

KUALITAS AIR IRIGASI PERTANIAN DI DESA KALIKEBO, KECAMATAN TRUCUK, KABUPATEN KLATEN

Oleh : Muhammad Alfian Firmansyah

Dibimbing oleh : Yanisworo WR

ABSTRAK

Pertanian di Desa Kalikebo menggunakan air dari saluran irigasi berasal dari Kali Kuning yang melewati pemukiman, peternakan, dan perikanan yang berpotensi mengalami pencemaran. Penelitian ini bertujuan untuk mengetahui kualitas air dan status mutu air irigasi di Desa Kalikebo, Kecamatan Trucuk, Kabupaten Klaten. Penelitian dilakukan dengan metode survei untuk menentukan lokasi dan metode *purposive* untuk menentukan titik pengambilan sampel air berdasarkan jarak dari sumber pencemaran ke arah persawahan. Ditentukan sebanyak 8 Titik sampel, 3 sampel berupa air irigasi yang diduga mengalami pencemaran, dan 5 Titik sampel berupa air irigasi yang masuk ke areal persawahan. Sampel air diambil menggunakan metode *Grab*. Parameter yang diamati dalam penelitian ini adalah temperatur, pH, *Total Suspended Solid* (TSS), *Total Dissolved Solid* (TDS), Dissolved Oxygen (DO), *Biochemical Oxygen Demand* (BOD), *Chemical Oxygen Demand* (COD), *Daya Hantar Listrik* (DHL), Nitrat, Total Fosfat, dan Timbal. Data hasil analisis laboratorium digunakan untuk menentukan kualitas air menggunakan metode Indeks Pencemaran (IP) dan Baku Mutu Air kelas empat berdasarkan Peraturan Pemerintah No 22 Tahun 2021. Hasil penelitian menunjukkan bahwa air irigasi di Desa Kalikebo, Kecamatan Trucuk, Kabupaten Klaten pada parameter Temperatur, TDS, pH, DO, DHL, Nitrat, Total Fosfat, dan timbal sesuai dengan baku mutu yang ditetapkan, lokasi Titik sampel 6 parameter BOD, COD, dan TSS melebihi baku mutu yang ditetapkan. Status mutu air irigasi di Desa Kalikebo, Kecamatan Trucuk, Kabupaten Klaten berdasarkan metode Indeks Pencemaran (IP) menunjukkan memenuhi baku mutu (kondisi baik) hingga tercemar ringan.

Kata Kunci : Irigasi, Kualitas Air, Indeks Pencemaran, PP No. 22 Th 2021.

QUALITY OF AGRICULTURAL IRRIGATION WATER IN KALIKEBO VILLAGE, TRUCUK DISTRICT, KLATEN REGENCY

By: Muhammad Alfian Firmansyah

Supervised By: Yanisworo WR

ABSTRACT

Agriculture in Kalikebo Village uses water from irrigation channels originating from the Kuning River, which flows through residential areas, livestock farms, and fisheries that potentially cause pollution. This research aims to determine the quality and status of irrigation water in Kalikebo Village, Trucuk District, Klaten Regency. The research was conducted using a survey method to determine the location and a *purposive sampling* method to determine water sampling points based on the distance from pollution sources toward the rice fields. Eight sampling points were established, including three samples of irrigation water suspected of being polluted and five sampling points of irrigation water entering the rice field area. Water samples were collected using the Grab method. Parameters observed in this study were temperature, pH, *Total Suspended Solid* (TSS), *Total Dissolved Solid* (TDS), *Dissolved Oxygen* (DO), *Biochemical Oxygen Demand* (BOD), Chemical Oxygen Demand (COD), *Electrical Conductivity* (EC), Nitrate, Total Phosphate, and Lead. Laboratory analysis data were used to determine water quality using the Pollution Index (PI) method and Class Four Water Quality standart based on Government Regulation No. 22 of 2021. The results showed that irrigation water in Kalikebo Village, Trucuk District, Klaten Regency met the established quality standards for Temperature, TDS, pH, DO, EC, Nitrate, Total Phosphate, and Lead parameters. However, at sampling point 6, the BOD, COD, and TSS parameters exceeded the established quality standards. The irrigation water quality status in Kalikebo Village, Trucuk District, Klaten Regency, based on the Pollution Index (PI) method, indicated conditions ranging from meeting quality standards (good condition) to slightly polluted.

Keywords: Irrigation, Water Quality, Pollution Index, Government Regulation No. 22 of 2021.