

## ABSTRAK

DEA DETRIA NURBAHIRA, 2025. **Dampak Aktivitas Peternakan Ayam Ras Petelur Terhadap Kondisi Lingkungan di Desa Sukaratu Kecamatan Sukaratu Kabupaten Tasikmalaya.** Jurusan Pendidikan Geografi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi.

Penelitian ini dilatarbelakangi oleh adanya aktivitas peternakan ayam ras petelur yang berkembang di Desa Sukaratu Kecamatan Sukaratu Kabupaten Tasikmalaya dan berada berdekatan dengan permukiman masyarakat. Aktivitas peternakan yang berlangsung secara intensif berpotensi menimbulkan berbagai dampak lingkungan, khususnya pada aspek kualitas udara, air, tanah, dan kesehatan masyarakat. Kondisi tersebut mendorong perlunya kajian mengenai bentuk aktivitas peternakan serta dampak yang ditimbulkannya. Tujuan penelitian ini adalah untuk mengetahui aktivitas peternakan ayam ras petelur serta menganalisis dampaknya terhadap kondisi lingkungan di Desa Sukaratu. Metode yang digunakan dalam penelitian ini adalah metode deskriptif kuantitatif. Pengumpulan data dilakukan melalui observasi lapangan, wawancara terhadap 5 pemilik atau pengelola peternakan, penyebaran kuesioner kepada 92 responden masyarakat menggunakan teknik purposive sampling, serta studi dokumentasi dan literatur. Selain itu, dilakukan uji laboratorium terhadap sampel air kolam dan tanah di sekitar area peternakan. Uji kualitas air meliputi parameter fisika, kimia, dan mikrobiologi, yaitu suhu, pH, *Dissolved Oxygen* (DO), amonia ( $\text{NH}_3$ ), Total *Coliform*, dan *Escherichia coli* (*E. coli*). Sementara itu, uji tanah meliputi parameter pH tanah, kadar air, nitrogen total (N-total), rasio C/N, karbon organik (C-organik), fosfor tersedia (*available P*), dan kalium tersedia (*available/ exchangeable K*). Hasil penelitian menunjukkan bahwa aktivitas peternakan ayam ras petelur di Desa Sukaratu meliputi sistem pemeliharaan intensif dengan kandang baterai, pemberian pakan, pemeliharaan kesehatan, pengumpulan telur, serta pengelolaan limbah. Dampak lingkungan yang paling dominan dirasakan masyarakat adalah gangguan kualitas udara berupa bau menyengat dan peningkatan populasi lalat. Berdasarkan hasil uji laboratorium air, suhu air tercatat sebesar  $25,6^\circ\text{C}$  dan pH sebesar 6,48 yang masih berada dalam baku mutu. Namun, kadar amonia menunjukkan nilai yang sangat tinggi yaitu 15 mg/L, jauh melebihi baku mutu 0,2 mg/L, serta nilai DO yang sangat rendah sebesar 0,55 mg/L dibandingkan baku mutu  $>6$  mg/L, yang mengindikasikan tingginya pencemaran organik. Hasil uji laboratorium tanah menunjukkan bahwa nilai pH tanah sebesar 5,13 tergolong agak asam dan kadar air tanah sangat rendah, yaitu 2,73%, yang mengindikasikan kondisi tanah kering. Kandungan nitrogen total sebesar 0,15% berada pada kategori rendah hingga sedang, sedangkan rasio C/N yang tinggi yaitu 34,0 menunjukkan proses dekomposisi bahan organik berlangsung lambat. Kandungan karbon organik tergolong tinggi sebesar 5,1%, sementara ketersediaan fosfor (*available P*) berada pada kategori sedang dengan nilai 13,76 mg/100 g dan ketersediaan kalium (*available/ exchangeable K*) tergolong rendah hingga sedang dengan nilai 0,55 mg/100 g. Kondisi tersebut menunjukkan adanya pengaruh aktivitas peternakan ayam ras petelur terhadap kualitas tanah, meskipun belum seluruhnya berdampak berat.

**Kata Kunci :** Peternakan ayam ras petelur, Limbah peternakan, Kualitas air dan tanah, Lingkungan permukiman

## ABSTRACT

DEA DETRIA NURBAHIRA, 2025. *Impact of Egg-Laying Chicken Farming Activities on Environmental Conditions in Sukaratu Village, Sukaratu District, Tasikmalaya Regency*. Department of Geography Education, Faculty of Teacher Training and Education, Siliwangi University.

*This study is motivated by the development of layer chicken farming activities in Sukaratu Village, Sukaratu District, Tasikmalaya Regency, which are located close to residential areas. Intensive farming activities have the potential to cause various environmental impacts, particularly on air, water, and soil quality, as well as public health. These conditions highlight the need for an in-depth study of farming activities and their environmental impacts. This study aims to identify layer chicken farming activities and analyze their impacts on environmental conditions in Sukaratu Village. The research employed a descriptive quantitative method. Data were collected through field observations, interviews with five farm owners or managers, questionnaires distributed to 92 community respondents using purposive sampling techniques, as well as documentation and literature studies. In addition, laboratory tests were conducted on pond water and soil samples collected from areas surrounding the farms. Water quality analysis included physical, chemical, and microbiological parameters, namely temperature, pH, Dissolved Oxygen (DO), ammonia (NH<sub>3</sub>), Total Coliform, and Escherichia coli (E. coli). Soil analysis included soil pH, moisture content, total nitrogen (N-total), C/N ratio, organic carbon (C-organic), available phosphorus (available P), and available/exchangeable potassium (K). The results indicate that layer chicken farming activities in Sukaratu Village are carried out intensively using battery cage systems, including feeding, health management, egg collection, and waste management. The most dominant environmental impact perceived by the community is air quality disturbance in the form of strong odors and increased fly populations. Laboratory analysis of water samples showed that water temperature was 25.6°C and pH was 6.48, both of which were within acceptable quality standards. However, ammonia concentration was very high at 15 mg/L, far exceeding the standard limit of 0.2 mg/L, while DO levels were very low at 0.55 mg/L compared to the standard value of >6 mg/L, indicating severe organic pollution. Soil laboratory results showed that soil pH was 5.13, classified as slightly acidic, and soil moisture content was very low at 2.73%, indicating dry soil conditions. Total nitrogen content was 0.15%, categorized as low to moderate, while a high C/N ratio of 34.0 indicated slow decomposition of organic matter. Organic carbon content was high at 5.1%, whereas available phosphorus was in the moderate category at 13.76 mg/100 g, and available/exchangeable potassium was classified as low to moderate at 0.55 mg/100 g. These findings indicate that layer chicken farming activities have affected soil quality, although the impacts are not yet classified as severe.*

**Keywords:** *Layer chicken farming, Livestock waste, Water and soil quality, Residential environment*