

## **Strigolactones: biosynthesis and potential in agriculture**

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Strigolactones have emerged as plant hormones with diverse roles in plant development. In addition to suppressing shoot branching/tillering they can suppress adventitious and lateral roots. They also enhance secondary growth and leaf senescence and can enhance the elongation of root hairs and primary root growth. Strigolactones play important roles in the rhizosphere where they promote symbioses that enhance nutrient and water uptake. On the negative side, strigolactones exuded from plants can stimulate plant parasites with potential to decimate crops. Over the eight years since discovery of genes for strigolactone biosynthesis, various researchers have mapped out a biosynthetic pathway and signal transduction system. This will be briefly reviewed along with our recent discovery of a new strigolactone biosynthesis gene and a discussion of the potential benefit strigolactone diversity may provide for plants and agriculture.