

Analysis of Agriculture Waste Used in Concrete

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Abstract: *The growing demand for sustainable construction materials has led to the exploration of agricultural waste as a potential alternative in concrete production. This research investigates the use of agricultural waste materials, such as rice husk, coconut shells, and wheat straw, as partial substitutes for conventional concrete components. The primary objective is to analyze the mechanical properties, durability, and environmental benefits of concrete incorporating agricultural waste. Experimental studies were conducted to evaluate the compressive strength, flexural strength, and workability of the resulting concrete mixes. The findings indicate that agricultural waste can enhance the performance of concrete, particularly in terms of reducing the carbon footprint, improving thermal insulation, and increasing overall sustainability. Furthermore, the research highlights the challenges associated with the consistency and reliability of these materials in large-scale construction applications. The paper concludes with a discussion on the potential for scaling up the use of agricultural waste in concrete and its implications for sustainable development in the construction industry.*

Keywords: Agricultural Waste, Sustainable Concrete, Waste Utilization, Alternative Aggregates, Rice Husk Concrete, Coconut Shell Concrete, Waste Materials in Construction, Green Concrete, Concrete Durability, Compressive Strength

