

# Integrated Pest & Crop Management

## When Fertilizing Go Easy on the Sea Salt

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There has been a recent increase in calls to MU Extension wondering about the fertilizer benefits of sea salt. Sea salt, like table salt, is primarily sodium chloride. It typically contains two percent other minerals but the content can be higher in some sources. The other minerals can include potassium, calcium, magnesium and some micro-nutrients with the exact content varying from source to source.

University of Missouri research has shown limited response to micro-nutrient fertilizer on Missouri soils and there are soils in Missouri that require additions of phosphorus and potassium. Use soil testing to document soil deficiencies of phosphorus and potassium and soil testing and plant tissue testing to evaluate micro-nutrient deficiencies in crops. For more information on micro-nutrient deficiencies see the University of Missouri IPM guide 1016, *Crop Nutrient Deficiencies and Toxicities* (<http://extension.missouri.edu/explorepdf/agguides/pests/ipm1016.pdf>).

If you document a deficiency in one of these nutrients is sea salt a good fertilizer to supply these nutrients? The short answer is no. The concentration of beneficial nutrients is so low in sea salt it would take high rates to apply an agronomically significant amount of a beneficial nutrient. Potassium is typically less than one percent sea salt, so a ton would supply less than 20 pounds, less than is removed in a ton of hay or 100 bushels of corn. Micro-nutrient concentrations are typically less than 0.01 percent so a ton of salt would provide less than a half pound of micro-nutrient.

There are potential negative effects of applying sea salt to crops. Too much salt near germinating seeds can hurt germination. Too much sodium can disperse soil structure and reduce yields in many crops. Farmers typically manage the salt content in fertilizers by avoiding direct contact of fertilizer with seeds and using higher concentration fertilizers to limit the amount of salt applied. Sea salt as a fertilizer source would require special care to avoid salt effects on crops because its low concentration of desirable nutrients would require higher rates of application to obtain agronomically relevant of fertilizer nutrients.

In summary, sea salt does contain nutrients that have fertilizer value, but there are much more concentrated and desirable sources of these nutrients that have less potential for harm to growing crops.

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