



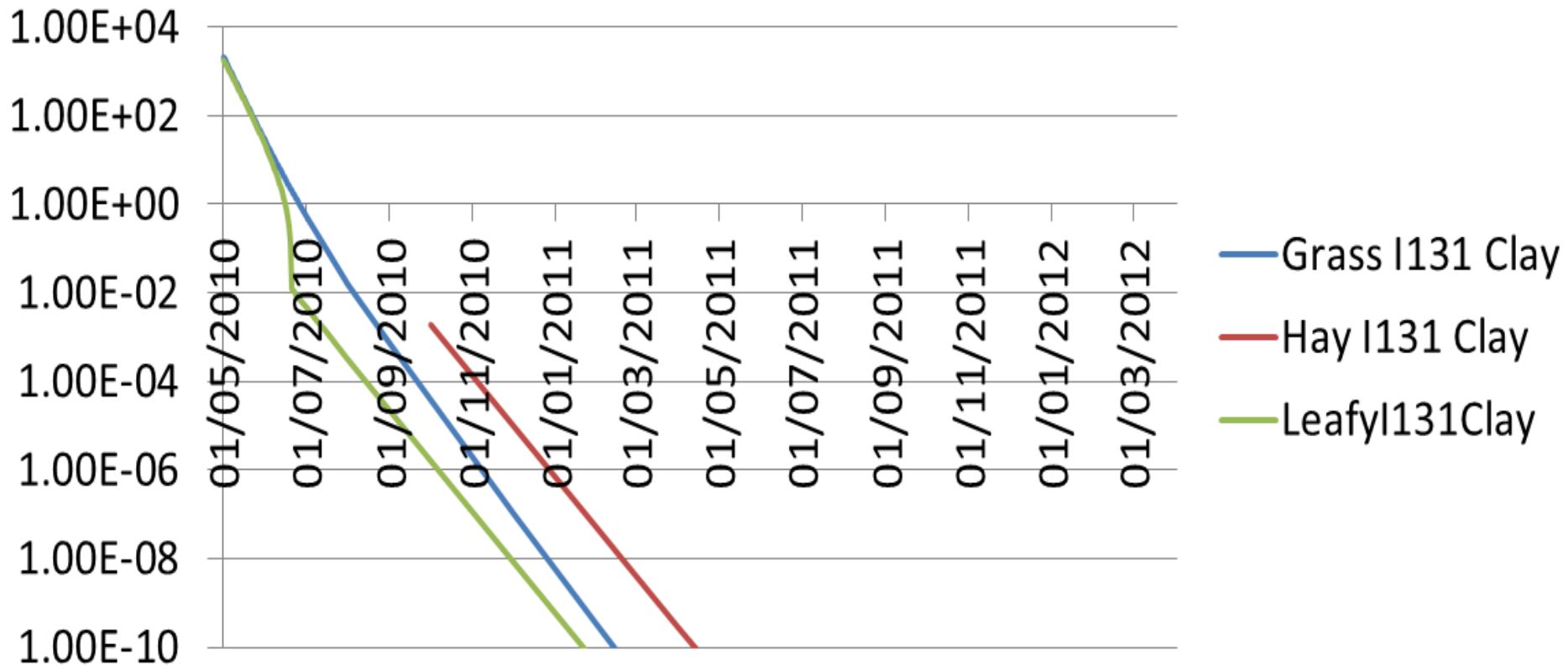
# Environmental sensitivity

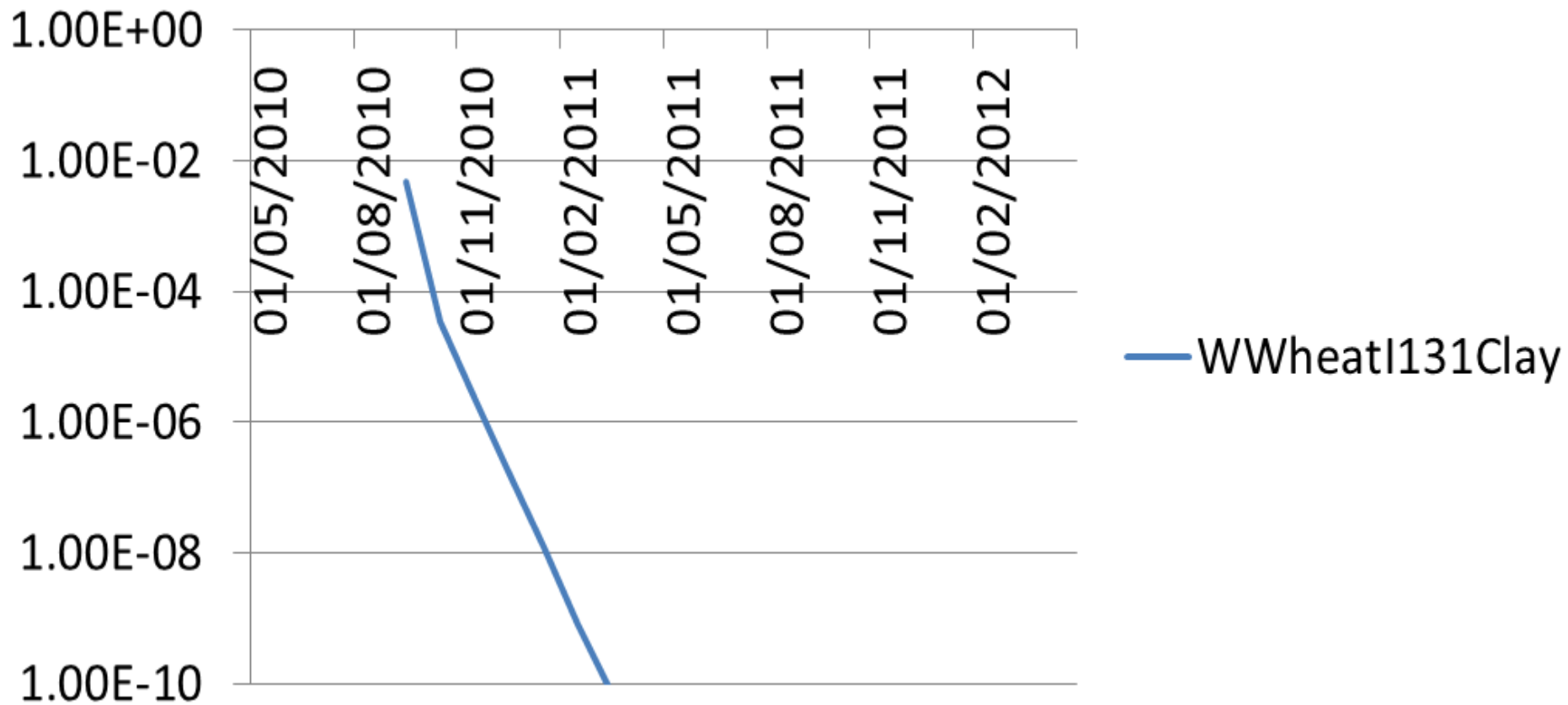
## Temperate environment

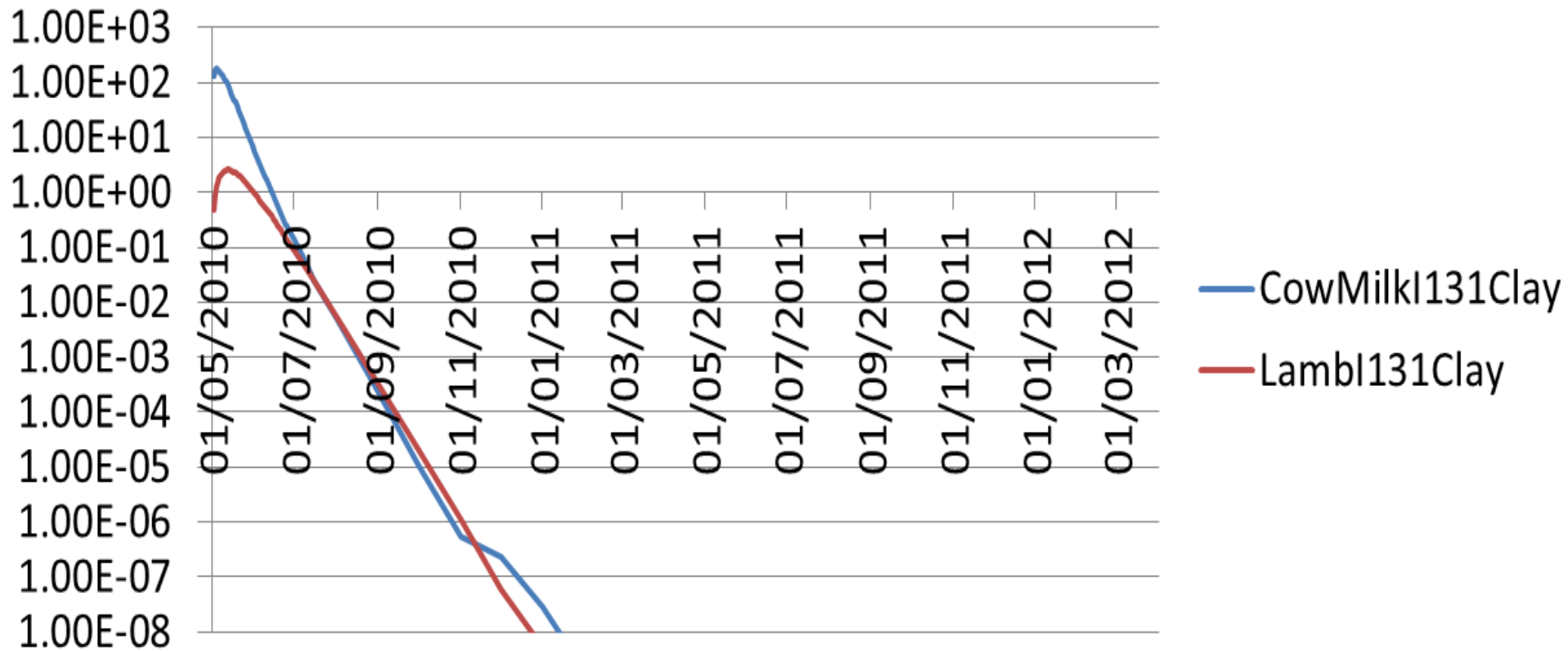
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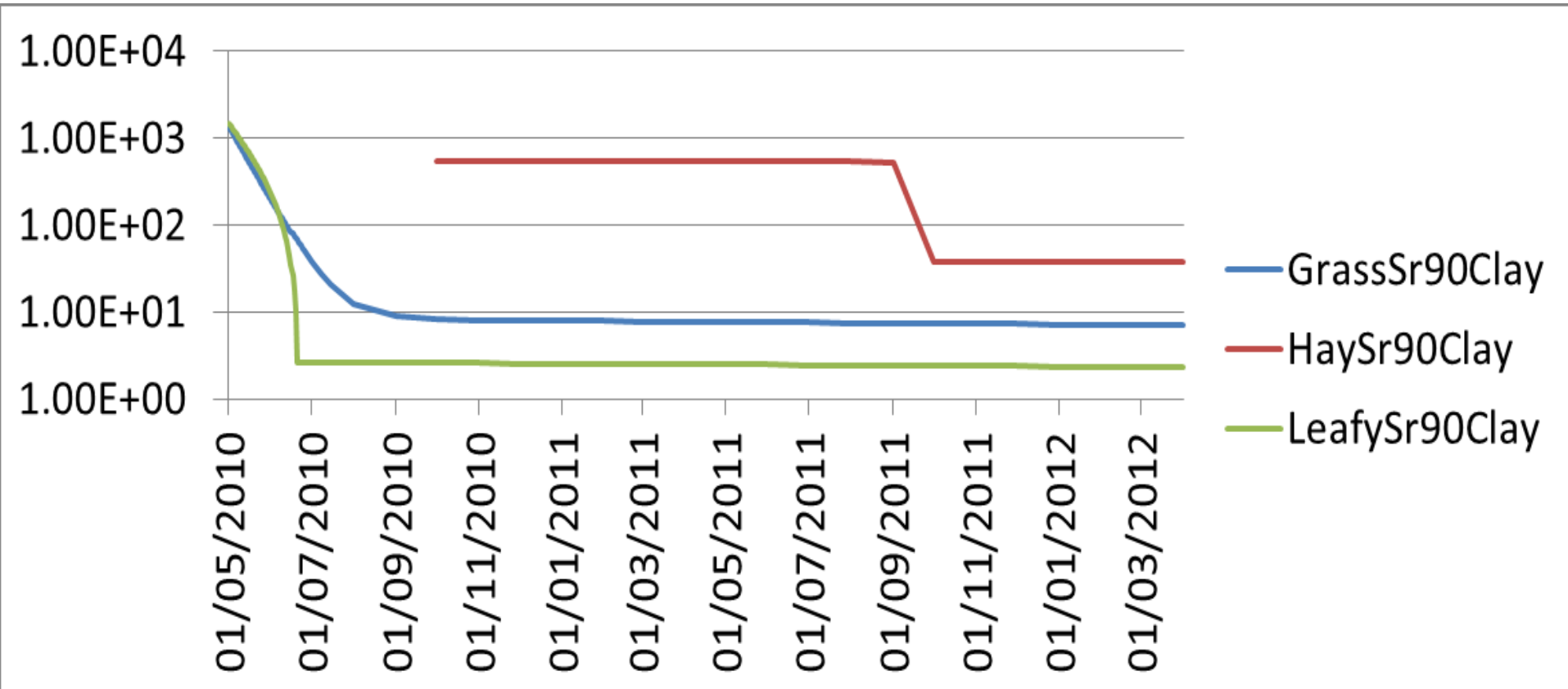
Belgian Nuclear Research Centre SCK•CEN  
Institute Environment, Health and Safety

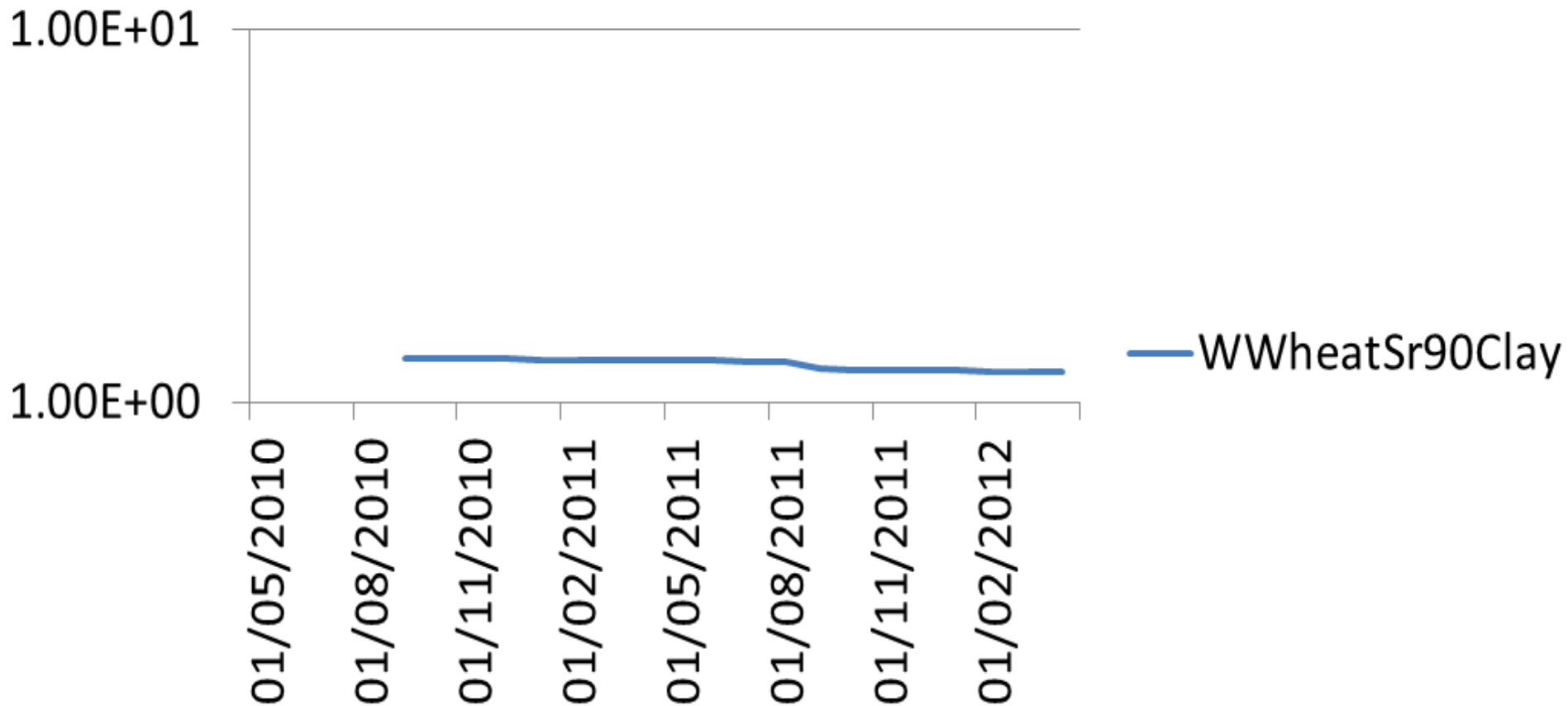
- Scope
  - Temperate environment, 3 types of soil
- Calculations
  - JRODOS
    - Considers foliar uptake, translocation, root uptake, resuspension
    - 1000 Bq/m<sup>2</sup>
      - Spring (May 1st)
  - SCK·CEN Biosphere model (model runs by Geert Olyslaegers)
    - Only suitable for up to 3 months after the deposition time
    - Considers also leaching

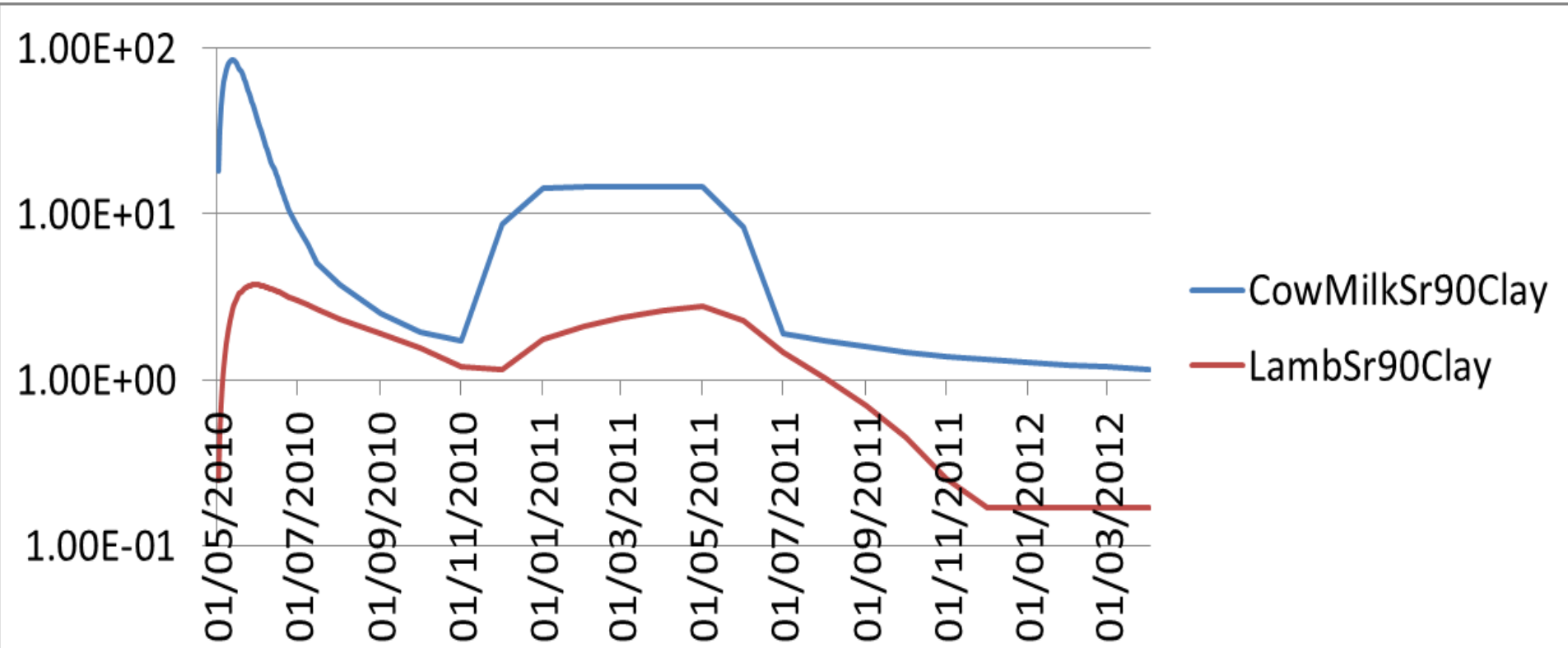




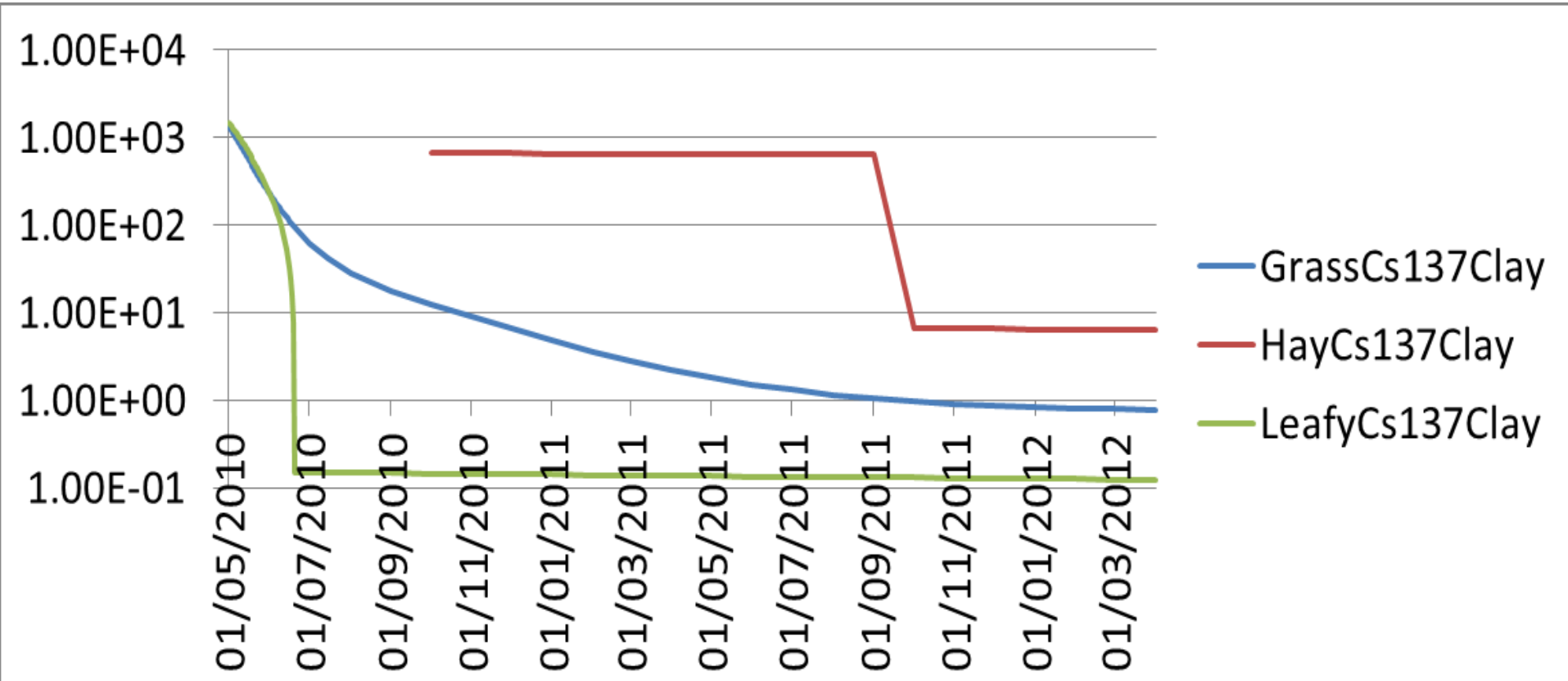




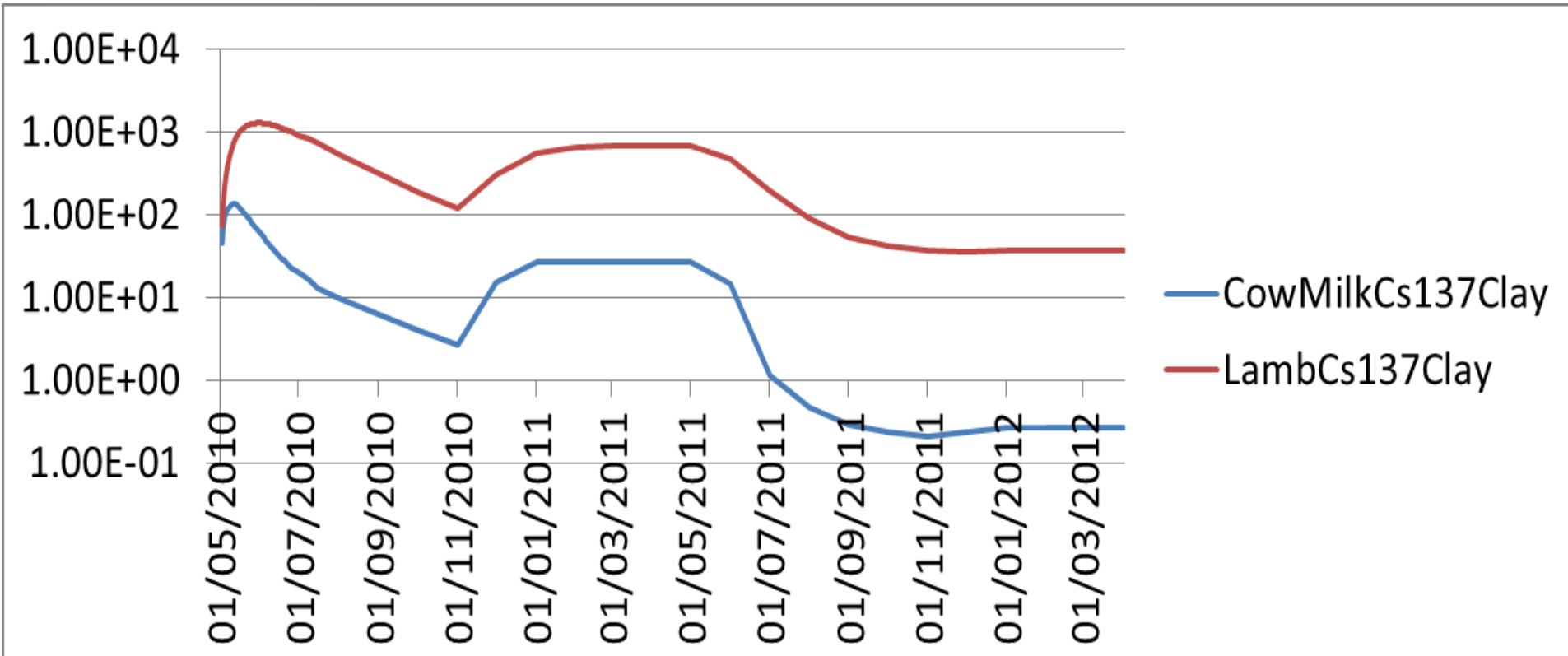




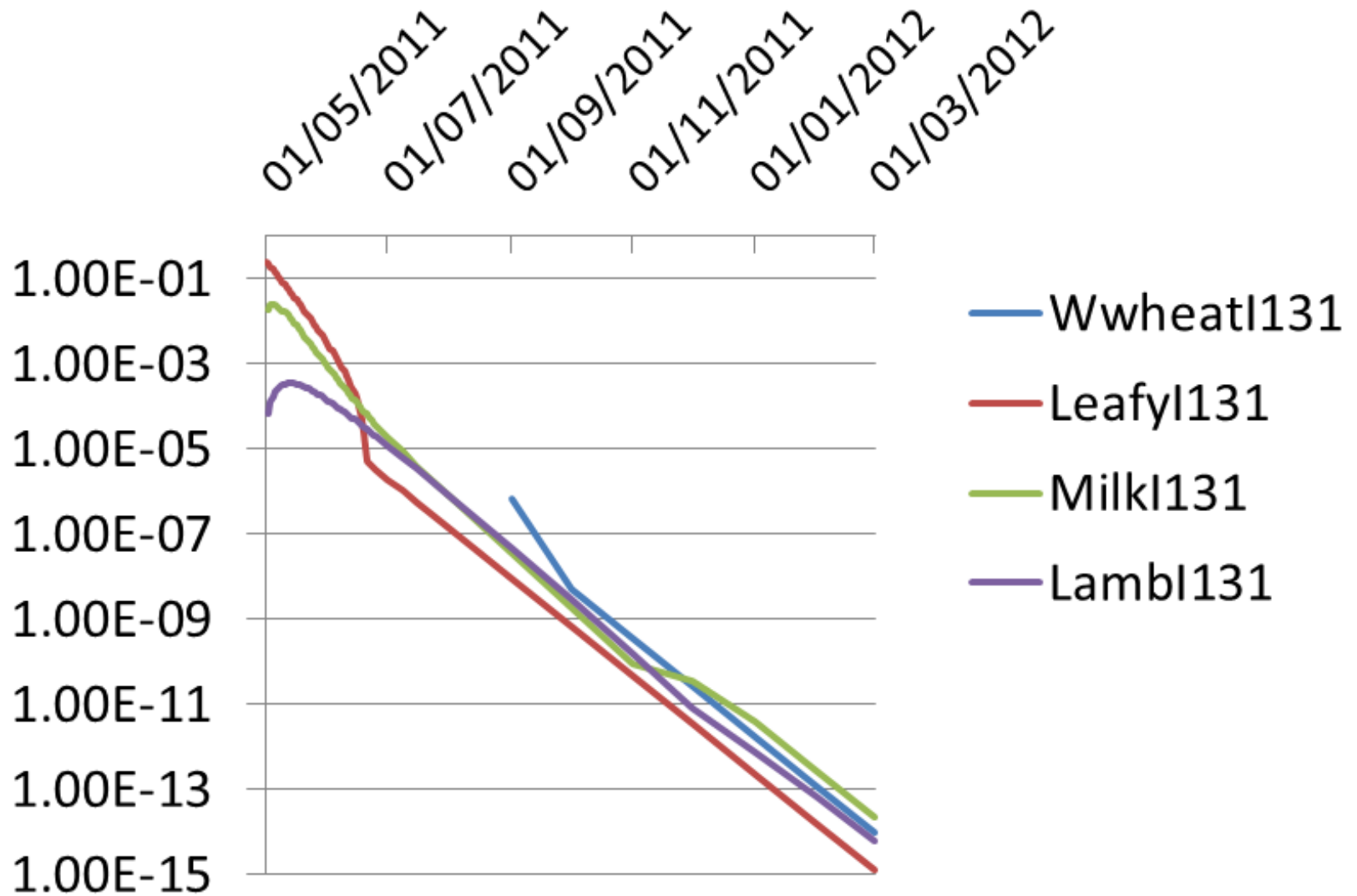




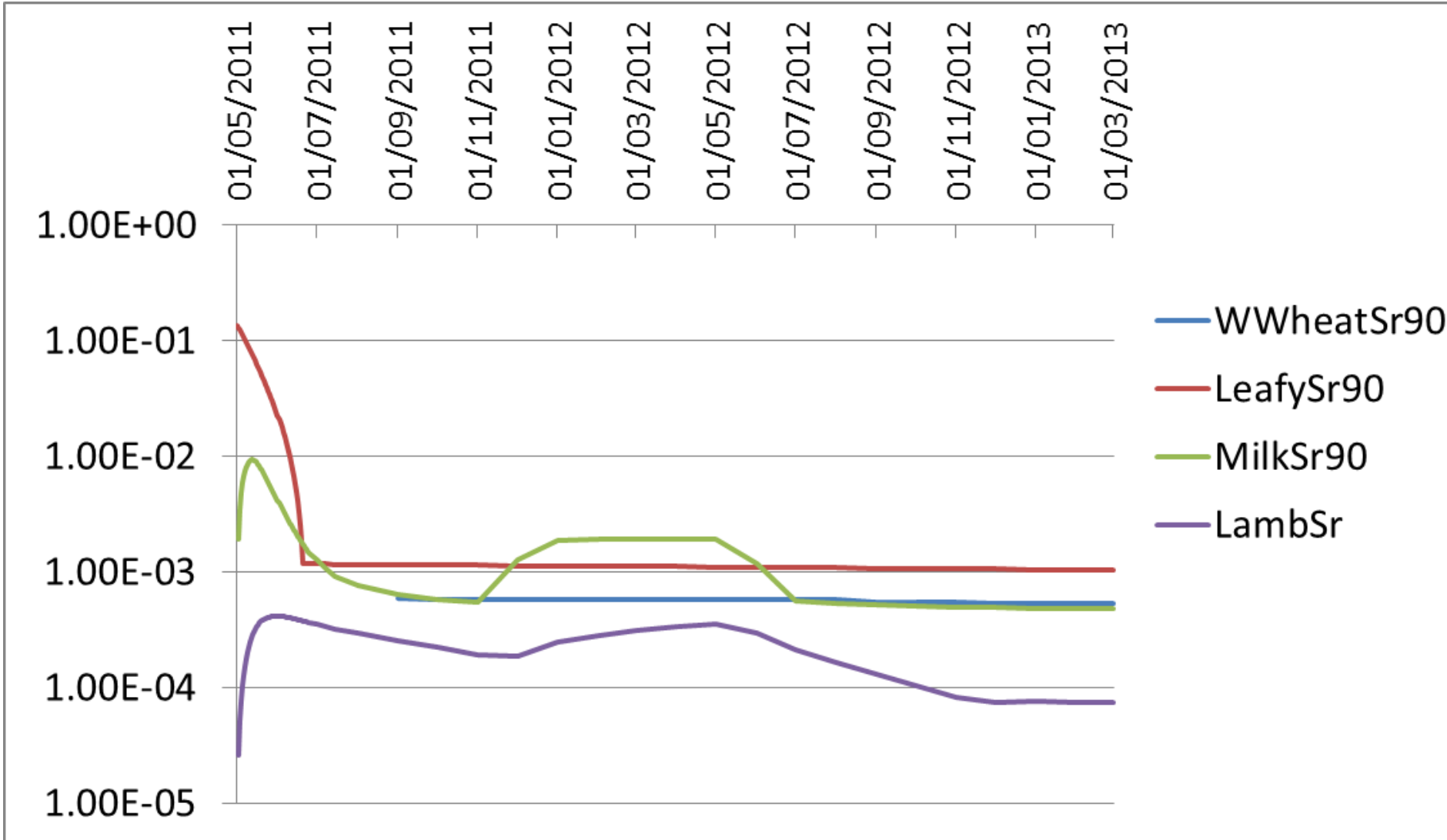




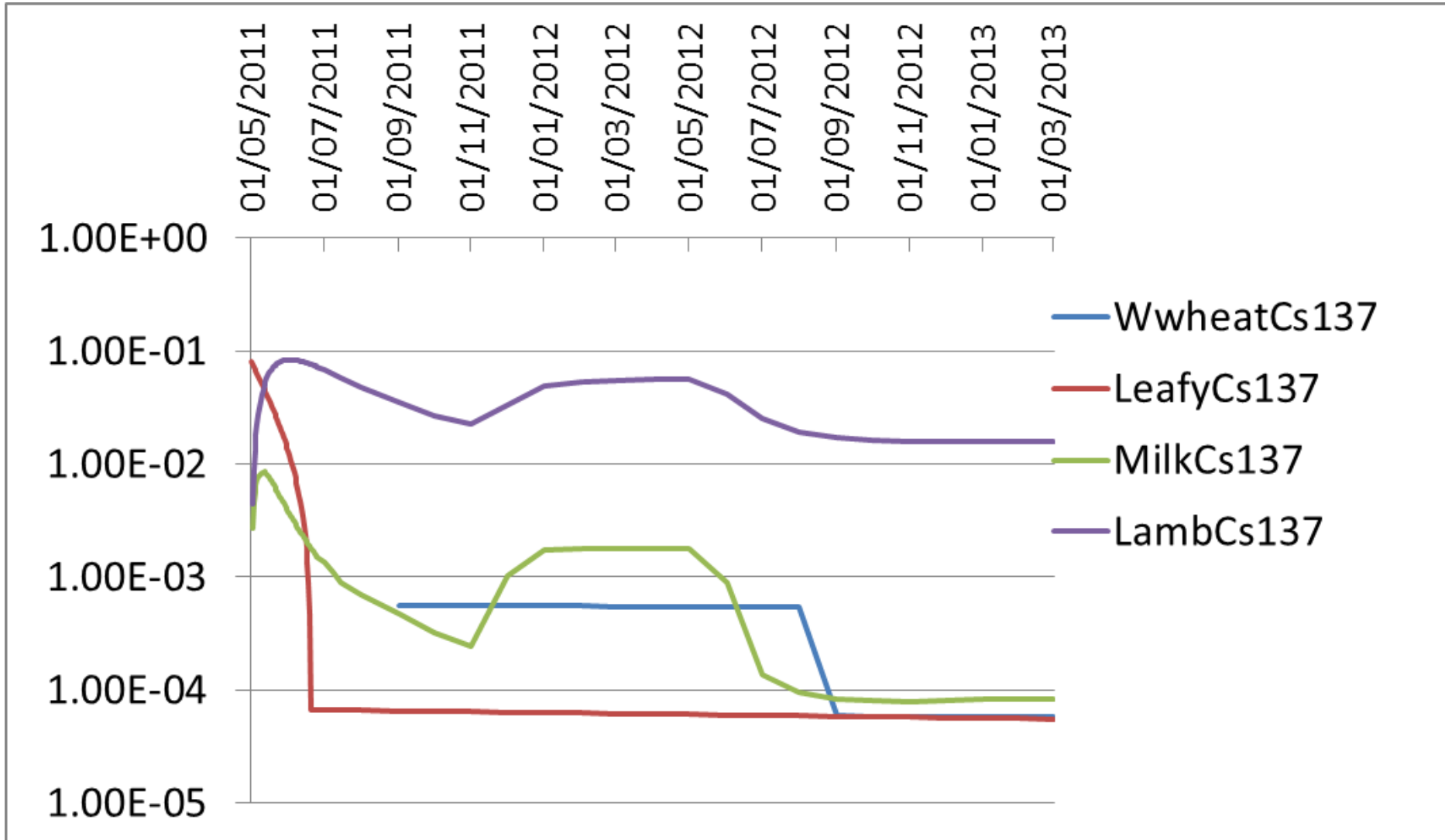
With wet deposition (1mm/h rain)



# With wet deposition (1mm/h rain)



# With wet deposition (1mm/h rain)



I-131			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	4.69E-04	2.79E+01	1.09E+01
Child 1y			1.05E-03	1.41E+02	2.17E+02
		Clay	4.77E-04	2.84E+01	1.11E+01
			1.07E-03	1.43E+02	2.21E+02

I-131			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	3.88E-14	0.00E+00	1.33E-13
Child 1y			1.06E-14	0.00E+00	3.25E-13
		Clay	3.95E-14	0.00E+00	1.36E-13
			1.08E-14	0.00E+00	3.31E-13



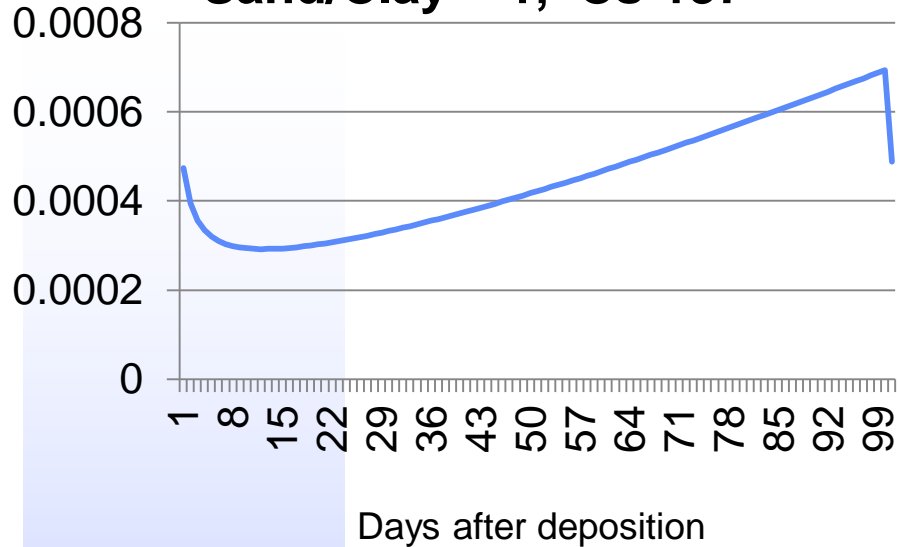
Sr-90			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	1.32E+00	6.81E+01	3.07E+01
Child 1y			9.40E-01	1.10E+02	1.95E+02
		Clay	1.32E+00	6.80E+01	3.07E+01
			9.39E-01	1.09E+02	1.95E+02

Sr-90			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	1.88E+00	2.28E+00	7.22E+00
Child 1y			5.14E-01	1.41E+00	1.76E+01
		Clay	1.88E+00	2.28E+00	7.21E+00
			5.13E-01	1.41E+00	1.76E+01

Cs-137			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	4.64E+00	3.07E+01	2.58E+01
Child 1y			1.17E+00	1.75E+01	5.80E+01
		Clay	4.62E+00	3.06E+01	2.57E+01
			1.17E+00	1.74E+01	5.78E+01

Cs-137			Winter wheat	Leafy vegs	Milk
adult	Dose [microSv]	Sandy	2.36E+00	5.72E-02	4.08E+00
Child 1y			6.44E-01	3.53E-02	9.94E+00
		Clay	2.35E+00	5.69E-02	4.07E+00
			6.41E-01	3.51E-02	9.90E+00

### Sand/Clay – 1, Cs-137



### Sand/Clay-1, Sr-90

