

# Experimental Investigation on Concrete Using Agricultural Waste Ash-A Review

Sakshi A. Zambre<sup>1</sup>, G. D. Dhavale<sup>2</sup>, V. A. Kalmegh<sup>3</sup>

PG Student/Research Scholar, Department of Civil Engineering<sup>1</sup>

Professor, Department of Civil Engineering<sup>2</sup>

Assistant Professor, Department of Civil Engineering<sup>3</sup>

Bapurao Deshmukh College of Engineering Sevagram, Maharashtra, India

**Abstract:** *The present study is aim to develop a high strength concrete by using mineral admixtures of bamboo leaf ash and pawpaw leaf ash. In order to check the compatibility, physical and chemical properties of materials are studied. This aims to provide a comprehensive review of recent trends incorporating biomass ashes from agricultural waste in ordinary Portland cement(OPC).The material properties of different leaf ashes and their effect on fresh and hardened concrete properties are review. Partial replacement of OPC with by products, such as bamboo leaf ash, pawpaw leaf ash. Partial replacement of OPC with by products, such as bamboo leaf ash, pawpaw leaf ash. It will also contribute to the effort of achieving zero waste technology and sustainable development.*

**Keywords:** Bamboo leaf ash, pawpaw leaf ash, Compressive Strength.

## REFERENCES

- [1]. Chao-Lung, H., Anh-Tuan, B. and Chun-Tsun, C. 2011. Effect of rice husk ash on the strength and durability characteristics of concrete. *Construction and Building Materials*, 25(9): 3768–377
- [2]. Bello, A. 2007. Geotechnical Evaluation of some Lateritic Soils as Foundation Materials in Ogbomoso North Local Government Area Southwestern Nigeria. *Science Focus*, 12(2): 70- 75.
- [3]. Bello, A. and C. Adegoke. 2010. Evaluation of Geotechnical Properties of Ilesha East Southwest Nigeria’s Lateritic Soil. *Pacific Journal of Science and Technology*. 11(2): 617-624.
- [4]. Bello, A., Ige, J. and Tajudeen, S. 2007. Geotechnical Characterization of Lateritic Soils in parts of Ejigbo Local Government Area, South western Nigeria. *LAUTECH Journal of Engineering and Technology*, 4(2): 34-38.
- [5]. Akinwumi, I. and Aidomojie, O. 2015. Effect of corncob ash on the geotechnical properties of lateritic soil stabilized with Portland cement. *International Journal of Geomatics and Geosciences*, 5(3):375-392.
- [6]. Amu, O. and Babajide, S. 2011. Effects of bamboo leaf ash on lime stabilized lateritic soil for highway construction. *Research Journal of Applied Sciences, Engineering, and Technology*, 3(4):278–283.
- [7]. Ernesto Villar (2010)- was represents a characterization and study of the pozzolanic behavior between calcium hydroxide(CH) and bamboo leaf ash (BLA), which was obtained by calcining bamboo leaves at 600oC for 2 h in a laboratory electric furnace.
- [8]. Massazza.F (1979)- Singh et al (2000) discussed that ecofriendly composite cements may be obtained by partial replacement of Portland cement with certain low cost materials
- [9]. Morton,1997; Hartman et al,(1981)-papaya has always held an attraction of people and there is great economic importanc to tropical regions where it is widely grown for edible fruit latex. the cluster of leaves at the apex and along the upper part of the stem makes up the foliage on the tree.
- [10]. Emeka and Aderinlewo (2016)-They carried out preliminary soil tests (in Federal University of Technology, Akure (FUTA), Nigeria and Engineering tests such as compaction.