

KEANEKARAGAMAN NEMATODA PARASIT TANAMAN
PADA RIZOSFIR TANAMAN TEBU (*Saccharum officinarum* L.)
DI SENTRA PERTANAMAN TEBU SUMATERA BARAT

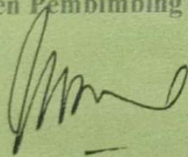
SKRIPSI

OLEH :

DELLA ANDANI
1210211030

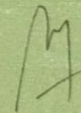
MENYETUJUI :

Dosen Pembimbing I



Ir. Winarto, MS
NIP. 19600510 198702 1 002

Dosen Pembimbing II



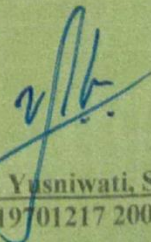
Prof. Dr. Ir. Novri Nelly, MP
NIP. 19641121 199003 2 001

Dekan Fakultas Pertanian
Universitas Andalas



Dr. Ir. Munzir Busniah, MSi
NIP. 19640608 198903 1 001

Koordinator Program studi
Agroekoteknologi Fakultas Pertanian
Universitas Andalas



Dr. Yusniwati, SP, MP
NIP. 19701217 200012 2 001

KEANEKARAGAMAN NEMATODA PARASIT PADA RIZOSFIR TANAMAN TEBU (*Saccharum officinarum* L) DI SENTRA PERTANAMAN TEBU SUMATERA BARAT

ABSTRAK

Jenis dan kepadatan populasi nematoda parasit pada tanaman tebu (*Saccharum officinarum* L) dipengaruhi oleh jenis tanaman dan lingkungannya. Keanekaragaman dan kepadatan populasi nematoda parasit perlu diketahui untuk mengurangi kerusakan dan kerugian pada tanaman tebu. Tujuan penelitian ini untuk mengetahui jenis dan kepadatan nematoda parasit pada rizosfir tanaman tebu (*Saccharum Officinarum* L) pada sentra produksi tanaman tebu Sumatera Barat. Metode penelitian menggunakan *Purposive Random Sampling*. Sampel tanah pada rizosfir tanaman tebu diambil dari 2 Kabupaten yaitu Kabupaten Agam, Kecamatan Matur, Nagari Tigo Balai dan Kabupaten Tanah Datar, Kecamatan Lintau Buo Utara, Nagari Batu Bulek. Hasil penelitian menunjukkan bahwa nematoda parasit yang ditemukan pada rizosfir tanaman tebu yaitu *Trichodorus*, *Helycotylenchus*, *Aphelenchoides*, *Xiphinema*, *Hemicycliophora*, *Meloidogyne*. Kepadatan populasi nematoda parasit paling tinggi di Sentra pertanaman tebu yaitu di Nagari Tigo Balai sebesar 1,0063 individu/cm³. Frekuensi kehadiran nematoda parasit pada rizosfir tanaman tebu di sentra pertanaman tebu Sumatra Barat yang paling tinggi yaitu genus *Helycotylenchus* dengan kategori assesori. Indeks keanekaragaman (H') pada Nagari Tigo Balai dan Nagari Batu Bulek dikatakan stabil. Indeks kesamaan komunitas nematoda parasit tergolong sama dengan nilai 1. Nematoda *Helycotylenchus* yang dominan pada setiap lokasi pengambilan sampel tanah rizosfir tanaman tebu di sentra pertanaman tebu Sumatera Barat dengan tingginya nilai indeks penting 0,689.

Kata kunci : *kepadatan populasi, nematoda parasit, tebu, rizosfir.*

**THE DIVERSITY OF NEMATODES PARASITIC IN SUGAR CANE
(*Saccharum officinarum* L) RHIZOSPHERE IN THE CENTER OF SUGAR
CANE PLANTATION IN WEST SUMATERA**

ABSTRACT

The type and a population density of parasitic nematodes in sugarcane (*Saccharum officinarum* L) are influenced by the plant type and its environment. The diversity and a population density of parasitic nematodes need to be known to reduce damage and losses in sugarcane. The aim of this study was to determine the type and density of parasitic nematodes in the sugarcane rhizosphere at sugar cane production center of West Sumatra. The method of this research used purposive random sampling. Soil samples in the sugar cane rhizosphere were taken from 2 districts, namely Agam District, Matur sub-district, Tigo Balai village, and Tanah Datar District, Lintau Buo Utara sub-district, Batu Bulek village. The results showed that parasitic nematodes found in the rhizosphere of sugarcane plants were *Trichodorus*, *Helycotylenchus*, *Aphelenchoides*, *Xiphinema*, *Hemicycliophora*, and *Meloidogyne*. The highest population density of parasitic nematodes is found in Tigo Balai Village is 1,0063 individuals/cm³. The highest frequency of the presence of parasitic nematodes in sugarcane rhizosphere of West Sumatra is found at *Helycotylenchus* with the category of accessory. The diversity index (H') in Tigo Balai and Batu Bulek Village is stable. The two study locations had the same similarity index of the parasitic nematode community classified as 1. *Helycotylenchus* is the most dominant nematode at each sampling location of sugarcane rhizosphere in the West Sumatra sugar cane plantation center with an important value index is 0.689.

Keywords: *population density, parasitic nematodes, sugarcane, rhizosphere*