International Journal of Environment, Ecology, Family and Urban Studies (IJEEFUS)
ISSN(P): 2250-0065; ISSN(E): 2321-0109
Vol. 6, Issue 1, Feb 2016, 119-130

TRANS STELLAR
•Journal Publications •Research Consultancy

USE OF AGROWASTE IN CONCRETE CONSTRUCTION

DEVINDER SINGH[1] & JASPAL SINGH[2]

[1]*Student, Department of Civil Engineering, Punjab Agricultural University, Ludhiana, Punjab, India*

[2]*Professor, Department of Civil Engineering, Punjab Agricultural University, Ludhiana, Punjab, India*

ABSTRACT

The use of agro-waste in concrete manufacture gives an appropriate solution to many environment concerns and burdens associated with waste management. A large amount of agricultural waste such as bagasse, rice husk, wheat straw, coconut shell etc. is produced in most of developing as well as developed countries. The large part of these wastes is being used as fuel for power generation which results into the ash. However, this ash has been considered being a waste material, which causes the problems of disposal. Furthermore, if this reutilization of waste as fuel is occurred under controlled temperature and atmosphere, the ash will be a rapidly reactive (due to high amorphous silica content) for pozzolanic activity during cement hydration. Therefore, agro-waste like ground shell ash, rice husk ash, sugarcane bagasse ash etc. can be used as cement replacement while coconut shell, oil palm shell etc. used as aggregates replacement in concrete. This paper presents an overview of the published data on the use of rice husk ash, sugarcane bagasse ash, groundnut ash and coconut shells in concrete. Effect of these wastes on the properties of concrete such as workability and compressive are presented.

KEYWORDS: Agrowaste, Coconut Shell, Concrete, Compressive Strength, Ground Nut Ash, Rice Husk Ash, Sugarcane Bagasse Ash, Workability

Received: Jan 15, 2016; **Accepted:** Jan 23, 2016; **Published:** Jan 28, 2016; **Paper Id.:** IJEEFUSFEB201612

Original Article