

T.C.

YOZGAT BOZOK ÜNİVERSİTESİ

FEN EDEBİYAT FAKÜLTESİ

**TEZİN ADI AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**

Yazar Adı Soyadı

Prof. Dr. Halil Erhan EROĞLU

(Tez Danışmanı)

LİSANS TEZİ

MOLEKÜLER BİYOLOJİ VE GENETİK PROGRAMI

YOZGAT – 2024

ÖZET

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.1 sayfayı geçmemelidir.

**Anahtar Kelimeler:** Aaaaa, bbbb, cccccc, dddddd, eeeeee, fffffff

ABSTRACT

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa. 1 sayfayı geçmemelidir.

**Key words:** Aaaaa, bbbb, cccccc, dddddd, eeeeee, fffffff

TEŞEKKÜR

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa teşekkürlerimi sunarım.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa teşekkürlerimi sunarım.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa teşekkürlerimi sunarım.

Aaaaaaa AAAAAAAAA

…/…/…….

İÇİNDEKİLER

**Sayfa**

[ÖZET ii](#_Toc423975859)

[ABSTRACT ii](#_Toc423975860)

[TEŞEKKÜR ii](#_Toc423975861)

[SİMGELER ve KISALTMALAR DİZİNİ ii](#_Toc423975862)

[ŞEKİLLER DİZİNİ ii](#_Toc423975863)

[TABLOLAR DİZİNİ ii](#_Toc423975864)

[1. GİRİŞ 2](#_Toc423975865)

[2. GENEL BİLGİ 2](#_Toc423975866)

[2.1. Aaaaaaaaaaaaaaaaaaaaaaa ??](#_Toc423975867)

[2.1.1. Aaaaaaaaaaaaaaaaaaaaaa ??](#_Toc423975868)

[3. MATERYAL ve YÖNTEM 2](#_Toc423975879)

[3.1. Aaaaaaaaaaaaaaaaaaaa](#_Toc423975880) ??

[3.2. Aaaaaaaaaaaaaaaaa](#_Toc423975881) ??

[4. BULGULAR ve TARTIŞMA 2](#_Toc423975891)

[4.1. Aaaaaaaaaaaaaaaaaaaaaaaaaaa ??](#_Toc423975892)

[4.2. Aaaaaaaaaaaaaaaaaaaaaaaaaa ??](#_Toc423975893)

[5. SONUÇ 2](#_Toc423975900)

[KAYNAKLAR 2](#_Toc423975901)

[ÖZGEÇMİŞ 2](#_Toc423975909)

SİMGELER ve KISALTMALAR DİZİNİ

**Simgeler Açıklama**

Aaa Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Bbb Bbbbbbbbbbbbbbbbbbbbbbbbbbbb

Ccc Ccccccccccccccccccccccccccccccc

Ddd Dddddddddddddddddddddddddddd

Eee Eeeeeeeeeeeeeeeeeeeeeeeeeeeeeee

Fff Fffffffffffffffffffffffffffffffffffffffff

Ggg Gggggggggggggggggggggggggggg

Hhh Hhhhhhhhhhhhhhhhhhhhhhhhhhhh

Zzz Zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz

**Kısaltmalar Açıklama**

Aaa Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Bbb Bbbbbbbbbbbbbbbbbbbbbbbbbbbb

Ccc Ccccccccccccccccccccccccccccccc

Ddd Dddddddddddddddddddddddddddd

Eee Eeeeeeeeeeeeeeeeeeeeeeeeeeeeeee

Fff Fffffffffffffffffffffffffffffffffffffffff

Ggg Gggggggggggggggggggggggggggg

Hhh Hhhhhhhhhhhhhhhhhhhhhhhhhhhh

Zzz Zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz

ŞEKİLLER DİZİNİ

**Sayfa**

Şekil 2.1. Aaaaaaaaaaaaaaaaaaaa ??

Şekil 2.2. Aaaaaaaaaaaaaaaaaaaaaaaaa ??

Şekil 2.3. Aaaaaaaaaaaaaaaa ??

Şekil 2.4. Aaaaaaaa aaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaa ??

Şekil 2.5. Aaaaaaaa aaaaaaaaa aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaa aaaaaaaaa ??

Şekil 2.6. Aaaaaaaaaaaaaaaa ??

Şekil 2.7. Aaaaaaaaaaaaaaaa ??

TABLOLAR DİZİNİ

**Sayfa**

Tablolar 2.1. Aaaaaaaaaaaaaaaaaaaaaaaaaaaaa ??

Tablolar 2.2. Aaaaaaaaaaaaaaaaaaaaaa ??

Tablolar 3.1. Aaaaaaaa aaaaaaaaa aaaaa aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa ??

Tablolar 4.1. Aaa aaaaa aaaaa aaa ??

Tablolar 4.2. Aaaaaaaaaaaaaaaaaaaaaaaaaa ??

Tablolar 4.3. Aaaaaaaaaaaaaaaaaaaaaaaaa ??

# 1. GİRİŞ

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

# 2. GENEL BİLGİLER

Bu bölüm tez konusu ile ilgili teorik bilgileri içermelidir.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Termik santrallerde, yakıtta bulunan kimyasal enerji öncelikle kazanda ısı enerjisine dönüştürülerek buhara verilir. Ardından buhardaki ısı enerjisi türbinde mekanik enerjiye ve ardından jeneratörde elektrik enerjisine dönüştürülür (Başak, 1997). Termik santrallerde birinci enerji dönüşümü buhar kazanında gerçekleşir. Burada yakıtta bulunan kimyasal enerjinin yakılmasıyla ortaya çıkan ısı su buharına verilir. Suyun buharlaştırılması sağlanarak, buharın elde edildiği kazanlara buhar kazanı veya bir başka deyişle buhar üreticisi adı verilir (Başak ve Güner, 2001).

Buhar kazanlarında elde edilen buhar, elektrik enerjisinin ve ısı enerjisinin büyük bir bölümünü oluşturur (Başak ve ark., 2022). Termik santrallerde temel işleyiş şekli, su buhar dönüşümüyle yapılır ve buhar kazanı ile turbo-jeneratör grubunu kapsar. Turbo-jeneratör grupları ve kazan grupları kesintisiz olarak işletilmektedir. Termik santraller, oldukça büyük miktarda yakıt tüketir (Peruzzi, 1987; Başak ve Güner, 2001; Aslan ve ark., 2011).

# 3. MATERYAL ve YÖNTEM

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

**Tablo 3.1.** Aaaaaaaaaaaaaa aaaaa aaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaaa aaaa

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.



(3.1)

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

# 4. BULGULAR ve TARTIŞMA

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

Şekil 4.1. Aaaaaaa aaaaaaaa aaaaaaaa aaaaaaaa aaaaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

# 

# Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

# 5. SONUÇ

Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa.

KAYNAKLAR

Altay D, Eroğlu HE, Hamzaoğlu E, Koç M (2017). Karyotype analysis of some taxa of *Dianthus* section *Verruculosi* (Caryophyllaceae, Sileneae). Turkish Journal of Botany 41: 367-374.

Bittrich V (1993). Caryophyllaceae. In: Kubitzki K, Rohwer J, Bittrich V (editors). The Families and Genera of Vascular Plants, Magnoliid, Hamamelid, and Caryophyllid Families, Vol. 2. Berlin, Germany: Springer, pp. 206-236.

Boissier E (1867). Flora Orientalis,Vol. 1. Basel is Switzerland: Wentworth Press.

Eroğlu HE (2008). Türkiye *Helichrysum* mill. (Asteraceae) taksonlarının genotoksik etkilerinin belirlenmesi. Doktora Tezi, Erciyes Üniversitesi.

IUCN Red List, <https://www.iucnredlist.org/> (Erişim Tarihi: 09.03.2023).

**Alfabetik sırada verilmeli…**

**top içeren bir resim

Açıklama otomatik olarak oluşturulduÖZGEÇMİŞ**

**Kişisel Bilgiler**

Adı Soyadı : …………………

Doğum tarihi ve yeri : 01.01.2002, Adana

e-mail : aaabbb@........

Yazarın kişisel bilgileri (doğum yeri ve yılı) iletişim bilgileri (telefon ve e-mail adresi) lisans öğrenimini tamamladığı yükseköğretim kurumları ve yılları belirtilmelidir. Ayrıca varsa yazarın aldığı burs ve ödüller ile bildiği yabancı diller ve iş deneyimleri yazılabilir. (**YÜKLEM İFADELERİNİ DOĞDU, TAMAMLADI, ALDI, ÇALIŞTI VB ŞEKLİNDE YAZINIZ. ÖZGEÇMİŞ SAYFASINA SAYFA NUMARASI EKLEMEYİNİZ.) İSTEYENLER FOTOĞRAFINI EKLEYEBİLİR, FOTOĞRAF EKLENMEYECEK İSE OK İLE BELİRTİLEN KISIM SİLİNMELİDİR.**