils	20	2.0	0.5	30	90	60	0,3	1200	50	60	130	120	0.5
Light soils	15	1.5	0.4	20	55	45	0,3	1000	45	55	120	105	0.5

Proposal for the new system of limit values

Prevention limit values –
organic pollutants

Substance	Prevention limit ($\mu\text{g.kg}^{-1}$ v suš.)
Polyaromatic hydrocarbons	
Fluoranthen	300
Pyren	200
Fenanthren	150
Benzo(b)fluoranthen	100
Benzo(a)anthracen	100
Anthracen	50
Indeno(cd)pyren	100
Benzo(a)pyren	100
Benzo(k)fluoranthen	50
Benzo(ghi)perylen	50
Chrysen	100
Naftalen	50
Σ PAU	1000
Chlorované sloučeniny	
PCB Σ 7 kongenerů ^{*)}	20
PCDD/F ^{**)}	1
HCB	20
DDT	30
DDE	25
DDD	20
HCH (Σ α + β + γ)	10
Nepolární uhlovodíky	
Uhlovodíky C10 – C40 (mg.kg^{-1})	100

Proposal for the new system of limit values

Indication values – food chain contamination

Element	Soil texture	pH /CaCl ₂	Indication value	
			Aqua regia	extraction NH ₄ NO ₃
			Content in mg.kg ⁻¹	
Cd		< 4,0	0,7	-
		4,0-5,0	1,1	-
		5,0-6,5	1,5	-
	normal soil	> 6,5	2,0	0,1
	light soil	> 6,5	2,0	0,04
Pb		-	300	1,5
As		-	-	1,0
Tl		-	10	0,2
Hg ^{*)}			1,5	

Proposal for the new system of limit values

Indication values – phytotoxicity

Element	pH /CaCl ₂	Indication value	
		Aqua regia	extraction NH ₄ NO ₃
		Content in mg.kg ⁻¹	
Zn	-	400	2
Ni	< 5,0	90	-
	5,0-6,5	150	-
	> 6,5	200	-
	-	-	1,0
Cu	< 5,0	150	-
	5,0-6,5	200	-
	> 6,5	300	-
	-	-	1,0

Proposal for the new system of limit values

Indication values – direct toxicity

substance	<i>Indication value</i>
Benzo(a) pyren ^{*)}	1,0
suma PAU ^{**)}	30,0
suma PCB ^{***)}	2,0
DDT a metaboly	10,0
HCH (α , β , γ)	1
HCB	1
PCDD/F ^{+))}	100,0 ^{+))}
As ⁺⁺⁾	40
Cd ⁺⁺⁾	20
Pb ⁺⁺⁾	400
Hg ⁺⁺⁺⁾	20

Proposal for the new system of limit values

Problem: definition of measures for the state administration