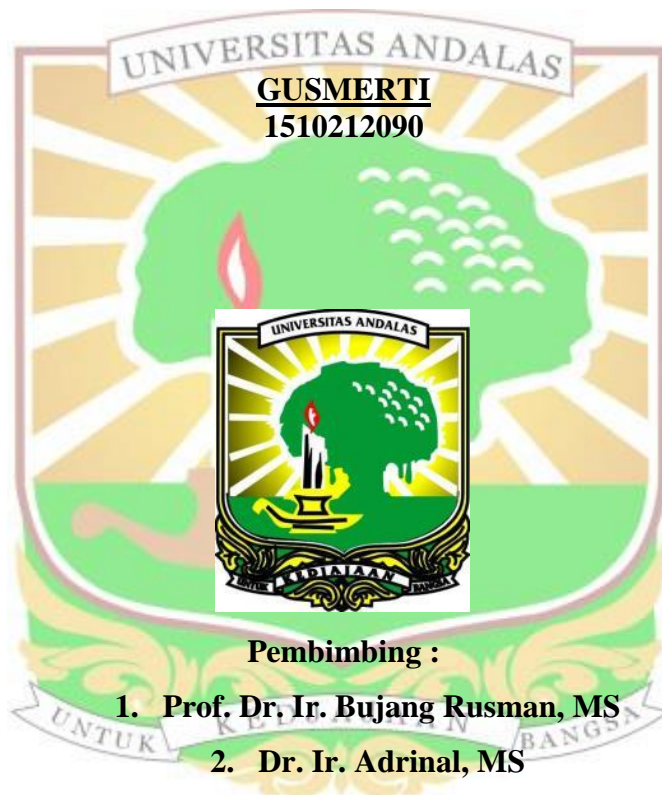


**SKRIPSI**  
**PENENTUAN INDEKS KUALITAS TANAH BERDASARKAN**  
**SIFAT FISIKA TANAH PADA BERBAGAI SATUAN LAHAN**  
**DI NAGARI ALAHAN PANJANG KECAMATAN LEMBAH**  
**GUMANTI KABUPATEN SOLOK**

Oleh :



**FAKULTAS PERTANIAN**  
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# PENENTUAN INDEKS KUALITAS TANAH BERDASARKAN SIFAT FISIKA TANAH PADA BERBAGAI SATUAN LAHAN DI NAGARI ALAHAN PANJANG KECAMATAN LEMBAH GUMANTI KABUPATEN SOLOK

## ABSTRAK

Penelitian ini bertujuan untuk mengetahui Mengetahui perbedaan kualitas tanah dari aspek fisika tanah pada berbagai satuan lahan dan mengetahui indikator kualitas tanah yang paling erat hubungannya dengan Indeks Kualitas Tanah di Nagari Alahan Panjang Kecamatan Lembah Gumanti Kabupaten Solok. Penelitian ini dilaksanakan dari bulan September 2019 hingga September 2020 berlokasi di berbagai satuan lahan Nagari Alahan Panjang Kecamatan Lembah Gumanti Kabupaten Solok. Pengambilan sampel dilakukan secara *purposive sampling* pada berbagai satuan lahan di Nagari Alahan Panjang pada kedalaman 0-20 cm dan 20-40 cm. Analisis sampel tanah dilakukan di Laboratorium Jurusan Tanah, Fakultas Pertanian, Universitas Andalas dan Laboratorium Balai Penelitian Tanah, Bogor. Parameter yang dianalisis sebagai indikator yaitu tekstur, C-organik, berat volume, total ruang pori, permeabilitas, pori air tersedia, dan indeks kemantapan agregat. Hasil analisis laboratorium dilanjutkan dengan analisis *Principal Component analysis (PCA)*, menggunakan perangkat lunak Minitab-19. Berdasarkan hasil penelitian, didapatkan hasil indikator kualitas tanah di Nagari Alahan panjang berada pada kelas sedang hingga sangat baik dan indikator yang paling mempengaruhi indeks kualitas tanah di Nagari Alahan Panjang yaitu Total Ruang Pori dan Air tersedia.

*Kata kunci : Indeks kualitas tanah, Principal Component Analysis (PCA), satuan lahan, , sifat fisik tanah*



# DETERMINATION OF SOIL QUALITY INDEX BASED ON SOIL PHYSICAL PROPERTIES IN VARIOUS LAND UNITS IN NAGARI ALAHAN PANJANG KECAMATAN LEMBAH GUMANTI, SOLOK DISTRICT

## ABSTRACT

This study aims to determine Knowing the difference in soil quality from the soil physics aspects of various land units and knowing the soil quality indicators that are most closely related to the Soil Quality Index in Nagari Alahan Panjang, Lembah Gumanti District, Solok Regency. This research was conducted from September 2019 to September 2020 located in various land units of Nagari Alahan Panjang, Lembah Gumanti District, Solok Regency. Sampling was carried out by purposive sampling on various land units in Nagari Alahan Panjang at a depth of 0-20 cm and 20-40 cm. Soil sample analysis was carried out at the Laboratory of the Department of Soil, Faculty of Agriculture, Andalas University and the Laboratory of the Soil Research Institute, Bogor. The parameters analyzed as indicators were texture, C-organic, volume weight, total pore space, permeability, available water pore, and the aggregate stability index. The results of laboratory analysis were followed by Principal Component analysis (PCA), using the Minitab-19 software. Based on the research results, the results of soil quality indicators in Nagari Alahan Panjang were in the medium to very good class and the indicators that most influenced the soil quality index in Alahan Panjang were the total pore space and available water.

*Key words: Land unit, soil quality index, Principal component analysis (PCA), soil physical properties*



