

Contents

1 Allelopathy: Introduction and Concepts	1
1.1 Introduction to This Book.....	1
1.2 History, Definitions, and Concepts of Allelopathy	2
1.3 Type and Concentration of Allelochemicals in Crop Species.....	4
1.4 Mode of Action of Allelochemicals.....	6
1.5 Implications for Weed Control.....	7
1.6 Conclusions and Future Thrust	8
References.....	8
2 Wheat Allelopathy for Weed Control	13
2.1 Introduction.....	13
2.2 Wheat Allelopathy and Allelochemicals.....	14
2.3 Allelopathic Wheat Cultivars for Weed Control	16
2.4 Allelopathic Wheat Mulch for Weed Control	18
2.5 Conclusions.....	18
References.....	18
3 Brassicaceae Allelopathy for Weed Control	21
3.1 Introduction.....	21
3.2 <i>Brassicaceae</i> Allelopathy and Allelochemicals.....	22
3.3 <i>Brassicaceae</i> Allelopathic Cover Crops for Weed Control.....	24
3.4 <i>Brassicaceae</i> Allelopathic Cultivars for Weed Control	24
3.5 Use of <i>Brassicaceae</i> Plants as Mulch	25
3.6 Conclusions.....	25
References.....	25
4 Maize Allelopathy for Weed Control	29
4.1 Introduction.....	29
4.2 Maize Allelopathy and Allelochemicals	31
4.3 Allelopathic Maize Cultivars for Weed Control	32
4.4 Allelopathic Maize Mulch for Weed Control	32
4.5 Conclusions.....	33
References.....	33

5	Rice Allelopathy for Weed Control	35
5.1	Introduction.....	35
5.2	Rice Allelopathy and Allelochemicals.....	36
5.3	Allelopathic Rice Cultivars for Weed Control.....	40
5.4	Allelopathic Rice Mulch for Weed Control.....	42
5.5	Conclusions.....	42
	References.....	42
6	Rye Allelopathy for Weed Control	49
6.1	Introduction.....	49
6.2	Allelopathy and Allelochemicals of Rye Crop.....	50
6.3	Allelopathic Rye Cover Crop for Weed Control.....	52
6.4	Allelopathic Rye Mulch for Weed Control.....	52
6.5	Allelopathic Rye Cultivars for Weed Control.....	53
6.6	Conclusions.....	54
	References.....	54
7	Barley Allelopathy for Weed Control	57
7.1	Introduction.....	57
7.2	Allelopathy and Allelochemicals of Barley.....	58
7.3	Allelopathic Barley Cultivars/Genotypes for Weed Control.....	59
7.4	Allelopathic Barley Mulch and Cover Crop for Weed Control.....	60
7.5	Conclusions.....	61
	References.....	61
8	Sorghum Allelopathy for Weed Control	65
8.1	Introduction.....	65
8.2	Allelopathy and Allelochemicals of Sorghum.....	66
8.3	Allelopathic Sorghum Cultivars for Weed Control.....	68
8.4	Allelopathic Sorghum Mulch for Weed Control.....	69
8.5	Allelopathic Sorghum Cover Crop for Weed Control.....	70
8.6	Intercropping of Allelopathic Sorghum for Weed Control.....	70
8.7	Use of Sorghum in Crop Rotation.....	71
8.8	Conclusions.....	72
	References.....	72
9	Sunflower Allelopathy for Weed Control	77
9.1	Introduction.....	77
9.2	Allelopathy and Allelochemicals of Sunflower.....	78
9.3	Allelopathic Sunflower Mulch for Weed Control.....	79
9.4	Allelopathic Sunflower Cultivars for Weed Control.....	80
9.5	Allelopathic Sunflower in Crop Rotation for Weed Control.....	81
9.6	Conclusions.....	82
	References.....	82
	Author Biography	87



<http://www.springer.com/978-3-319-53185-4>

Manipulation of Allelopathic Crops for Weed Control

Jabran, K.

2017, X, 87 p., Softcover

ISBN: 978-3-319-53185-4