

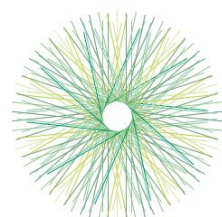
EKORAIN ULTRA®: Rainwater Collection and Treatment for Drinking and Washing Water in Farming



Figure 1: Illustration of the EKORAIN ULTRA® rainwater collection concept for livestock farming

EKORAIN ULTRA®, developed by OCENE, is an innovative solution for collecting and treating rainwater for animal drinking and washing of housing on poultry and pig farms. The system prefilters and ultrafilters rainwater to remove suspended solids, viruses, and bacteria, followed by chlorination for double disinfection. Treated rainwater is mixed with supplementary water from wells or public sources and distributed on the farm. Remineralisation is possible. Storage capacity is sized according to roof area and local rainfall, enabling self-sufficiency of 30% to 80% in water supply. Designed for farms with at least 4,500 m² of roof surface, EKORAIN ULTRA® requires an investment of €80,000–€100,000 and operating costs of €0.90–€1 per m³. A smaller version, EKORAIN POA®, suits farms with roofs over 2,500 m². Subsidies of up to 40% help finance projects, with a typical return on investment in 5–8 years compared to public water costs (€2.5/m³ in 2024). The system reduces dependence on public water and boreholes, improving farm resilience during water shortages and lowering environmental impact. Site layout and topography are key elements for implementation, and rainwater from asbestos roofs cannot be used for animal drinking. Field tests are underway with commercial rollout expected in late 2025. EKORAIN ULTRA® offers a practical, sustainable way for livestock farmers to manage water efficiently, cut costs, and enhance resource security.

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