

switch **AG**



Restoring biological life to agricultural soils.....

Advance Restore has been specifically designed to add multi-strained biological life back into heavily farmed, depleted agricultural soils. Restore's biological package is complemented with high grade humates and kelp for feeder root development. Restore's carbohydrates & amino acids stimulate existing soil microbes and reduce plant stress levels.

UNIQUE FEATURES:

- Robust multi-strained biological package proven in scientific field trials
- Mitigates soil borne fungal diseases
- Improve nutrient mineralisation and root uptake
- Enhanced root development
- Increased water holding capacity
- Improved soil structure
- Compatible with Tech Grade fertilisers
- Reduced nutrient leaching in light soils



Manufactured by:
Switch Ag Pty Ltd
Sydney Road
Cowra NSW 2794
Email: admin@switchag.au



DRUM SIZE 20L **200L** **1000L**

 **Advance**

RESTORE

BIOLOGY+HUMATES+SUGARS+KELP+AMINO ACID

APPLICATION TIMING	LITRES/HA
Commencement of flowering	5-10L
Fruit set	5-10L
Key periods of temperature stress	5-10L
With nutrient applications	5-10L

Annual Application: 4-6 times.

Post Fumigation: Refer to your consultant.

Application Method: Via fertigation, boom or liquid inject. Dilute with 70-100+L water/HA.

Ingredients: Multi-strain biological package (including bacillus and pseudomonas strains) with added carbohydrates, full spectrum amino acid complex, kelp and humates.

Compatibility: Compatible with tech grade fertilisers. Always conduct a 'jar test' prior to tank mixing. Caution needs to be taken when mixing with pesticides as potential crop damage could occur. Thoroughly decontaminate tanks and spray equipment before use particularly before applying to sensitive crops. Clean the entire sprayer system, not just the tank.

Storage: Avoid exposure to direct sunlight and store in a cool dry place. Ideally use within six months.

For further information refer to the SDS on our website. SWITCH's responsibility for the product sold is subject to the terms and conditions of sale, a copy which is available upon request.

NOTE: PRODUCT REQUIRES AGITATION PRIOR TO APPLICATION

switch 

WWW.SWITCHAG.AU

Dr MONTGOMERY
SOIL MICROBE
VIDEO



SOIL HEALTH
— INSTITUTE —

<https://youtu.be/Ly-WeqhSWA>

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Trial Data

- Restore has proven to be effective in independent trials on a wide range of soil types in both agricultural & sports turf markets
- Shown to help mitigate the effects of soil born fungal diseases
- Demonstrated to propagate communities of beneficial microbial and fungi species in the soil
- Aids in fertiliser mineralisation and delivery to plants
- Delivers greater water use efficiency and drought tolerance.



Fumigate.....Re-populate

- Replicated trial used sterilised soil with fusarium added
- Pots with Restore performed the best
- Demonstrated the ability of Restore to add beneficial biology back to the soil after fumigation & or years of soil health neglect.

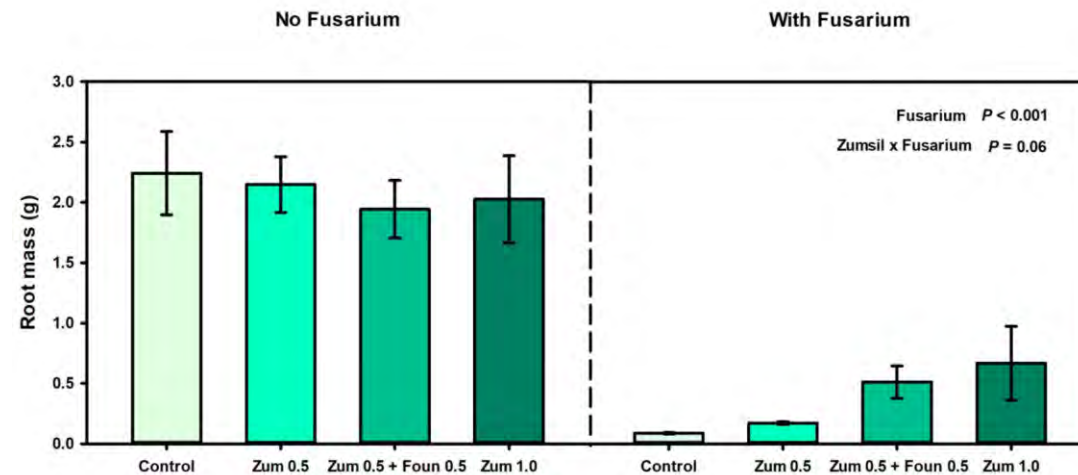


Figure 3. ← Effects of Zumsil and Microsoil Foundation on the root mass (g) of rockmelon (*Cucumis melo*) grown for nine weeks, with and without *Fusarium oxysporum* f.sp. *melonis* infection. Values are means \pm standard error. Significant ($P < 0.05$) and marginally significant ($P < 0.1$) factors are indicated.

Microbe Wise Lab Tests

High rates of fertiliser showing soil quality decline

microbiology laboratories australia
 100 South Street, East Perth, WA 6004
 1800 634 634
 www.microbiolabs.com.au

MICROBE WISE FOR SOIL

Microbe Wise for Soil measures the living biomass of key microbial groups important for soil health and productivity directly from your sample. It uses molecular (DNA type) technology to analyse the unique soil microbial 'fingerprints' of each microbial group, to identify and quantify well known microbial groups essential to important soil processes, such as nutrient release, disease suppression and residue breakdown. The Microbe Wise method allows for some unique features, such as a measure of microbial diversity, available to indicate soil system resilience. Results are presented in a way that allows you to easily assess the microbial health of your soil in detail and indicate what best practice to practice.

Key Features

- Fast results
- High resolution
- Molecular grade technology

Ideal for:

- Commercial and residential agricultural production
- Environmental and remediation projects
- Commercial and residential agricultural production
- Environmental and remediation projects

Info Level
★★★★

SEE OUR ONLINE PRODUCT SELECTOR
www.microbiolabs.com.au/selector

COLOUR CODED RESULTS FOR EASY UNDERSTANDING
 A result of 1000 is based on a 1000g soil sample in a 100ml volume.

Key: Poor Fair Good

COMMENTS AND EXPLANATIONS
 Each result is accompanied by a comment explaining the result and what it means for your soil health.

MORE INFO?
 Call, email, visit our website or contact your local Microbe Wise representative.

ALSO AVAILABLE IN THESE GREAT VALUE TEST PACKAGES

- Soil Audit
- Soil Health
- Soil Fertility
- Soil Phosphorus
- Soil Sulfur
- Soil Nitrogen

www.microbiolabs.com.au

EFFECT OF HIGH FERTILISER RATES ON SOIL BIOLOGY & NUTRIENT AVAILABILITY							
Soil Biology Analysis	Treated (High Fertiliser)	Control	Desired Microbe Levels	Soil Nutrient Analysis	Treated (High Fertiliser)	Control	Desired So Levels
Nutrient Solubilizing	13.3	52.3	70-100	pH CaCl	5	5.6	6.5
Nutrient Cycling	27.7	52.1	70-100	Salinity	0.09	0.03	0.04
Disease Resistance	25.1	52.1	70-100	CEC	7.6	9.9	
Drought Resistance	16.3	42.4	70-100	N	14	2.9	25
VAM Fungi	4.7	52.8	70-100	P	557	19.6	110
Residue Breakdown	40.2	55.9	70-100	K	857	615	200
Overall Microbes	25.9	47.2	60-100	Ca	864	1324	1400
Total Microorganisms	14	25	50.00	Mg	134	210	150
Total Bacteria	3.2	4.3	15.00	S	6.5	4.6	55
Total Fungi	10.7	20.2	33.80	Fe	140	54.5	160
Microbial Diversity	46.4	51.4	80.00	Mn	104	151	40
Fungi:Bacteria	3.3	4.7	2.30	Zn	8.6	0.8	4
Pseudomonas	0.218	0.518	1.00	Cu	0.64	0.8	5
Actinomycetes	0.486	0.519	1.00	B	0.7	1.5	1.5
Grams Positive	2.087	2.399	7.50	Cl	62.4	90.4	60
Grams Negative	1.132	1.864	3.75	Na	6.4	2.8	50
Methane Oxidizers	0.218	0.518	0.50				
Sulphur Reducers	BDL	BDL	<0.005				
True Anaerobes	BDL	BDL	<0.005				
Protozoa	BDL	0.586	1.25				
Mycorrhizal Fungi	0.469	5.277	10.00				
Nutrients Held In Microbes							
N	0.88	1.487	3.45				
P	0.097	0.145	1.50				
K	0.032	0.048	0.50				
S	0.032	0.048	0.50				
Ca	0.016	0.024	0.25				
Mg	0.016	0.024	0.25				
Carbon	6.44	11.515	22.68				

BDL = Below Detectable Level

The treated area was an area of high fertiliser concentration due to a fertiliser spill in 2012. Control was normal farm practise

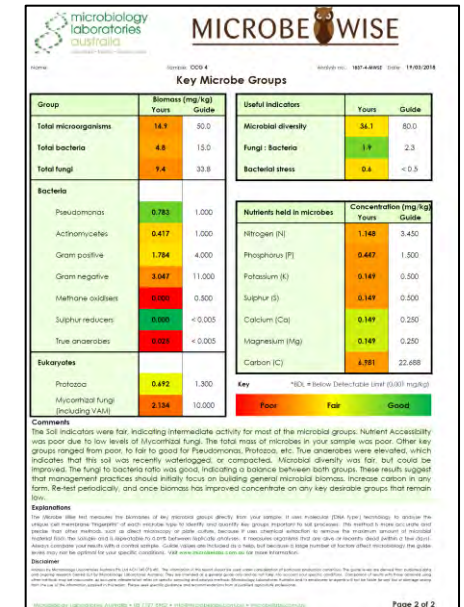
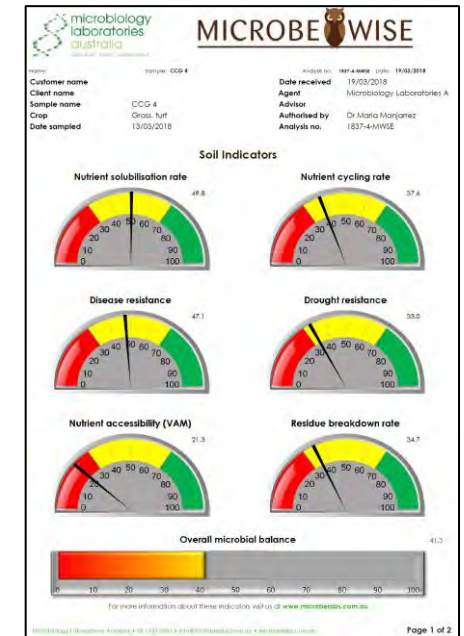
The soil microbe and nutrient testing was conducted in August 2014.

Restore is 'white labelled' to Living Turf and used on Australia's premier sports stadiums, golf courses & racetracks under their MATCHplay label.

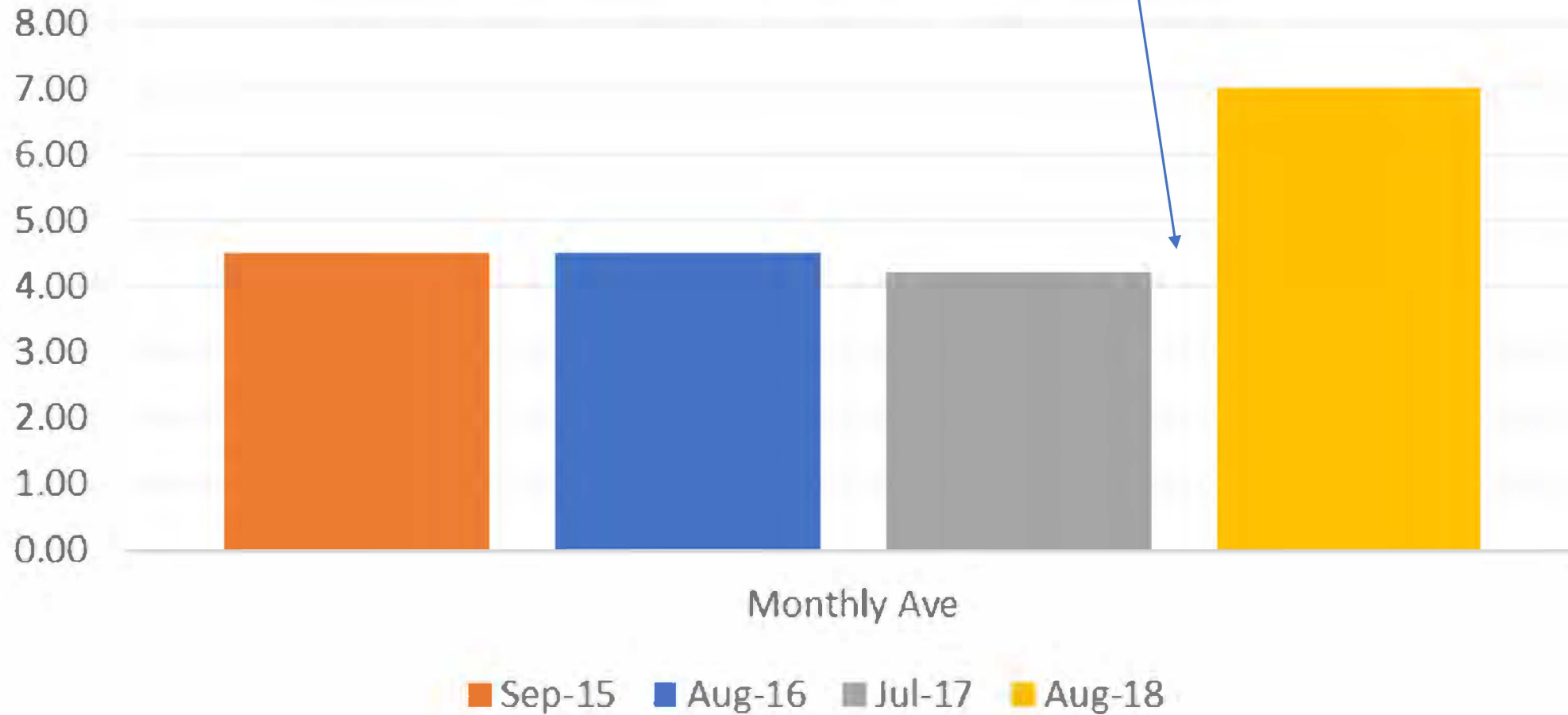
Extensive Soil Microbe Testing

- Across major sports stadiums and golf courses covering a wide variety of soil types
- Significant improvement in key categories of soil microbial health.

	4th Green	4th Green	7th Green	7th Green	8th Green	8th Green	West Bowls	West Bowls	East Bowls	East Bowls
Microbes	March 2018	September 2019	March 2018	September 2019	March 2018	September 2019	March 2018	September 2019	March 2018	September 2019
Nutrient Solubilizing	49.6	71.3	32.1	44.4	55.6	72.2	25.4	66.7	44.7	93.1
Nutrient Cycling	37.7	65	22.6	37.6	50.9	67.1	28.8	53.1	38.7	72.3
Disease Resistance	47.1	77.1	30.8	50.3	56.8	77.1	18.6	54.9	29.8	86.7
Drought Resistance	33	66.1	26.1	38.9	36.3	65.2	17	48.9	28.7	72.9
VAM	21.3	64.3	16.1	26.2	30.8	56.3	26.5	68.1	42.3	89.1
Residue Breakdown	34.7	70.9	24	49.3	46.4	73.9	11.4	47.3	18.6	74.7
Overall Microbes	41.3	60.8	28.9	39.4	48.9	62.5	23.5	46.8	34.9	67.2
Total Microorganisms	14.9	24.8	10.8	17	17.2	27.9	8.5	26.3	16.7	35.1
Total Bacteria	4.8	5.6	3.9	4.2	4.8	6.1	1.4	3.1	2.5	6.7
Total Fungi	9.4	17.9	6.7	12.3	11.3	20.6	6.1	21.4	12.6	25.5



Root length (cm) after soil biology program started in May 2018 (4th green RSGC)





JANUARY



FEBRUARY



MARCH



APRIL



MAY



JUNE

PRODUCTS

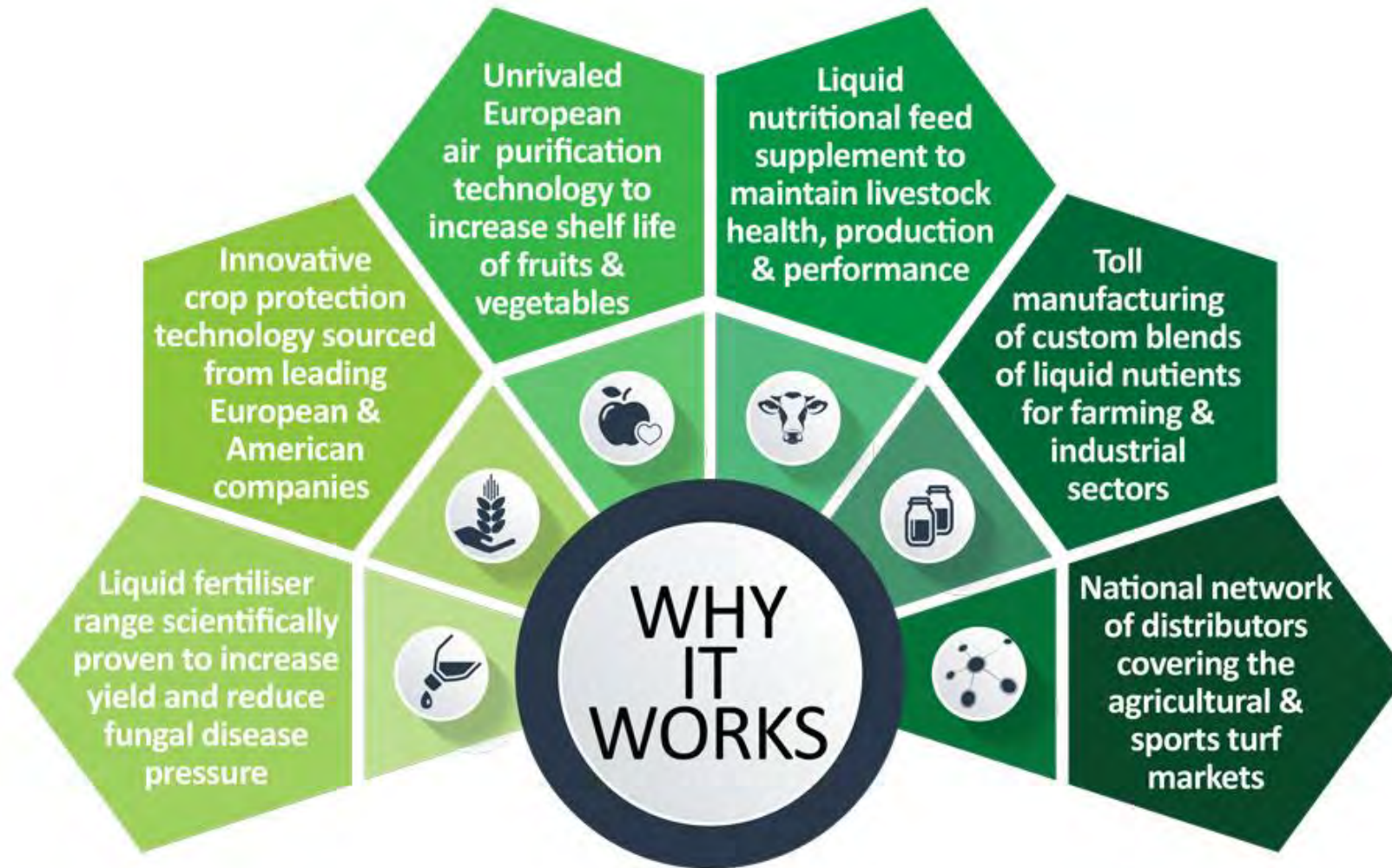
APPLIED/HA:

- MP Roots 25L
- MP Promote 12L
- MP Reinforce 10L

SUMMARY

- The root length grew from 100mm to 180mm – 80% growth
- Root thickness has increased from thin to medium-thick
- Root density has increased from thin-medium to medium
- Only one fungicide application only over the summer / autumn period
- Significant visible increases in the overall plant health.

About Switch



switchAG



www.switchag.au