



# EVALUATION SHEET TREE & SHRUB PLANTING



## 1. Project details:

**Client:** Nikola Tesla Power Plant, Belgrade, Serbia  
**Project name:** Reclamation of degraded mining land filled with fly-ash  
**Evaluated by:** Ms. Natasa Trifunovic (Olimpik Inzenjering d.o.o.)  
**Application date:** March 2010 **Evaluation date:** August 2010  
**Site conditions:** Fly-ash, a coal production waste material, has been dumped as sludge in vast areas surrounding the thermal power plant. Wind erosion of these areas is of major concern as it is causing health problems to the local population, hence the need for a vegetative cover. However, the chemical composition of fly-ash and the lack of microbiological soil life make plant growth very difficult.



% /	08. 12. 2005.	
	aktivna III	pasivna
SiO <sub>2</sub>	52,20	53,56
Al <sub>2</sub> O <sub>3</sub>	27,75	26,69
Fe <sub>2</sub> O <sub>3</sub>	6,61	6,08
CaO	3,12	5,07
MgO	2,49	1,99
Na <sub>2</sub> O	1,01	0,74
K <sub>2</sub> O	1,78	1,45
TiO <sub>2</sub>	0,75	0,75
P <sub>2</sub> O <sub>5</sub>	0,06	0,07
SO <sub>3</sub>	3,01	2,53

	2009			
	22.04.		14.10.	
	aktivna I	pasivna	aktivna I	pasivna
As	84	100	130	119
B	620	316	1120	1200
Ba	423	392	340	330
Bg				
Cl				
Ca				
Co				
Cr	342	302	280	270
Cu				
Cu	190	220	102	110
Cl	<10	<10	<10	<10
F	<1	<1	<1	<1
Ga	53	40	50	50
Hg	<0.01	<0.01	<0.01	<0.01
Li	53	99	60	60
Mn	293	287	440	450
Mo	<1	<1	<1	<1
Nb	18	14	15	15
Ni	123	131	130	150
Pb	38	36	32	35
Rb	210	120	180	170
Sc	<1	<1	<1	<1
Sa				
Sr	177	190	200	180
Th				
U				
V	99	116	102	99
W				
Zn	93	45	98	110
Zr	74	90	60	72
Y	22	30	23	31

## 2. Information on the use of TerraCottem® Universal:

✓ For which of the following applications did you use TerraCottem® Universal?

- Trees
- Shrubs
- Flowers

Trees from different species were planted as a test-case:

- *Robinia pseudoacacia*
- *Ulmus campestris*
- *Elaeagnus angustifolia*

The seedlings were of poor quality, small (appr. 30cm) and almost dry.

None of the plants received any additional water or care.

The rate of 1.5kg TerraCottem® Universal per m<sup>3</sup> of soil was mixed with the soil from the plant hole.



✓ Which issues did you have to deal with prior to using TerraCottem® Universal in the above applications?

High plant mortality.

✓ What did you want to achieve by using TerraCottem® Universal?

Increased survival rate.

✓ Which of the following product benefits did you observe?

Growth

- Increased survival rate
- Better growth
- More fruits
- Quicker establishment of young trees/shrubs
- Increased resistance to water stress
- Others:

Inputs

- Reduction in maintenance ...%
- Reduction in replacement costs ...%

✓ Did you achieve your aim?

- Yes
- No

On August 12th 2010, the following plant height and survival rates were observed:

- Robinia Pseudoacacia: 195cms Almost 100%
- Ulmus Campestris: 85cms 85%
- Elaeagnus angustifolia: 135cms 95%
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