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AGRONOMIC SIGNIFICANCE OF RECYCLING RICE STRAW

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The straw generated from a crop of rice can contain about one fourth the quantity of nitrogen and about twice the quantity of potassium fertilizer required by it. Additionally straw is rich in carbon and silicon. Yet straw is hardly put to agronomic use mainly due to lack of simple and inexpensive methods of recycling.

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Straw with its high C/N ratio can be converted into compost without addition of any low C/N ratio materials by merely heaping it in a part of the paddy field. The time taken for composting will depend largely on the extent to which the heap gets moistened. In soils which are moderately well drained or well drained, straw can be recycled by direct incorporation after the first ploughing. Straw can also be spread on the surface of the land and rice seedlings transplanted. Another method is to add straw in between rows of transplanted rice. Each method has its advantages and limitations. In addition to supplying nutrients, surface added straw serves to effectively control weeds in a rice crop.

Field experiments have shown that the amounts of nitrogen and potassium fertilizer necessary for a rice crop can be reduced by use of straw. In fact higher grain yields are often obtained when straw is recycled.