Ashes from natural wood chip under fireplace

Key facts:

→ **Product Category**: PFC 1C
→ **Input material:** Shredded wood
→ **General appearance:** grey powder
→ **Nutrient Content (N-P-K-Mg %):** 0.0 N%, 0.4 P2O5%, 0.9 K2O%, 0.4 MgO%
→ **Neutralizing value :** 45 (equivalentCaO)
→ **Product status:** system complete and qualified
→ **Permit availability**: not commercial yet.
→ **Geographical area:**South Britany
→ **Price range:**-€/ha

Summary:

The ash collected at the outlet of the boilers can come from different fractions: sub-fireplace or flying (from dust removal and smoke filtration). The ash under the fireplace is generated in larger amounts and concentrates the non-combustible minerals of the wood (1 to 2% of the initial mass of the wood). With significant levels of lime, magnesium, potassium and phosphorus, this fraction generated up to 95% of the total ash production presents valuable agronomic advantages. A return to the ground allows benefits from the fertilizing and liming value of these ashes. They generally contain phosphorus around 20 to 50 g P_2O_5/kg of raw material, and potassium around 80 to 100 g K_2O/kg. Cationic nutrients Ca, K and Mg in ash are readily available to potentially available for cultivation. With a neutralizing value sometimes reaching more than 50%, they are a liming material that can increase the pH by 1 point after a cumulative application of 7 to 8 t/ha. The potential risks linked with this use are due to the presence of metal trace elements (MTE), at higher or lower concentrations, depending on the origin of the wood and the combustion technic. To limit these risks: choose ash from natural wood (unadjusted) and from unpolluted media. Under these conditions, wood ash represents a substantial saving for the farmer, from 100 to 150€/t.

How to use:

→ **Type of farming**: organic, low input, conventional. ALL
→ **Cultivationmethods:** open field, greenhouse
→ **Recommended crops**: All crops
→ **Application doses**t/ha
    It can be considered that a soil application of 2,5 t/ha every 3 years is generally enough for soil maintenance, but this dose should be estimated according to the culture system needs and the soil pH.

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Key product features:

→ Powder material. Spreading conditions are to be well chosen.

→ Low organic matter.

→ Very low heavy metals.

Key product benefits:

→ **Total background fertiliser with a great neutralizing value**

→ **Correct bioavailability**. Nutrients in wood ashes can be readily absorbed by the plant. They can firmly improve crop productivity including when phosphorus is at issue.

→ When using wood for energy, ashes are produced anyway. Using them as à fertiliser and liming material permit to recycle mineral nutrients (especially phosphorus) instead of bury them.

Competitive position and advantages:

100 to 150 € of fertilizer savings per ton of ash spreading. This is a minimum for bulk fertilizers and it could be a bit more for organic fertilizers.

Organic farms are often phosphorus-deficient more generally nutrients-deficient. Wood ashes represent a very good and cheap opportunity for them.

For natural wood, the input of trace metals represents, for each of them, less than 1% to 3% of the maximum quantities authorized by the regulation

The CO_2 released into the atmosphere during the combustion of the wood has previously been removed: there is no increase in the greenhouse effect.

The economic interest thus conferred on the bocage will contribute to preserve it.