

Fertilising in autumn

By Todd Layt

What effect does autumn fertilising have on winter colour and spring green up? Slow release versus a chemical fertiliser? Does Spring fertilising help? What about mowing height? Which lawns have best Winter colour?

In April 2007, a study commenced to determine what the effect of three different fertiliser applications had on six different turf types each replicated 6 times at Windsor NSW. All the plots were evaluated in Winter, and then in Spring to determine which fertiliser combination was the best for winter colour and for Spring Green up. The combinations were, no fertiliser in autumn (19th of April), Scotts Lawn Builder Slow release fertiliser, and Shirley's No. 17, all applied as recommended. In spring, another application of fertiliser was applied to another subset of the plots, this time half were with No fertiliser, and the other half Shirley's No 17. Also 10 days prior to evaluating the spring green up, half the plots were mown short, whilst the other half were mown taller. This meant by the end of the trial there were 108 sub plots to evaluate, with each combination having three replicated plots, randomly spread as per best practice. Scotts Lawn Builder and Shirley's No17 were chosen, as they are well known brands, easily available to the trade, and the general public.

Results.

The winter evaluations were interesting to say the least. Three people evaluated the plots for winter colour in July 2007. Ian Paananen, a consulting Agricultural scientist, Henry Locoock, a lawn manager, and Nathan Dutschke a horticulturist. The overall result showed little difference between the plots in respect to fertiliser application. On average, over 6 plots of 6 different varieties, the average score out of 10 for winter colour for Non fertilised plots was the best at 3.3, with the Shirley's No 17 scoring a 3, and the slow release a 3.2. Based on statistical analysis the differences are not significant. Interestingly however, the varieties that stayed the greenest in winter, had better scores for the slow released fertilised plots in winter, and the quick release and no fertiliser averaged out the same. Speculation could suggest that the Kikuyu and the Palmetto Buffalo types, kept actively growing in winter, and benefited more from the fertiliser, than the less winter active types. The less winter active types such as the Sir Walter, the Shade Master Buffalo, and the Couch turf varieties showed a bigger difference to fertiliser applications. In fact the no fertiliser gave better winter colour results for those turf types. **Amongst Buffalo types the difference in winter colour retention was pronounced. Palmetto had a winter colour rating of 5.6 with slow release fertiliser, whilst Sir Walter only had a rating of 3.3, and Shade Master 2.1.** Empire was the Odd man out, as its winter colour was similar to Shade Master, but it had a better result form slow release fertiliser compared to no fertiliser, but only just. Not enough to make the result significant.

The spring green up ratings were again out of 10, but this time they were evaluated over 3 different weeks, in 3 separate evaluations. The results for the three applications in Autumn showed that Using a slow release fertiliser is much better than no fertiliser, and better than normal fertiliser. On average the plots with no fertiliser had a rating of 4.38 out of 10, whilst the slow release had an average of 6.1, and the Shirley's No 17 had a rating of 4.9. So based on these results, the best way to achieve a quick spring green up is to use a slow release fertiliser in Autumn. The shorter mown plots (5.2 out of 10) had only a slightly better rating than the longer grown plots (5). The average of the plots fertilised in spring were 5.6 as opposed to 4.7 for those not fertilised in spring. Finally, to really show what effect fertilising can have on spring green up, the best results were compared to the worst results. The plots that were fertilised in Autumn with Scotts Lawn Builder slow release fertiliser, mown short, and were again fertilised just prior to spring with Shirley's No 17, rated an average spring green up of 6.9, whilst the worst rating of 4, was for the no autumn fertiliser, and no spring fertiliser, for both long and short mowing.

Conclusion

For a quicker spring green up it is best to fertilise in autumn, and in spring. Using a slow release fertiliser in autumn will give better results than a standard type fertiliser or no fertiliser for spring green up.

Summary of Spring Green up Data.

Note; If fertilized in Autumn, Palmetto had the best spring green up, but if not fertilized in Autumn, Sir Walter had a better spring green up. But if you combine this with Winter colour, you will see Palmetto fertilized in autumn had much better winter colour and Spring Green up. The best choice is to buy Palmetto, and fertilise in Autumn. See PDF with Data.

Autumn Fertiliser Data and spring green up.

	Short Mow						Long Mow					
	No Fertilizer Autumn		Normal Fertilizer Aut		Slow Release Fert Aut		No Fertilizer Autumn		Normal Fertilizer Aut		Slow Release Fert Aut	
	Spring Fertiliser	No Spring Fertiliser	Spring Fertiliser	No Spring Fertiliser	Spring Fertiliser	No Spring Fertiliser	Spring Fertiliser	No Spring Fertiliser	Spring Fertiliser	No Spring Fertiliser	Spring Fertiliser	No Spring Fertiliser
Palmetto Plot 2	5.00	5.00	6.50	6.00	7.50	7.00	4.00	3.00	5.50	5.50	6.50	6.50
Palmetto Plot12	4.50	4.00	6.50	5.50	7.50	7.00	4.50	4.00	5.50	5.00	6.50	6.00
Palmetto Plot 17	4.50	4.00	6.50	5.50	7.00	6.00	4.50	4.00	5.00	4.50	5.50	5.50
Average	4.67	4.33	6.50	5.67	7.33	6.67	4.33	3.67	5.33	5.00	6.17	6.00
Sir Walter Plot 1	5.00	5.00	6.50	6.00	7.50	6.50	3.50	3.00	6.00	5.50	6.50	6.00
Sir Walter Plot 2	4.50	4.00	6.00	5.50	7.50	6.50	4.00	4.00	6.00	5.00	7.00	6.50
Sir Walter Plot 3	5.50	5.50	5.50	5.50	6.50	5.50	5.50	5.00	5.50	5.50	6.00	6.00
Average	5.00	4.83	6.00	5.67	7.17	6.17	4.33	4.00	5.83	5.33	6.50	6.17
Shademaster 1	3.00	2.00	4.00	4.00	5.00	4.50	2.00	2.00	3.00	3.00	4.00	4.00
Shademaster 2	2.00	2.00	4.00	4.00	5.00	5.00	2.00	2.50	3.50	3.00	4.00	4.00
Shademaster 3	3.50	3.50	4.50	4.00	5.50	5.00	3.00	3.00	4.00	4.00	4.00	4.00
Average	2.83	2.50	4.17	4.00	5.17	4.83	2.33	2.50	3.50	3.33	4.00	4.00
Empire Plot 1	3.50	2.50	3.50	3.00	5.00	4.50	1.50	1.00	1.50	1.00	2.00	1.50
Empire Plot 2	4.50	4.00	4.50	4.00	6.00	5.00	2.50	2.00	2.50	2.00	3.50	3.00
Empire Plot 3	4.50	4.00	4.50	4.00	5.00	4.50	2.50	2.00	2.00	2.00	2.50	2.00
Average	4.17	3.50	4.17	3.67	5.33	4.67	2.17	1.67	2.00	1.67	2.67	2.17
GLP Couch 1	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.50	1.50
GLP Couch 2	1.00	1.00	1.00	1.00	2.50	1.50	1.00	1.00	1.00	1.00	1.50	1.50
GLP Couch 3	1.00	1.00	1.00	1.00	2.00	1.50	1.00	1.00	1.00	1.00	1.50	1.50
Average	1.00	1.00	1.00	1.00	2.17	1.33	1.00	1.00	1.00	1.00	1.50	1.50
Kikuyu Plot 1	2.00	4.00	3.00	3.00	6.00	5.00	3.00	3.00	4.00	3.00	6.00	5.00
Kikuyu Plot 2	5.00	5.00	4.50	4.50	7.50	7.00	4.00	4.50	3.50	3.00	5.50	5.00
Kikuyu Plot 3	3.50	5.00	4.00	3.50	5.50	4.00	4.50	4.00	5.00	4.00	5.50	4.00
Average	3.50	4.67	3.83	3.67	6.33	5.33	3.83	3.83	4.17	3.33	5.67	4.67
Average Total	3.53	3.47	4.28	3.94	5.58	4.83	3.00	2.78	3.64	3.28	4.42	4.08
Average Fert	No Fert Autumn		3.19		Normal Fert Autumn		3.78		Slow Release Autumn Fert			4.73
Average Mowing Short		4.27					Long		3.53			
Av. Spring Fert	4.07											
Av. No Sprg Fert	3.73											
	3.53	3.47	4.28	3.94	5.58	4.83	3.00	2.78	3.64	3.28	4.42	4.08

5.47

5.58

3.60

3.15

1.21

4.40