

## CHAPTER 18

### ENVIRONMENTAL MANAGEMENT OF DEGRADED ECOSYSTEMS

#### Doctoral Theses

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**Investigations on Some Agroecological Aspects of Phalaris  
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#### *Abstract*

Examines the effect of rice straw incorporated into soil on growth of *P. minor*, and to know whether observed inhibition (if, any) is mediated through allelopathy or by changed/ altered soil properties rice straw burned or unburned on the phytotoxicity of a soil-applied herbicide, isoxaflutole, wheat straw on soil improving potential of cyanobacteria, importance of binary mixture of soil-applied herbicides when compared to individual herbicide application, selected herbicides on a fallow crop. mung bean, residual effects of selected herbicides on *P. minor* and wheat a commonly used herbicide, sulfosulfuron on the growth of *P. minor* seeds collected from several wheat fields located in the states of Haryana and Punjab, herbicides with different modes of action on growth of a common rice field cyanobacterium *Anabaena fertilissima*, probable causes of the success of *P. minor* in the wheat field compared to areas outside the wheat fields and whether light and nutrients play any role for that, and impact of *P. minor* on selected soil properties.

#### *Contents*

1. Weeds in agroecosystems : An overview. 2. *Phalaris minor* : An introduction. 3. Incorporation of straw into soil : Agroecological implications and its impact. 4. Herbicide use in wheat-rice cropping system. 5. Performance of *P. minor* in wheat fields.