



IVMP
INTEGRATED VEGETATION
MANAGEMENT PROJECT

Newsletter Summer 2009

Finding a better way to manage vegetation

Project Manager Update

Welcome to the Summer edition of the IVMP Newsletter.

This edition explores the successes of the recent visit by collaborating Research Scientist Travis Gannon, from North Carolina State University. Thanks to strong partnerships with researchers from North Carolina State University (NCSU) and significant levels of funding allocated for research and development, North Carolina Department of Transportation (NCDOT) has implemented innovative roadside vegetation strategies that have not only saved millions of dollars but also significantly improved the safety levels for road users and those who maintain these road networks.

Australia can learn a lot from the efforts of NCDOT in the management of roadside vegetation. As the cost of maintaining road networks continues to increase, funding for roadside vegetation management is under increasing pressure. A number of the innovative practices and vegetation management methodologies developed by NCDOT in conjunction with NCSU would be worthy of implementation in Australia.

The IVMP Project is currently exploring a number of these innovations, with the support of both North Carolina State University (NCSU) researchers and the NCDOT' Roadside Environmental Unit.

To learn more about this project or share your ideas, visit www.ivmp.com.au or email me direct at steve.hampton@growsolutions.com.au

Kind Regards, Steve.

IVMP Vegetation Managers Forum

The Integrated Vegetation Management Project (IVMP) conducted a Vegetation Managers Forum with Project Partners on the Gold Coast in August to present the results from year one and two of the project. The forum featured guest speakers from the project tech team and the project's lead partner Technigro.

The Integrated Vegetation Management Project (IVMP) is a collaborative research project being conducted in Australia from December 2007 until December 2010. This project aims to identify the most appropriate practices for vegetation management issues facing modern asset managers in Australia, with a focus on mown vegetation.

The IVMP is funded by industry and government partners including Brisbane City Council, Gold Coast City Council, Horticulture Australia and Technigro. The project is also supported by Bayer Environmental Science and Syngenta.

The IVMP Vegetation Managers Forum commenced with a presentation by Mr Nick Bloor, Technigro' CEO. Nick introduced the purpose of the project and explained why as the lead partner, Technigro are deeply committed to the project. He described how Technigro have already commenced integrating some of the methods researched in IVMP into their vegetation work programs.



Above: Jyri Kaapro (Bayer), Steve Hampton (Grow Solutions) & Travis Gannon (NCSU)

Dr Travis Gannon, a research scientist from the North Carolina State University (NCSU) and who is a part of the IVMP Technical Team, attended as a special guest to share his knowledge and experience on IVM in roadside management and how these practices have been successfully utilised in North Carolina in the United States. Travis has worked with Dr. Fred Yelverton since 1999 and he has coordinated projects in all facets of turf, including sports turf, amenity turf, golf courses and roadsides.

A major focus for Travis has been his work with North Carolina's Department of Transportation (NCDOT) developing Integrated Vegetation Management (IVM) programs for roadsides and other non-crop areas. This work has included strategies to convert existing roadsides to low maintenance species and application placement technologies for herbaceous vegetation management, utilising both herbicides and PGRs.

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Project Partners



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IVM Strategies a Success in North Carolina

The North Carolina Department of Transportation (NCDOT) have had considerable success using integrated vegetation management (IVM) practices. North Carolina has the nation's largest State Maintained Highway System consisting of 125,500 kilometres of highways. This equates to over 133,950 hectares of rights of way maintained in three general forms: turf, natural areas, and landscape plantings.

NCDOT has developed a system for coordinating the management of roadside vegetation to maximize the effectiveness of both operations while increasing cycle times between mowing operations.

The Integrated Roadside Vegetation Management (IRVM) system is a decision-making and quality management process for maintaining roadside vegetation that integrates cultural, biological, mechanical, and chemical pest control methods to economically manage roadsides for safety plus environmental and visual quality.

In developing the IRVM system the following factors are also considered:

- needs of local communities and highway users,
- knowledge of plant ecology processes,
- design, construction, and maintenance considerations,
- monitoring and evaluation procedures,
- government statutes and regulations and,
- technology.

IRVM is a spin-off of the Integrated Pest Management (IPM) concept used in agriculture, horticulture, and forestry. IPM is a term used to describe a system of managing pests whereby all possible methods of reducing pests are integrated to maintain and manage pest levels below economically damaging levels. IPM employs proven practical and cost effective methods in a plan designed to exclude pests from the management unit.

IPM and, more specifically, IRVM are used to manage vegetation by simply applying logical information, communication, technology, planning and research.

An effective IRVM program improves safety for the public and employees, satisfies long range economic goals, maintains or improves quality, provides aesthetically pleasing facilities, and improves public relations. The highest priority for NCDOT employees is supplying safe transportation corridors that have the features of hazard free safety clear zones, low growing vegetation in the operational zone and open sight distances.

NCDOT's Roadside Environmental Unit works in cooperation with 14 divisions state-wide, covering three climate zones: coastal, piedmont and mountain. These zones include multiple cool and warm season grass species as well as varying soil conditions. The professionalism, dedication and commitment of the team were clearly apparent as were the results of their hard work.

With strong partnerships with researchers from North Carolina State University (NCSU) and significant levels of funding allocated for research and development, NCDOT has implemented innovative roadside vegetation strategies that have not only saved millions of dollars, but have also significantly improved the safety levels for road users and those who maintain these road networks.

NCDOT have taken a long term view with their roadside vegetation management strategies. They have been prepared to invest significant funding in the short term knowing that in the longer term the benefits will outweigh the initial investment.



Top & Above: Using low growing trees and native grasses on roadsides

Australia can learn a lot from the efforts of NCDOT in the management of roadside vegetation. As the cost of maintaining road networks continues to increase, funding for roadside vegetation management is under increasing pressure. Innovative ways to reduce the triple bottom line cost of managing roadside vegetation is more essential than ever and funding dedicated towards this cause will pay handsomely in the future.

Year Three - The Road Ahead

Whilst Year three is in the process of being finalised, the proposed direction for the project involves the following three pronged approach;

1. The evaluation of programs for the lead technologies; selecting the most promising methodologies and evaluating these in programs conducted in field situations where Bahia grass and Common Paspalum dominate the vegetation cover. The purpose is to make options available for commercial use as quickly as possible.
2. The optimisation of other technologies which international experience and scientific literature identify as having potential, but may not have performed well in trials during Year two. This poor performance has been identified as being possibly due to the product rate selected or application interval. These products require further evaluation in shortened programs for efficacy against Bahia grass and other Common Paspalum species.
3. The evaluation of products in shortened programs for efficacy trials on a broader range of identified problem weed species, including Rhodes grass (*Chloris gayana*), Green Panic (*Panicum maximum*), Pitted bluegrass (*Bothriochloa decipiens*) and Sheda grass (*Dichanthium annulatum*).

Further to this, aligned project and extension work is being considered for separate yet aligned trials with both Gold Coast City Council and the Department of Main Roads. It is proposed that in conjunction with their service provider Technigro, trial work be conducted to evaluate the integration of IVM strategies into current mowing operations to assess the cost / benefit of modifying the current mown vegetation management practices.

The respective projects will involve;

1. The identification of desirable and undesirable plant species within the trial area
2. Establishing an understanding of species composition for the roadside vegetation in the trial area



Above: IVM at its best - the ultimate aim of IVMP

3. Development of IVM strategies based on intervention heights and contract management requirements for the mown vegetation within the trial site
4. Applying treatments with growth regulatory / seed head suppression qualities to undesirable species within trial site
5. Monitoring /measuring the performance of these treatments against the desired outcomes of the trial
6. Undertaking a cost benefit analysis measuring management utilising IVM Strategies v Current Practises
7. Reporting to clients and their customers regarding trials, program activity and program results

IVMP Features in Syngenta's Gro Magazine

Syngenta is a founding partner in the Integrated Vegetation Management Project (IVMP) which aims to develop vegetation management techniques and best management practices to suit the Australian environment.

Trial work is currently being undertaken in New South Wales and south east Queensland with new active ingredients, mixtures, rates and techniques. Several Syngenta products have shown very good potential in trials and are under further investigation, while submissions have been made for the registration of some existing Syngenta products for Bahia seed head management.

IVMP recently featured in the Winter 2009 edition of Gro, Syngenta's quarterly magazine. The IVMP team is very proud to see the project generating interest within the industry.

The article, "A partnership in amenities turf management" introduces the project and focuses on the potential outcomes of the project.

To download a copy of Gro or for further information about Syngenta, visit www.syngenta.com.au.

