



Republic of Turkey
Ministry of Forest and
Water Affairs






A STUDY ON DETERMINATION OF NUTRIENT IN SOME ONE YEAR AGED POPLAR CLONES


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1


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A STUDY ON DETERMINATION OF NUTRIENT IN SOME ONE YEAR AGED POPLAR CLONES



I-214





S.307/26 (İZMİT)



77/51 (SAMSUN)

2

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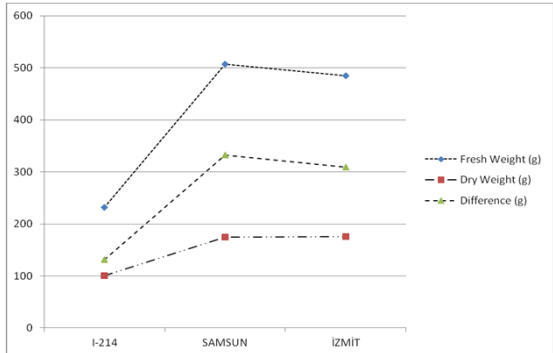
Fresh weight
Owen dry weight
N, P, K, Ca, Mg and Na

3

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Clone	Fresh Weight (g)	Dry Weight (g)	Difference (g)
I-214	~230	~100	~130
SAMSUN	~500	~180	~320
İZMİT	~480	~180	~300

4



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I-214 : 3,21 ton/ha/year
İzmit (S.307/26): 6,74 ton/ha/year
Samsun (77/51): 7,04 ton/ha/year

5



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I-214 : %57,66
İzmit (S.307/26): %64,74
Samsun (77/51): %66,49

6



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N (Nitrogen)

I-214 : %2,51
İzmit (S.307/26): %2,25
Samsun (77/51): %2,80

7



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**By annual leaf abscission from
poplar clones for N**


I-214 :35,03 kg/ha/year
İzmit (S.307/26):54,84 kg/ha/year
Samsun (77/51):67,86 kg/ha/year

8



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P (Phosphorus)


I-214 : 2026 ppm
İzmit (S.307/26): 1768 ppm
Samsun (77/51): 2032 ppm

9



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**By annual leaf abscission from
poplar clones for P**


I-214 :2,83 kg/ha/year
İzmit (S.307/26):4,31 kg/ha/year
Samsun (77/51):4,92 kg/ha/year

10



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K (Potassium)


I-214 : 16104 ppm
İzmit (S.307/26): 12674 ppm
Samsun (77/51): 11599 ppm

11



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**By annual leaf abscission from
poplar clones for K**


I-214 : 22,48 kg/ha/year
İzmit (S.307/26): 30,89 kg/ha/year
Samsun (77/51): 28,11 kg/ha/year

12



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Ca (Calcium)


I-214 : 19749 ppm
İzmit (S.307/26): 22680 ppm
Samsun (77/51): 22711 ppm

13



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**By annual leaf abscission from
poplar clones for Ca**


I-214 : 27,56 kg/ha/year
İzmit (S.307/26): 55,28 kg/ha/year
Samsun (77/51): 55,04 kg/ha/year

14



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Mg (Magnesium)


I-214 : 3131 ppm
İzmit (S.307/26): 4100 ppm
Samsun (77/51): 5580 ppm

15



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**By annual leaf abscission from
poplar clones for Mg**


I-214 : 4,37 kg/ha/year
İzmit (S.307/26): 10,00 kg/ha/year
Samsun (77/51): 13,52 kg/ha/year

16



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Na (Sodium)


I-214 : 718,5 ppm
İzmit (S.307/26): 802,8 ppm
Samsun (77/51): 880,1 ppm

17



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**By annual leaf abscission from
poplar clones for Na**


I-214 : 1,00 kg/ha/year
İzmit (S.307/26): 1,95 kg/ha/year
Samsun (77/51): 2,13 kg/ha/year

18




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DISCUSSION and CONCLUSION

19



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**Accordingly, the highest value were
obtained from**

Samsun (I-77/51) 65,6 %
İzmit (S.307/26) 63,8 %
I-214 56,6 %



20

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CLONES	NUTRIENT ELEMENTS (kg/ha/yr)					
	N	P	K	Mg	Ca	Na
I-214	35,03	2,83	22,48	4,37	27,56	1,00
SAMSUN (I-77/51)	67,86	4,92	28,11	13,52	55,04	2,13
IZMIT (S.307/26)	54,84	4,31	30,89	10,00	55,28	1,95

21






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The order of plant nutrient elements

$N > Ca > K > Mg > P > Na$



22

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CLONES	NUTRIENT ELEMENTS (%)					
	N	P	K	Mg	Ca	Na
I-214	2,51	0,20	1,61	0,31	1,97	0,07
SAMSUN (I-77/51)	2,80	0,20	1,15	0,55	2,27	0,08
IZMIT (S.307/26)	2,25	0,17	1,26	0,41	2,26	0,08

23


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the percentage order of the plant nutrient elements in the leaves


$N > Ca > K > Mg > P > Na.$

24

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In this study potassium is
determined as the third most
abundant element in poplar clones
after nitrogen and calcium

25



THANKS FOR YOUR ATTENTION

26