

FLY ASH USE IN AGRICULTURE

Bulk Utilisation of Fly Ash in Agriculture

Fly ash is known to be a good insecticide and active carrier in chemical and herbal insecticides for use against various kinds of pests infecting crops. Fly ash utilisation is gaining significance due to its micronutrient values for raising agricultural, horticulture and forestry crops / plantation etc. and positive influence on chemical and biological properties of soil. Application of fly ash increases:

- **Increases water holding capacity**
- **Improves soil texture**
- **Optimizes pH values**
- **Provides nutrients like, Fe, Zn, Cu, K, P, Ca which in turn increases the productivity.**

The Agriculture produce have been evaluated for toxicology, nutritional value as well as radio activity and have been certified as good material for human and animal consumption. In some cases significant increase in minerals like Fe & Calcium have been noticed which is beneficial.

(Source- Fly Ash Utilisation Programme (FAUP), Deptt. of Sc. & Tech., Govt. of India)

The acidic soils can be benefitted from the incorporation of fly ash having higher pH. **In Odisha about 80% of the total geographical area is under acid soils.** Besides fly ash is a source of readily available nutrients source. Since, fly ash generated from coal available in Odisha is generally alkaline in nature its use can help in neutralizing the acidic soils.

Promising results from the farm experiments conducted at CRRI, Cuttack, a *kisanmela* was organized on 3rd May, 2011 (Rabi 2011), at the time of maturity of the rice crop in order to sensitize the stake holders about the utility of bulk application of fly ash. Farmers and other stake holders from different districts of Odisha were exposed to on-station field experiment conducted at **CRRI**,

Cuttack and participated in the discussions during the Scientist-Farmer interaction session. From the interested farmers attended the *kisanmela*, 12 farmers were selected from three districts of Odisha broadly covering the major soil groups of the state and field demonstrations were initiated during kharif 2011.

On application fly ash @ **50 Tons /ha** to the demonstration plots yielded a **maximum 35% rise** in the yield of paddy crop.



Yield details of the Demonstrations

M/s Hindalco, Sambalpur also had carried out pilot projects for paddy production using fly ash in the year 2010 and the yield obtained was 25% higher than previous yields.

