Burying crop residues at sea may help reduce global warming

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Imagine a massive international effort to combat global warming by reducing carbon dioxide - build up in the atmosphere. It involves gathering billions of tons of cornstalks, wheat straw, and other crop residue from farm fields, bailing it, shipping the material to seaports, and then burying it in the deep ocean.

Scientists in Washington and California have concluded that this Crop Residue Oceanic Permanent Sequestration (CROPS) approach is the only practical method now available for permanently sequestering, or isolating, the enormous quantities of CO2 necessary to have a real impact on global warming.

In a report scheduled for the Feb. 15 issue of ACS' Environmental Science & Technology, a semi-monthly journal, Stuart Strand and Gregory Benford conclude that (CROPS) could reduce global carbon dioxide accumulation by up to 15 percent per year. Plants remove carbon dioxide from the atmosphere during photosynthesis, and release it when they decay. Ocean burial would prevent that carbon dioxide from re-entering the atmosphere.

After comparing known methods for carbon dioxide sequestration on the basis of efficiency, long-term effectiveness, practicality, and cost, the researchers concluded that CROPS is the only method feasible with existing technology. CROPS would be 92 percent efficient in sequestering crop residue carbon. They recommend that crop residue sequestration and its effects on the ocean should be investigated further

and its implementation encouraged. - MTS

Citation: "Ocean Sequestration of Crop Residue Carbon: Recycling Fossil Fuel Carbon Back to Deep Sediments", pubs.acs.org/stoken/presspac/p … ll/10.1021/es8015556

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