

**Conference Program 2014** 

### NEW TECHNOLOGY, NEW TECHNIQUES

### Introducing the Speakers... Biography Bulletin Board

# President's ADDRESS and Welcome to the IVMA Conference 2014!

### Gwen Shrimpton, IVMA BC

Gwen Shrimpton is a British Columbia based consultant providing services for land management of linear corridors, specializing in environmental issues, vegetation management and First Nations negotiation. Gwen is a Registered Professional Forester and a Registered Professional Biologist, and has a Masters Degree in Pest Management. She worked for BC Hydro for 20 years developing vegetation management programs for the transmission system. She is the President of the Integrated Vegetation Management Association of BC and was chosen as a member of the vegetation standards drafting team for the North American Electric Reliability Corporation.



### **KEYNOTE SPEAKER**

### Richard Johnstone

BIO:

Rick Johnstone has 37 years experience in utility vegetation management having served as System Forester for 2 electric utilities; and as President of the 501-C-3 non-profit corporation IVM Partners, Inc., conducts IVM research and presents findings at conferences and workshops for federal, state and tribal land management agencies along with electric and natural gas utilities, conservationists and academia. He provides consultation to utilities, agencies and land managers under VMES, LLC and is a past President of the Utility Arborist Association and a Registered Professional Forester with a Bachelor Degree in Forest Resources Management from West Virginia University.



#### THE ECONOMICS OF A RELIABILITY-BASED DISTRIBUTION TREE MAINTENANCE PROGRAM

#### Abstract 1:

Trees are a major factor in electric distribution outages and drive maintenance budget dollars. This talk will review best management practices and various contracting methods relative to their impact on system reliability, crew productivity and economics.

#### THE CONCEPT OF IVM AND THE BENEFITS TO THE ENVIRONMENT, WILDLIFE AND POLLINATORS

#### Abstract 2a:

This presentation will present documented best Integrated Vegetation Management practices that meet safety and reliability needs of electric and natural gas utilities while partnering with agencies and communities to; control invasive weeds, lower risk of wildfire, improve bird, pollinator and wildlife habitat, and improve community relations and economics.

#### Abstract 2b:

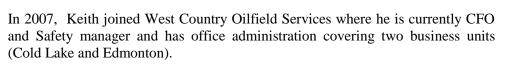
Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators: Pollinators contribute substantially to the economy of the United States and are vital to keeping fruits, nuts, and vegetables in our diets. Honey bee pollination alone adds more than \$15 billion in value to agricultural crops each year in the United States. Over the past few decades, there has been a significant loss of pollinators, including honey bees, native bees, birds, bats, and butterflies, from the environment. The problem is serious and requires immediate attention to ensure the sustainability of our food production systems, avoid additional economic impact on the agricultural sector, and protect the health of the environment.

### **CONFERENCE PRESENTATIONS**

### Keith Sanftleben

BIO:

Graduated from the University of Saskatchewan with a Bachelor of Science of Agriculture. Keith worked as territory sales representative in Agriculture with Elanco for a number of years, later moving into the Industrial sector as a Western Canada sales representative with DowElanco. He then entered the contracting world with Midland Vegetation as a territory manager, evolving into the Alberta divisional manager. Midland was purchased by Asplundh Canada and Keith became a supervisor managing vegetation programs for region 83.





Keith is currently serving as Past President with the IVMAA, as well as committee member with the Industrial and Forestry Advisory Committee with Alberta Environment and Sustainable Resource Development, Pesticide Branch. Keith has been active with Canadian Humanitarian Organization for International Relief (Canadian Humanitarian) a non-religious, non-political, registered Canadian Charity assisting disadvantaged children, their families and communities break free from the cycle of poverty. Keith has participated in expeditions to Ethiopia in 2010 and 2013, with most recent expedition helping to setup drip irrigation systems for a market garden and a

number of home gardens in rural Ethiopia. He is also a Scout leader where his son Tuloro attends. Keith's hobbies include volleyball, biking, wine making, photography, and travelling.

#### **OIL AND GAS LEASE SITE MANAGEMENT**

#### Abstract:

There are a number of challenges facing service providers to manage vegetation control on oil and gas sites. We will explore some of the challenges we face and look at some of the ways we are meeting these challenges through the use of new technology and techniques.

When it comes to herbicide applications over the years we have lost some tools to use or the way we are able to use them. We have also gained a number of very effective tools to aid our endeavour to keep vegetation at bay with some new products such as Overdrive, Navius, and Esplanade. Managing sites does go beyond just putting a product in a tank and applying. Program planning, employee training, as well as utilizing computer aids and technology to manage oil and gas leases will be discussed.

## Babita Bains, B.Sc., M.Sc., FIT BIO:

Babita started working with B.A. Blackwell & Associates Ltd. in 2010, as a recent UBC post-graduate where she completed her Master's Degree in the Faculty of Forestry. While at Blackwell and Associates, Babita has completed and contributed to numerous projects relating to forest health, environmental impact assessment, community wildfire protection planning and urban forestry, in a capacity that has involved project management and administration, field work, GIS, First Nation and stakeholder engagement, and professional report writing. Babita also has experience developing and instructing courses for BCIT's Sustainable Resource Management Program.



#### **EXPLORING THE IMPACT OF FOREST PEST INCIDENCE ON BC HYDRO INFRASTRUCTURE**

#### Abstract:

B.A. Blackwell & Associates Ltd. were contracted by BC Hydro to determine the potential impact of forest insects and diseases on BC Hydro infrastructure. Considering the diverse landscape of British Columbia, there are many tree species which support a variety of insects and diseases, including bark beetles, defoliators and fungal pathogens. The recent exacerbation of damage from forest health factors can be linked to climate change which is a growing concern among land managers. BC Hydro transmission, distribution and communication systems are extensively located in areas impacted by forest pest damage. A series of interactive maps were designed to assist operations and field staff in the identification of forest pest incidence and the level of associated risk to BC Hydro infrastructure. These maps were developed to aid with prioritizing monitoring and infrastructure management, and to minimize the impact of dead or dying trees adjacent to BC Hydro infrastructure.

## Dave Ralph, MFLNRO BIO:

David Ralph is a Senior Invasive Plant Technologist with the Invasive Plant Program, Ministry of Forests, Lands and Natural Resource Operations in Kamloops, BC. From 1980 to 2010 he was with the BC Ministry of Agriculture's Weed Management Section, during which time he left the Ministry for 3 years (1984-1987) to manage the Western Indian Agriculture Corporation's Provincial Knapweed Control Program.



In 2010 he began working with MFLNRO. He has worked in developing Invasive Plant (IP) management strategies and control recommendations for pasture, range and intensive crop production. He has also spent many years conducting herbicide efficacy and crop tolerance research on current and new herbicide formulations for control options for BC's IP species and to assist in label expansions and for new formulation registrations. He is currently a Director on six Regional Weed Committees and the Invasive Species Council of BC and is a member of the Canadian Weed Science Society of Canada, where he is the representative for the province of BC.

#### **B.C. WEED CONTROL ACT UPDATES**

#### Abstract 1:

Initial discussions to revise the BC Weed Control Act Regulations began in 2009 when the Noxious Weed Legislation resided with BC Ministry of Agriculture. In 2010, with restructuring of provincial resource ministries, the Weed Control Act and Regulations were transferred to the BC Ministry of Forests, Lands and Natural Resource Operation where revisions continued. Currently the final drafts and development of the revised regulations are in progress. Proposed changes to the WCA Regulations include, 4 categories of noxious species (currently 2 categories), listing of additional invasive terrestrial and aquatic plant species, ( to the 64 species currently listed) and enhanced enforcement powers to restrict movement, sale, storage and disposal of listed noxious species.

### CURRENT INVASIVE PLANT INITIATIVES AND PROJECTS IN B.C.

#### Abstract 2:

BC has a diverse number of ministries, agencies, councils, industries and groups engaged in invasive plant management. With so many initiatives, on-going programs and projects underway, this presentation will focus an overview of the structure and process for establishing priorities for IP management on the provincial and regional level and the provincial Early Detection Rapid Response Program. Also included, will be an overview of the hurdles and successes in developing and initiating the Spartina Project, an aquatic herbicide control program for the invasive plant species cordgrass (*Spartina spp.* in the inter-tidal areas of Boundary Bay and Roberts Bank in Delta BC.

## Scott McNay, RPBIO(BC), PBiol(AB), PHD BIO:

Scott McNay is a Registered Professional Forester and Professional Biologist (AB) who has been engaged in ecological research and management in British Columbia for 33 years. He began his work with the BC Forest Service conducting research on black-tailed deer, a species that was the focus of both an MSc and a PhD. After 15 years in government, Scott pursued work as a biologist in industry which provided opportunities to initiate research and recovery planning for a number of caribou herds in northern BC. Currently as a consultant, Scott leads several projects focused on the recovery of caribou populations both in BC and in Alberta.



#### MANAGEMENT OF VEGETATION TO ENHANCE CARIBOU SURVIVAL

#### Abstract:

Management of vegetation after natural- and human-caused disturbances can have a profound influence on caribou population demographics. Currently, many local populations of caribou nation-wide are declining steeply because a lack of advanced vegetation regeneration leads to both functional and numerical responses by predators to increased numbers and a broader spatial distribution of their primary prey. A first-hand demonstration of this amplified predation effect was observed this past summer after the release of cows and calves that had been penned for their protection during the calving season. Five cows with calves sought relatively pristine environments and all have survived. Five other cows and 4 calves ended up in more disturbed areas and incurred 5 mortalities. The four cows that are still alive continue to experience increased energy expenditures and even injury while being chased by predators. Silviculture and other vegetation management techniques are being used along seismic lines and other disturbed areas in an attempt to lessen the apparently unsustainable predation that occurs on caribou. The restoration management is focused on advancing vegetation regeneration, creating complex vegetation structure, and reducing trafficability by predators and prey. Initial results show promise: use of the linear features by predators and ungulates has been reduced. We predict predator encounter rates with ungulate prey (including caribou) will also be reduced and that caribou will experience enhanced survival rates as a result.

#### CONTACT: WILDLIFE INFOMETRICS, INC.

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Email: scott.mcnay@wildlifeinfometrics.comWebsite: wildlifeinfometrics.com

### **REGULATORY UPDATES**

## Jonathan Mullan, M.P.M., P.Ag, R.P.Bio BIO:

Jon completed his Bachelor of Science from Simon Fraser University in 1998 majoring in Biology (Entomology, Pest Management) with a Minor in Physical Geography (Soil Science). He then went on to achieve a Masters of Pest Management (SFU) in 2003 with a focus on semiochemical control of vegetable pests in greenhouses.

Jon has had a varied career in pest management. This includes positions in mosquito control, alien insect detection at Canadian ports, Integrated Pest Management (IPM) in Vancouver parks, and the development of IPM strategies to combat wireworm in agriculture. Jon began working in forest pest management in 2003 and was the Entomology Department Head with Spectrum Resource Group until 2005.



Jon has been working with the Ministry of Environment in the Integrated Pest Management Program since 2005. He held the Senior Pesticide Officer position in the Prince George regional office and is currently the Pesticide Officer – Large Industry Specialist in Victoria. Jon's duties now include reviewing Pesticide Use Notices and issuing Confirmations, reviewing Pest Management Plans and developing policy to implement the IPM Regulation.

#### Abstract:

Ministry of Environment updates related to the Integrated Pest Management Act and Regulations.

## Cliff Proudfoot, Lawson Lundell BIO:

Cliff received his Master in Law degree (LL.M.) from Cambridge University, England in 1989 and his Bachelor of Law degree (LL.B.) from the University of Manitoba in 1988. He was called to the bar in Manitoba in 1990, where he practiced litigation in the areas of criminal and insurance law. Cliff was called to the bar of British Columbia in 1992 at which time he joined Lawson Lundell.

Mr. Proudfoot's practice is focused on environmental and aboriginal litigation. His clients include companies in the forestry, manufacturing, mining, hydro-electric power generation and government. He has represented his clients in environmental prosecutions, administrative actions, permit appeals, environmental assessments and has helped clients respond to a wide variety of environmental investigations and prosecutions. Mr. Proudfoot advises clients, including those in the oil and gas,



forestry, mining and chemical industries, respecting compliance with environmental laws and regulations, due diligence, environmental auditing, issues surrounding contaminated sites as well as private landfill operations. He has appeared in the Courts in British Columbia, Manitoba, Alberta, Saskatchewan, Ontario and the Supreme Court of Canada.

Mr. Proudfoot has acted for the IVMA, transportation and forestry clients and the Ministry of Environment in Pesticide Control Act and the Integrated Pest Management Act ("IPMA") permit appeals, advising on the IPMA, drafting of the IVMA legislation and regulation, implementation of the IPMA and amendments thereafter.

### SUPREME COURT DECISION IMPACTS ABORIGINAL ISSUES AND VEGETATION MANAGEMENT

#### Abstract:

- A "primer" on the law of Aboriginal rights, including Aboriginal title
- The three legal regimes
  - Non-treaty areas
  - Historic Treaties in Canada
  - Modern Land Claim Agreements
- Aboriginal Rights
- o Aboriginal Title (including the Tsilhqot'in case)
- The Duty to Consult and Accommodate
- o Source The Honour of the Crown
- o Purpose: Asserted Aboriginal Rights and Title (protection)
- o Purpose: Historic Treaties (procedural gaps)
- Scope and Extent of Obligation

Clifford G. Proudfoot Direct Line: (604) 631-9217

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## **Bob Joseph** www.ictinc.ca BIO:

Bob is founder and President of Indigenous Corporate Training Inc. (1994), providing training and assisting individuals, companies, financial institutions, governments, and Aboriginal Peoples on Indigenous and Aboriginal Relations. He has assisted individuals and organizations in building Indigenous or Aboriginal relations. He has worked internationally and in 2006, Bob facilitated a worldwide Indigenous People's roundtable in Switzerland which included participants from the United Nations, Australia, New Zealand, North, Central and South America, Africa, and the Philippines. Bob has worked as an associate professor at Royal Roads University. In addition, he is routinely a guest lecturer at other academic institutions.



Bob has an educational background in Business Administration and International Trade, and is a certified Master Trainer who in May of 2001 was profiled in an annual feature called, "Training: the New Guard 2001" by the American Society of Training and Development (ASTD) in their prestigious Magazine, "T + D". Bob was one of nine trainers selected for the feature from over 70,000 members who come from more than 100 countries and 15,000 organizations. Bob is the author and co-author of books and resources relating to working with Aboriginal or Indigenous Peoples.

Bob is an Aboriginal person, or more specifically a status Indian, and is a member of the Gwawaenuk Nation. The Gwawaenuk is one of the many Kwakwaka'wakw tribes located between Comox and Port Hardy on Vancouver Island and the adjacent mainland of British Columbia. He is an initiated member of the Hamatsa Society and the son of a hereditary chief who will one day in accordance with strict cultural laws become a hereditary chief.

#### MUST DO'S FOR WORKING EFFECTIVELY WITH ABORIGINAL PEOPLES

#### Abstract:

Aboriginal consultation and engagement, land claims, and self-government represent some of the biggest changes, challenges, risks and exciting opportunities for organizations today. The "must do's" being discussed will provide great ideas for individuals and organizations before that next **First Nations**' community meeting.

### **Dan Tisseur**, Spectra Energy BIO:

Dan Tisseur is a Registered Professional Biologist who has spent the past 5 years, acting as the Environmental Specialist supporting the Spectra Energy Transmission system that extends from Fort Nelson to the Canada/US border in Abbotsford. In this capacity Dan interacts with a number of regulatory agencies, regional invasive species councils, and provincial ministries, and is the lead specialist for the vegetation management portfolio for Spectra's BC operations. Prior to this role, Dan spent 10 years working as a private consultant specializing in freshwater aquatic ecosystems. In his free time he enjoys an eclectic range of hobbies pursued with his wife and two sons.



#### MANAGING THE MIGRATORY BIRDS CONVENTION ACT

#### Abstract:

Vegetation management activities are a necessary component for large scale linear industries, and are a necessity for the safe and reliable operation of Natural Gas pipelines. Integrated vegetation management approaches are vital when it comes to addressing operational needs while maintaining a social license within the province of BC. Working to achieve the objectives of IVM while managing access and visibility for inspecting pipeline rights-of-way must incorporate protection of wildlife and their habitat. A perspective for implementing best management practices to meet the federal Migratory Birds Convention Act as they apply to pipeline and field service operations will be presented. Through judicious use of proven techniques and a continued commitment to research and innovation, pipeline companies can continue to be responsible partners in the industrial and ecological landscape of British Columbia.

## Darrell Chambers, DuPont - Engage BIO:

Darrell has worked in the IVM industry since 1995. Darrell works for Engage Agro, which is a sales and marketing company representing many of the suppliers in this industry.

Darrell lives in southern Alberta on his horse ranch with his wife Sarah. In his spare time he enjoys hunting, fishing and golfing.



#### **NAVIUS AND TRUVIST**

#### Abstract:

- DuPont Land Management is very excited with the registration of 2 new products for the Canadian IVM marketplace. These 2 products, Navius VM Herbicide and Truvist Herbicide are new unique chemistry based on group 2 and group 4 herbicide. The new active ingredient is called: Aminocyclopyrachlor. This is a very unique chemistry offering a vegetation managers new tools in the fight against herbicide resistant weeds and brush control along utility rights-of-way.
- Navius VM Herbicide helps maintain reliable power delivery and safe access to track, pipelines and other rights of way.
- Truvist Herbicide helps you keep roadside clear while protecting natural grasses and helps you ensure bareground sites stay safe, clean and clear.
- Both products have very low use rates.
- In the first year of registration (2014) they were applied with great results in every province except BC (nobody has on their PMP).

## **Tom Wolf**, AgriMetrix Research and Training BIO:

Tom Wolf grew up on a grain farm in southern Manitoba and maintains strong ties to the farming community. He obtained his BSA and M.Sc. (Plant Science) at the U of M, and his Ph.D. (Agronomy) at the Ohio State University. Tom was a research scientist with Agriculture & Agri-Food Canada for 17 years before forming AgriMetrix, an agricultural research company that he now operates in Saskatoon. Tom specializes in spray drift, pesticide efficacy, and sprayer tank cleanout, and conducts research and training on these topics throughout Canada. He sits on the Board of the Saskatchewan Soil Conservation Association, is an active member of the American Society of Agricultural and Biological Engineers and is a member and past president of the Canadian Weed Science Society.



#### **CALIBRATION TIPS AND TRICKS**

#### Abstract 1:

In this presentation, the basic goals of a sprayer calibration are reviewed with special reference to some specific situations encountered in industrial vegetation management. The pros and cons of several calibration methods are reviewed. Challenges posed by boomless sprayers are discussed. Tools and calculations that may be helpful are presented. The goal is to produce a spray application job that meets the expected outcome in the most economical and efficacious manner possible.

#### **SMARTPHONE APPS FOR SPRAYING**

#### Abstract 2:

This talk will feature live interactive demos of several new smartphone apps that can assist an applicator in common pesticide application tasks. Each app is geared towards a Canadian applicator. The Spray Quality app provides a way to identify the spray quality of any nozzle available in North America, or choose the correct nozzle for a specific spray quality need. The Calibration app allows the user to determine the correct travel speed, spray pressure, or water volume for a given application situation. The Tank Mix app assists the user in determining the amount of pesticide to add to a spray tank. The Field Record app allows a user to record specific

aspects of an application job, which can be downloaded for incorporation into a desktop system. The Buffer Zone app allows for modification of PMRA buffer zones according to their published buffer zone calculator.

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## Geoff Thompson, BASF - Engage BIO:

Geoff Thompson hails from the small town of Sangudo Alberta, approximately 120 km Northwest of Edmonton. He has spent 20 years working as an Agricultural Fieldman (AAAF) with Lac Ste. Anne County, managing the Agricultural Services Department. He is currently on a one year leave of absence with Lac Ste. Anne County and is contracted with Engage Agro as a Vegetation Management Specialist.



Geoff spends his spare time chauffeuring and coaching his kids in all sporting activities, playing hockey, and cheering on his favorite Edmonton Oilers.

Geoff along with wife Margaret have two children, and live on the family farm -a 500 cow/calf beef cattle operation. Geoff also owns and operates a small vegetation control company – operating in the Oil & Gas Sector. Geoff is a graduate of Lakeland College in Vermilion Alberta, where he studied Business Management, and Agriculture Production.

#### **OVERDRIVE**

#### Abstract:

Geoff will be presenting information on a new registered product from BASF – Overdrive. Overdrive has 2 mode of actions including a new herbicide group for the industrial marketplace. Overdrive has become a cornerstone product in many TVC and broadleaf weed control programs across Canada.

## Lisa Jarrett - Dow AgroSciences BIO:

Lisa is a Professional Agrologist (BCIA) working with Dow AgroSciences as a territory representative, within the arena of Horticulture, Industrial Vegetation Management, Range and Pasture and Forestry. Lisa graduated with a Bachelor of Science (Soil Science) from the University of British Columbia. Working within the Tree fruit industry, as a fieldman, after graduation, brought Lisa back to the Okanagan valley where she continues to work and live today.



#### **ASPECT AND CLEARVIEW BRUSH**

#### Abstract:

An update from Dow AgroSciences on two new products, Aspect and Clearview Brush, and how our portfolio can meet your vegetation management needs in the field from selective control to reliable weed and brush control.

### Daniel Chicoine, Incremental Forest Technologies BIO:

Daniel is a Registered Professional Forester in Alberta and a graduate of the University of Alberta with a BSc in Forestry. Daniel worked as a Silviculturalist, Operational Planner, and Supervising Forester with Alberta Newsprint Company in Whitecourt for 15 years. He joined Incremental Forest Technologies in 2009 as a Co-owner and as managing partner. Daniel's background is mainly in operational reforestation, vegetation management and GIS with a focus on integrating strategic thinking and operational activity. In addition to his consulting work at IFT, Daniel is currently the Program Manager for Tree Improvement Alberta.



Daniel enjoys the outdoors, volunteering, and spending quality time with his family.

#### **MAKING GLYPHOSATE WORK**

#### Abstract:

The presentation will describe potential areas we can influence in order to maximize effectiveness of glyphosate herbicides with a focus on aerial application. There are many abiotic and physiological factors that influence the uptake and translocation of herbicides into and throughout plants.

Discussion on the use of droplet size and rates of glyphosate to manage efficacy. Also, managing around environmental factors, configuration of equipment and the role of calibration to optimize aerial application success. We will look at leaf structure and plant functions as a potential explanation for varying degrees of efficacy and ways to manage for success.

### **Dennis Prouse**, VP, Government Affairs - Crop Life Canada BTO:

Dennis Prouse is Vice President, Government Affairs at CropLife Canada, communicating the vision of CropLife Canada to elected officials, political staff, and senior public servants at all levels of government. Dennis also maintains a strong network of relations with CropLife Canada's stakeholder groups, exchanging information and ensuring coordinated action on legislative, regulatory and policy initiatives.

Dennis has 26 years of experience in government relations and public affairs. He was a senior executive for a major national trade association, and was an executive



for a large public affairs consultant group. Dennis spent five years working on Parliament Hill, including three years in the Prime Minister's Office.

Dennis served on the Board of Directors of the Government Relations Institute of Canada for six years. He has also been recognized for five consecutive years on The Hill Times annual list of the Top 100 Lobbyists in Ottawa.

#### **CONFIDENT CONVERSATIONS - PESTICIDES AND THE PUBLIC**

#### Abstract:

CropLife Canada has had a great deal of success over the last few years reaching out to our member companies and stakeholders to teach them how to have good, positive conversations with people about our technologies (in this case pesticides), be it in the workplace or at social gatherings. These conversation skills also work when it comes to reaching out to elected officials to talk about plant science, something we don't do nearly as often as we should, or as often as environmental activists do....

### **Geoff Gordon - CP Rail** BIO:

Geoff Gordon is currently the North American Vegetation Manager for CP Rail. He worked previously as Vegetation Management Specialist, Engage Agro. In that position he provided product support for new Integrated Pest Management (IPM) products for ROW management. Before that Geoff worked for 5 years as Regional Manager and IPM specialist for a National Vegetation management Contractor.



#### CANADIAN PACIFIC RAILWAY SPRAY TRAIN TECHNOLOGY

#### Abstract:

Geoff Gordon's presentation will outline CP Rail's Vegetation Management program and highlight the use of specialized herbicide application technology used by CP Rail to provide selective and targeted applications as part of their IPM vegetation management program.

### Don Hare, Dow AgroSciences BIO:

Don Hare was born and raised in Alberta, Canada.

He received his B.Sc and M.Sc. in Soil Science from the University of Alberta.

Don joined his current company (Dow AgroSciences) 30 years ago in 1984 and has held jobs including: field technical sales, Product Regulatory Manager for Western Canada, Product Development Manager for Western Canada, and is currently a Senior Research Scientist based in Edmonton.



Don has worked in herbicide research for the majority of his career, and currently provides technical expertise leadership for 4 active ingredients, and 17 commercial herbicides. Among other duties and responsibilities, Don is the Canadian Biology Technical Leader for the Range and Pasture and IVM businesses for Dow AgroSciences.

Don has worked extensively with invasive weed programs, regulations, and products since 2000, from BC to PEI, and has a keen interest in Canadian habitat protection and invasive weed control. He is currently on the Board of Directors of the AISC (Alberta Invasive Species Council), leading research on Prohibited noxious weed control options. He is also currently on the on the Board of Directors for CWSS Canadian Weed Science Society.

#### HERBICIDE RESISTANCE MANAGEMENT IN IVM

#### Abstract:

Management of herbicide resistance is critical for today's Industrial Vegetation Management industry. Herbicide resistance in Canada continues to increase, and has the potential to severely limit the utilization of certain herbicides for vegetation management programs. This presentation will review the current status of herbicide resistance in Integrated Vegetation Management in Canada, review mode of action and mechanism of action of IVM herbicides, and review several herbicide management strategies that Industry Partners are utilizing in the development of current herbicide products and portfolios.

## Jodi Axelson, MFLNRO BIO:

Jodi Axelson is a forest entomologist with the BC Ministry of Forests, Lands and Natural Resource Operations in Williams Lake, BC. Jodi's broad research interests include forest resilience, adaptive management and the plasticity of tree species to disturbances. Since 2006, her research has specifically focused on forest dynamics and response to insect disturbances from outbreaks of western spruce budworm and mountain pine beetle.

Jodi Axelson holds a Master's degree in Geography from the University of Regina and is completing her Ph.D. at the University of Victoria. Her Ph.D. research used novel techniques such as tree-rings, x-ray density and wood anatomy to investigate records of insect outbreaks in British Columbia across a range of temporal and spatial scales.



#### INTERIOR BC SPRUCE BUDWORM TREATMENTS

#### Abstract

In the Cariboo Region insects and diseases are significant vectors impacting forest health. Forest health issues, including abiotic vectors such as snowpress, fire and flooding are highly integrated across the landscape and generate uncertainty in terms of timber supply, biodiversity, resilience and the impacts of ongoing climate change. Much of BCs interior sustained catastrophic mortality by the mountain pine beetle, and since the outbreak collapsed attention has turned to managing other tree species such as Douglas-fir. In the Cariboo Region 15% of forested land-base is dominated by Douglas-fir and 45% of the area is classified as part of the Interior Douglas-fir (IDF) biogeoclimatic zone. Douglas-fir is an example of a tree species that relies on habitat conditions associated with mature forests for successful regeneration, although mature forests are under increasing and unrelenting pressure due to insect outbreaks. An example is the western spruce budworm, a native

defoliator of Douglas-fir and the most destructive defoliator in western North America. With the most recent western spruce budworm outbreak in its second decade management over the last 15 years has focused on biological control of this insect through the aerial application of *Bacillus thuringiensis* var. kurstaki (Btk). Treatment decisions are made based on: a decision-matrix approach at the landscape scale, past defoliation history (long-term and short-term), and predictive sampling to prioritize areas with the largest populations. This talk will focus on the impact of western spruce budworm outbreaks in BC, the strategies employed when undertaking operational treatment, how treatment programs are executed in the southern interior of BC and the efficacy of such approaches.

Jodi Axelson Forest Entomologist – Cariboo Region Ministry of Forests, Lands and Natural Resource Operations, Williams Lake, BC

## David Spak, Ph.D, Bayer Crop Science BIO:

Dave is currently the Product Development Manager for herbicide innovation and stewardship within the North American industrial vegetation management market He oversees activities associated with developing new products as well as stewarding the safe and effective use of existing products. Responsibilities include managing the herbicide biology team at the Development & Education Center for Bayer CropScience in Clayton, N.C., as well as overseeing collaborative research efforts globally.



Dave has held numerous positions within Bayer, most recently as fungicide development manager at the Research Triangle Park headquarters. He was also a field development and technical service representative for the U.S. Mid-Atlantic region. Dave has published research findings in *Crop Science and Weed Science* journals and has presented results at many meetings and seminars within the industry.

Dave earned his bachelor's and master's degrees in Agronomy from The Pennsylvania State University. In 1991, he received his doctorate in Crop Science from North Carolina State University, specializing in plant physiology. Dave lives in Cary, NC with his wife and two children.

Contact: Product Development Manager, Herbicides Bayer CropScience, Clayton, NC

### ESPLANADE SC – INTRODUCTION OF INDAZIFLAM INTO THE CANADIAN INDUSTRIAL VEGETATION MARKET

#### Abstract

Esplanade 200 SC is a newly registered herbicide in Canada for effective and long-lasting pre-emergent control of annual grasses and broadleaf weeds in areas such as roadsides, industrial sites and railroads. Esplanade contains the active ingredient indaziflam, a cellulose biosynthesis inhibitor (CBI), and represents a novel mode of action for resistance management and long-term residual activity in the industrial bareground market. As a low use rate suspension concentrate, Esplanade has proven to be highly efficacious at a rate of 375 ml/ha which represents significant operational benefits compared to many currently used industrial vegetation management products. In addition, Esplanade provides excellent broad-spectrum control of annual grasses, broadleaf weeds and annual sedges. Research trials and operational applications have shown long-term performance of Esplanade tank-mixes on tough broadleaf weeds such as marestail, kochia, and yellow starthistle, as well as annual grasses

such as cheatgrass, crabgrass, and sprangletop. Results from university trials, internal Bayer research, and operational demonstrations utilizing Esplanade tank-mixes will be presented. Also, topics surrounding good stewardship of Esplanade as an industrial vegetation management tool will be discussed.

### **ENTERTAINMENT**

Opening Reception - Hospitality Suite
October 28, 2014 - Tuesday Evening 5:00 - 7:00 pm

Univar Environmental Sciences and Dow AgroSciences welcomes you to join them from 5 to 7 at the welcome reception.

Banquet Dinner Entertainment
October 29, 2014 - Wednesday Evening 7:30 - 8:30 pm
Vancouver TheatreSports League - Improv Group



For over 30 years, the Vancouver TheatreSports League® (VTSL) has been entertaining audiences across Canada and abroad with our unique style of fast-paced spontaneous comedy. They are now a local institution and a worldwide phenomenon - producing and staging some of the most daring and innovative improv in the world. Boasting six International Improv Comedy Awards and starring in several television specials, Vancouver TheatreSports™ League first opened their doors at the Back Alley Theatre, where they consistently drew cult-like, capacity crowds. They continue to WOW audiences at The Improv Centre on *Granville Island* performing to more than 50,000 enthusiasts yearly, 5 nights a week, 52 weeks per year.

In addition to performing 10 weekly live shows at The Improv Centre, our wildly-talented improvisers present over 100 special event performances a year to corporations, associations, not-for-profit organizations and private parties.

Interactive and innovative, every show is a one-of-a-kind experience where the audience itself plays a role through giving suggestions or joining the actors onstage. You can count on our professional and experienced improvisers to perform a high-energy show that will leave your guests laughing. ENJOY!!!



### Herbicide Exam Writing and Test Primer Sessions.

### Pesticide Applicator Certification Examination

\*The exam primer sessions and Instructor on Tuesday and Thursday are free of charge provided by the IVMA of BC and supported by the Ministry of Environment. This is a primer session only and not suitable for those who have not done some preliminary study.

The Examination costs are additional, as outlined with the registration material for this conference. Arrangements for exams for those interested (and paid) will be made through the IVMA through the Ministry of Environment normal channels for recertification. Exams will be delivered to the site in the name of the proponent. Picture identification will be required for the examination. Please confirm with the IVMA of BC your intent to write the exam before October 15<sup>th</sup> 2012 and verify that the sessions will be held prior to paying for and setting up exam fees.

### Dave Spata

#### **Instructor**

David Spata is the Manager, Vegetation Program at Canadian Pacific with system wide responsibility for vegetation management along CP's 15,000 mile route network in Canada and the USA. David has been involved in industrial vegetation management for over 18 years and has been on the Board of Directors of the IVMA BC for most of those years and is currently the organization's Vice President. David holds a B.A. (Geography) from the University of British Columbia and is a member of the Applied Science Technologists & Technicians of British Columbia (ASTT BC).



#### Peter Mohammed

#### Invigilator

Peter Mohammed will be responsible for invigilating the exam process, and assist with the oversight to the CEC, exams and training program on behalf of the IVMA of BC.

contact info:

Peter Mohammed, Senior Project Manager

#### P. Mohammed and Associates Consulting, PMAC

Environmental and Vegetation Management Consultant 4682 Ryser Court | Prince George BC | V2M 6X8 cell 250.640.3351

# THANK YOU FOR ATTENDING THE 2014 IVMA CONFERENCE!