

Wheat Guideline

A suggested guideline for the sustainable production of winter row crops. Improve overall crop health and productivity while building root health and fertility.



Root Health Program

Product: Application and Rates	Purpose
Laying Foundations	
<i>Humate Granules</i> : 5 kg/ha in pre-plant granular fertiliser blend.	<ul style="list-style-type: none"> Improves efficiency of fertiliser and maximises nutrient utilisation.
<i>Fulvic acid powder</i> : 2-5 kg/ha as soil application, or as 1 - 2% part of liquid fertilizer blend.	<ul style="list-style-type: none"> Natural chelator, plant growth promotor and microbial stimulant.
<i>Eco-T</i> [®] : Seed treatment @ 1 g/kg or in-furrow 100 g/ha or via irrigation 250 g/ha.	<ul style="list-style-type: none"> Stimulates healthy root development. Suppression of fungal soil borne diseases.
<i>Eco-T</i> [®] <i>Ezi-Flo</i> : Seed treatment in the seed bin @ 1 g/kg seed, minimum 25 g/ha.	<ul style="list-style-type: none"> Stimulates healthy root development. Suppression of fungal soil borne diseases.
<i>RhizoVital</i> [®] 42: Seed treatment @ 0.5 ml per kg seed, or in furrow @ 100 - 350 ml/ha, or via irrigation @ 500 ml.	<ul style="list-style-type: none"> Beneficial bacteria to build soil health and aid in prevention of soil borne diseases. Mobilisation and improved uptake of phosphate and other nutrients.
<i>V¹² Initiate</i> : 3 kg/ha in furrow at planting or 5 kg/ha via irrigation.	<ul style="list-style-type: none"> B, Si, Ca and biostimulants initiate the nutrition cycle and support germination and early growth.
<i>AgriSil</i> [®] K50: Soil drench through irrigation @ 1 - 4 L/ha every 7 - 10 days from emergence or transplant. Do not over irrigate.	<ul style="list-style-type: none"> Silica supplement to support immunity and stress tolerance (biotic & abiotic). Improved cell strength results in improved crop quality and reduced lodging.

Plant Vitality Program: *Plant Maintenance*

Product: Application and Rates	Purpose
Stimulate Vegetative Growth	
<i>V¹² Shoor</i> : Foliar application @ 0.5 - 1 L/ha 2 weeks after emergence or transplant. Repeat 28 days after first application and as needed thereafter.	<ul style="list-style-type: none"> Stimulate vegetative growth.
Nutrient Management	
<i>V¹² Multi</i> [®] : Foliar application @ 3 - 5 L/ha. Repeat when necessary for stress or to improve overall plant health.	<ul style="list-style-type: none"> Supplement nutrition during periods of stress and critical growth periods. Refer to table for suggested application timing.
<i>V12 Micro</i> [®] : Foliar application @ 2 L/ha. Repeat when necessary to correct micronutrient deficiencies.	<ul style="list-style-type: none"> Micronutrient supplement to aid in deficiency management.
Plant Stress and Strength	
<i>AgriSil</i> [®] K50: Foliar application or soil drench through irrigation @ 1 - 4 L/ha. Low rates can be applied every 7 to 10 days from emergence or transplant, under low stress conditions and when plants are small. Apply high dose rates when applications are done further apart, under high stress conditions and on large plants.	<ul style="list-style-type: none"> Silica supplement to support immunity and stress tolerance.

Bio Crop Protection: *Disease and Pest Management*

Product: Application and Rates	Purpose
Disease Management	
<i>Eco-T</i> [®] : Seed treatment @ 1 g/kg, soil drench via irrigation @ 500 g/ha. Repeat monthly through irrigation @ 250 g/ha.	<ul style="list-style-type: none"> Suppression of fungal soil borne diseases, i.e. <i>Fusarium</i>, <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Phytophthora</i>, etc.
<i>Eco-T</i> [®] <i>Ezi-Flo</i> : Seed treatment in the seed bin @ 1 g/kg seed, minimum 25 g/ha.	<ul style="list-style-type: none"> Suppression of fungal soil borne diseases, i.e. <i>Fusarium</i>, <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Phytophthora</i>, etc.

Product: Application and Rates	Purpose
Pest Management	
<i>Bolldex</i> [®] : Foliar application @ 200 ml/ha when pest is first noticed - eggs or 1st instar larvae. Repeat applications every 7 to 10 days until bollworm is under control.	<ul style="list-style-type: none"> Suppression of African bollworm.

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Application Timing

Application timing is a guide only.
Can be amended according to
season, crop and location.



	Product	Pre-plant	Planting	Emergence to first leaf W 1 - 2	Second to fourth leaf W 2 - 3	Start of tillering W 4	Tillering continues, first node visible W 5	Tillering continues W 6	Tillering continues, Flag leaf visible W 7	Head development W 8 - 10	Flowering W 11 - 13	Yield formation W 14 - 18	Ripening W 19 - 20	
		Establishment			Vegetative growth						Flowering	Yield form	Ripening	
Root Health	<i>Humate Granules</i>	5 kg/ha												
	<i>Fulvic Acid</i>			Apply as needed										
	<i>RhizoVita®42</i>	0.5 ml/kg seed OR	In furrow @ 100-350 ml/ha/ Irrigation @ 500 ml/ha											
Plant Vitality	<i>V¹² Initiate</i>		In-furrow @ 3 kg/ha/ Irrigation @ 5 kg/ha											
	<i>AgriSil® K50</i>						2 L/ha		2 L/ha					
	<i>V¹² Shoot</i>					1 L/ha								
	<i>V¹² Multi®</i>					2 L/ha			2 L/ha					
	<i>V¹² Micro®</i>			Apply as needed										
Bio Crop Protection	<i>Eco-T®Ezi-Flo</i>		1 g/kg seed											
	<i>Eco-T®</i>		250 g/ha in furrow (if no Ezi-Flo seed application)	Apply via irrigation @ 250 – 500 g/ha										
	<i>Bolldex®</i>		200 ml/ha as necessary for management of African Bollworm. Apply when pest is first noticed. Target eggs or first instar larvae.											

AgriSil® K50 contains potassium silicate. Reg. No. B3756, Act No. 36 of 1947, skin irritant. PQ Silicas South Africa (Pty) Ltd, PO Box 14016, Wadeville, 1422, Reg. No. 2000/027189/07. Fulvic Acid Powder contains fulvic acid. Reg. No. B4796; Humate Crystals contains humic acid and potassium. Reg. No. B4797; RhizoVital® 42 contains *Bacillus amyloliquefaciens* FZB42. Reg. No. B4201; V¹² Initiate contains potassium, sulphur, calcium, magnesium, manganese, zinc, iron, silica, copper, molybdenum, and boron. Reg. No. B4513; V¹² Multi® contains nitrogen, phosphorous, potassium, sulphur, magnesium, iron, copper, zinc, manganese, boron and molybdenum. Reg. No. K4512; V¹² Micro® contains nitrogen, potassium, magnesium, sulphur, iron, manganese, zinc, copper, boron and molybdenum. Reg. No. B4514; V¹² Shoot contains nitrogen, magnesium, sulphur, iron, manganese and molybdenum. Reg. No. B4510. Bolldex® contains *Helicoverpa armigera* Nucleopolyhydrovirus (HearNPV). Reg. No. LB895, Act No. 36 of 1947. Andermatt Madumbi (Pty) Ltd, Postnet Suite 20, Private Bag X6011, Hilton, 3245. Reg. No. 2009/020798/07. Eco-T® contains *Trichoderma asperellum*. Reg. No. L6938; Eco-T® Ezi-Flo contains *Trichoderma asperellum*. Reg. No. L9276, Act No. 36 of 1947. Andermatt PHP (Pty) Ltd, PO Box 207, Nottingham Road, 3280. Reg. No. 2003/007987/07.

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