



The 2012 Independent Plant Breeders Conference

November 1-4, Portland, Oregon

Thursday, November 1st	
6:00-8:00pm	Evening Registration at Embassy Suites
Friday, November 2 nd	
8:00 - 8:30	Registration
8:30-8:45	<p>Welcome & Introduction to IPBC Overview of the history of the Independent Plant Breeders Conference: What is the purpose of this conference? How did it get started? Some things to remember. We are here to help you understand not only basic breeding techniques, but also to give a realistic outlook on what is involved in bringing a plant to market. Planning update: 2013 Longwood Garden's conference on plant trialing.</p> <p style="text-align: right;">Dan Heims, Terra Nova Nurseries – 2012 Host Matt Taylor, Longwood Gardens & Mike Uchneat, Garden Genetics – 2010 Host Kip McConnell, Plant Development Services Inc. – 2008 Host Dr. Dave Clark, University of Florida – 2006 Host Rick Schoellhorn, Proven Winners – 2004 Host</p>
8:45-9:30	<p>From Passion to Profession</p> <p>When it comes to plant breeding, the Terra Nova™ name is well known. Owner Dan Heims has compiled a talk that highlights the transition from backyard plant breeder to co-owning a company with world-wide recognition. Advancements in specific genera will be discussed as well as touching on the means of promoting a new discovery.</p> <p style="text-align: right;">Dan Heims, Terra Nova Nurseries</p>
9:30-10:15	<p>Breeding 101 A primer on basic breeding: with suggestions and techniques for the novice. Join Janet Egger from Terra Nova® Nurseries and get some solid tips on how to build a breeding program, suggestions on where to start, some simple techniques that can save you time and effort as well the importance of, and some thoughts on, good record keeping. Everyone starts somewhere and Janet has a rich experience in both corporate and independent breeding programs working with a range of budgetary constraints and succeeding with some truly breakthrough breeding.</p> <p style="text-align: right;">Janet Egger, Terra Nova Nurseries</p>
10:15-10:30	Coffee Break Voodoo donuts
10:30-11:15	<p>Protect yourself and Protecting Your Genetics. Understanding patents – what they do and what they cannot do. Is your plant even patentable? When does a patent need to be in place? Before or after release? What happens when you sell the plant? Promote the plant? Can others breed with your patented material? Join Sheree Rybak Ph.D., of Klarquist Sparkman LLP for an overview on the paperwork side of things! This does not have to be a chore, but it is essential to protect yourself in the business world. Let Sheree help you understand what you have to do before even offering your plant to anyone for trials, protective agreements, setting up basic contracts. Ms. Rybak will explain what you need to do before you ever sell a plant, what happens when you do sell the plant? And how should protect yourself. In addition Sheree will go over the changes in US patent laws that took effect last September, they are fairly major changes. Also a discussion of utility patents and how they differ from a standard patent and what the implications are both in terms of protection but also in dollars.</p> <p style="text-align: right;">Sheree Rybak Ph.D. , Klarquist Sparkman LLP</p>
11:15-12:00	<p>Finding the plant/Improving the plant. Join two amazing plantsmen, Sean Hogan and Kelly Norris on a journey through finding, improving, and releasing plants both native and internationally discovered. Sean & Kelly are both well known for their interest in new plants, native plants, and bringing them to market as well as into a breeding program. They will bring their unique perspectives on the plant discovery process, the release of non-patentable species and share with you some ideas on how you might also succeed.</p> <p style="text-align: right;">Sean Hogan, Cistus Nursery & Kelly Norris, Iowa State University</p>
12:00-1:00	Lunch Break
1:00-1:45	<p>Trials and Tribulations</p> <p>Trialing is a critical part of the release process, both before and after your plant makes it to the market. Join Dr. Rick Schoellhorn for a look at protecting yourself with the best kind of trial agreements, what they actually protect you from, what they allow and what you may or may not want to allow. How long should a trial take? What are realistic expectations? Then explore the benefits of public trials after release of a new plant. Most companies use the public trials system as a way to increase their face time with industry and the consumer, but it can also be a great way to see where your genetics fall in comparison to competitor lines.</p> <p style="text-align: right;">Rick Schoellhorn, Proven Winners</p>
1:45-2:30	<p>Protect yourself and Protecting Your Genetics. Understanding the patent laws is one thing, but keeping up with changes is another. In September of 2012 the US patent laws changed again and it will have a big impact on how breeding innovations are recorded and protected. Also what IS a utility patent? This type of patenting is becoming more frequent at the corporate level of horticulture, but it has drastic impacts on what a plant can and cannot breed with in the future. Join Dr. Sheree Rybak of Klarquist Sparkman LLP to learn how these changes could impact you. Secondly, once you have a patented plant on the market, are you protected? Not unless you are monitoring illegal propagation and working to make sure your patents are respected. Join Sam Rizzi of Royalty Administration International to find out how they monitor illegal propagation. How does RAI work for the breeder? What happens if no one is protecting your breeding innovations?</p> <p style="text-align: right;">Sheree Rybak Ph.D. , Klarquist Sparkman LLP & Sam Rizzi, Royalty Administration International</p>
2:30-2:45	Coffee Break
2:45-3:30	<p>Market Trends and how to market your plants Join a panel of marketing experts for a question and answer session and let them tell you the secrets of success. What are the successes & failures of the last 5 years? Because we learn from them both. What is a realistic expectation for a new variety in terms of marketing? How does information on a new plant get into the market and then into the consumers hands? In the computer age, amidst a thousand new releases a year how can you (or your industry partner) make the best impression?</p> <p style="text-align: right;">Kevin Hurd, Proven Winners® & Kip McConnell, Plant Development Services Inc., Tom Foley, Ball Ornamentals, TBA</p>



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3:30-4:15	<p>Breeding for the new urban landscape : Join Tom Foley, supply chain manager for Ball Ornamentals in a group discussion of where ornamental plant breeding needs to go in the future! What are the product characteristics needed for good urban plants? What will the urban landscape look like in 20 years? Who are the key stake holders in advancing plants onto the market? How does the breeding needed get to the market? Join in a question answer session designed to not only give you information from industry on what they see, but also feedback from other breeders on the characteristics they are working for. Where are we going in the future and how can these questions open a market window for your breeding?</p> <p style="text-align: right;">Tom Foley, Ball Ornamentals</p>
4:15-5:00	<p>Speaking Corporate: How does an independent plant breeder cooperate, or compete, in the world of corporate breeding? Join a panel of new products experts and learn what they are looking for in an independent breeder and find out how to make partnerships that last. When you are working with or trialing with corporations it helps to understand their language and their expectations. How do corporate horticulture view naming of new varieties? How does hygiene in your breeding program impact timelines for release? How long should a trial be before you get an answer? Bring your questions, and see what the experts say.</p> <p style="text-align: right;">Chuck Pavlich, Terra Nova Nurseries, Tom Foley, Ball Ornamentals, Kevin Hurd, Proven Winners TBA</p>
5:00-5:30	<p>Speaking Breeder: Talk to a blend of amateur & professional plant breeders in the group to have act as a question and answer service, seat them all behind a table and let folks ask them what has worked and not worked for them. Question & Answer.</p> <p style="text-align: right;">Janet Egger, Terra Nova Nurseries, Dr. Dave Clark, University of Florida TBA</p>

Saturday, November 3 rd	
7:30 - 8:15	Networking
8:15-9:00	<p>What is the value of innovation? A grower/retailer perspective.</p> <p>Join us for a view into how retailers and growers view new breeding. William McClenathan is host of Garden Time. the Pacific Northwest #1 rated gardening show, as well as owner of Viscaya Gardens & Nursery. Viscaya is a new concept garden center in Portland that pushes the boundaries of what a nursery is, changing the perception of retail nursery's to appeal to those that are not just from the Baby Boomer's Generation. You have heard from plant breeders and plant marketing companies. You have heard how to protect your plants. Now let's get an insider's view of what matters when the plant hits the bench. What are growers looking for in new breeding? What are retailers looking for? What are their customers looking for? What makes a successful plant for the retail garden center? Join William for a sometimes humorous view of what is most important where the rubber meets the road, at the retail garden center.</p> <p style="text-align: right;">William McClenathan, Viscaya Gardens & Nursery</p>
9:00-9:45	<p>Lily Breeding & what it reveals about breeding at large: Judith began working as geneticist at Oregon Bulb Farms in September 1971, and continued to work with, grow, and study lilies for over 40 years! She has found fascinating and humbling to hybridize lilies — with every cross comes some new wrinkle to unveil still more to learn and another generation essential to figuring out those elusive genes! Pollen shapes, sizes, and germination patterns, other cell sizes, and actual chromosome counts are useful guides in planning crosses and interpreting the results. Judith's kitchen is a little different than most, cupboards of tissue culture and microstaining chemicals, microscopes, summertime sea of pollen samples and slides, and year-round test tubes started from bits of buds, scales, and even leaf axils. Join Ms. McCrae and see how her progress in lilies can offer you tools in the crops you work on.</p> <p style="text-align: right;">Judith Freeman, the Lily Gardens</p>
9:45-10:30	<p>Pollinators – What you should use and what you should know</p> <p>Pollinators make the flowering world possible. While feeding themselves or collecting pollen and nectar for their offspring, they accidentally move pollen from anthers to stigmas for most of the world's 300,000 flowering plant species. It's this lucky accident that makes reproduction possible in angiosperms. In fact, if not for animal go-betweens it's likely that early mammals and proto-humans wouldn't have evolved. We wouldn't be here. Dr. Stephen Buchmann takes us on a tour of the pollinating animal bestiary (insects, especially bees, and birds and bats). He then explores the floral traits of shape, color, scent and rewards that make flowers attractive. Artificial selection for floral traits that please people are under strong selection by commercial and indie plant breeders the world over.</p> <p style="text-align: right;">Dr. Steve Buchmann, Melittologist, Pollinator Partnership/University of Arizona</p>
10:30-10:45	Coffee Break
10:45-11:30	<p>Making the most of your GRIN, the Global Genebank database: The US Department of Agriculture, Agricultural Research Service, manages a database of genebank information for the National Plant Germplasm System (NPGS). This database, the Germplasm Resources Information Network (GRIN) contains the data on accessions in the collections of the 30 NPGS genebanks scattered around the country. The genebank objectives are to collect, maintain, distribute, evaluate, and document the assigned genetic resources. These genebanks have plant material available for distribution to breeders for the development of economically important food and fiber crops. Origin of wild material, pedigrees of cultivated plants, source histories, nomenclature, characterization (through molecular genetics and morphological approaches), observations and vouchers (images and herbarium specimens) will be described. The request procedures for clonal or seed propagated plant material will be given. New developments for the soon-to-be-released GRIN-Global database will also be summarized.</p> <p style="text-align: right;">Dr. Kim Hummer, Supervisory Research Horticulturist, USDA Corvallis OR</p>
11:30-12:15	<p>Twice is Nice – the art of Ploidy Manipulation</p> <p>Since 1937 ploidy manipulation has been used extensively in plant breeding. For many years, chromosome doubling was performed using colchicine but in recent years more researchers and breeders have utilized safer techniques such as dinitroaniline herbicides. Regardless of technique, one issue that breeders have faced is how to accurately and rapidly identify polyploids. Historically, tedious morphological measurements or observation of gross morphology were used. At best this was time consuming and at worst it was inaccurate. Nowadays, breeders have the advantage of using flow cytometers to accurately and rapidly identify ploidy level of plants with very little tissue destruction. Ryan will summarize ploidy manipulation in plant breeding including potential uses for polyploidy, treatment</p>



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	techniques, observed effects of polyploidization, and use of flow cytometers in identifying polyploids. <i>Dr. Ryan Contreras, Oregon State University, Corvallis</i>		
12:15-1:00	Lunch Buffett		
1:00-1:30	Tissue Culture Services – what can a lab do for you? Folks frequently think a tissue culture firm is just a way to generate thousands of clonal plants, and that is true but it is only part of the story. A good tissue culture lab can partner with you to: establish elite stock, screen for viruses, bacteria, instabilities in flower or leaf color. They are not just tissue culture but also a laboratory with all that that implies. Join three great tissue culture companies to learn what they can do for you! Harini Korlipara – Terra Nova Nurseries, Randy Strode – Agristarts, Steve McCullough - Mountain Shadow Nursery & Gayle Suttle, Microplant Nurseries, Inc.		
1:30-2:15	The Story of the Knock Out® Rose. Join Bill Radler, the breeder of the Knockout Roses for ‘The story of the Knockout Rose’. One of the best examples in the past 20 years of a breeding breakthrough that changed the face of the American landscape, impacted the sales of the world’s most popular flowering shrub, created a new category in roses internationally. Hear how Bill developed the rose? How he knew what had developed and how he went about partnering and building the market for the Knock Out® series. This is a perfect example of what an independent breeder can do if the pieces are put together correctly. Join Mr. Radler for a fascinating walk through the process that led to a new definition of the rose. <div>Bill Radler</div>		
2:15 -2:30	Coffee Break		
2:30-3:15	Mutagens – a reality check: How to stay realistic about what they can do. As plant breeders we frequently throw about the idea of using mutagens to develop the perfect plant, but what does that really mean? And how well does that work? How do you create the best opportunity for success when working with random events? In this talk we will discuss the use of mutagens such as EMS, gamma radiation, colchicine, and others. We will also touch on the use and/or curse of somaclonal variation. Much of this talk will focus on the theoretical pros and cons of various mutagens, safety and access, and what should be your realistic expectations. We will discuss examples of successes and failures, and add in a good dose of personal experience. <div>Mike Uchneat, Garden Genetics</div>		
3:15-4:00	How to start your own plant breeding company and compete with the big boys. Join Michael Dobres the Managing Director, of NovaFlora LLC for a look into what it takes to build a new breeding company. Michael’s talk will examine the business, legal, and commercial challenges to starting your own breeding company. Different business models and their relative risks and rewards will be presented. Tips on things to focus on, how to avoid pitfalls, and learning to build relationships around the industry, from the people who have lived the story! <div>Michael Dobres/NovaFlora</div>		
4:00-5:00	Crops by category – A break out session to allow you to meet with product managers in the crop area you work in. What services do they offer? What crops/ideas are they interested in? How do they work with breeders? A chance for smaller group interaction.		
	<i>Annual Crops</i> Kevin Hurd, Proven Winners Chuck Pavlich, Terra Nova Nurseries Kevin Roethle – Ball TBA	<i>Perennial Crops</i> Dan Heims, Terra Nova Nurseries John Walters – Walters Gardens Karl Batschke – Ball TBA	<i>Woody & Small Fruit Crops</i> Tim Wood – Spring Meadow Kip McConnell, PDSI Tom Foley – Ball TBA
5:00-5:30	Tours for Sunday, Wrap up business, Evaluation forms? Next location in 2012?		
6:00	Dinner on your own		



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Sunday, November 4th – Tour in the Portland Oregon Area

Time	Destination	Description
8:15 AM	Pickup at Embassy Suites	Be ready at hotel entrance at 8:15 am
~9:00 AM	Arrive Cistus Nursery	<p><u>Cistus Nursery</u> is a retail micro-nursery located on scenic Sauvie Island, 15 miles northwest of Portland, Oregon. Cistus offers Mediterranean climate, southern hemisphere, hardy tropical plants, and more. Come visit the nursery and wander through the display gardens, or browse our Plant Lists and have a small piece of the nursery sent to you through the mail... Plants are our passion, and sharing our treasures with plant lovers is our joy.</p> <p>Location: 22711 NW Gillihan Road, Portland, OR 97231 Map Hours: every day 10 am to 5 pm Phone 503-621-2233 Fax 503-621-9657 Email: info@cistus.com</p>
10:30 AM	Depart Cistus Nursery	
11:10 AM	Arrive Japanese Garden	<p><u>Japanese Garden of Portland OR</u> Proclaimed the most authentic Japanese garden outside of Japan, the Portland Japanese Garden is a 5.5-acre haven of tranquil beauty nestled in the scenic west hills of Portland, Oregon.</p> <p>Hours of Operation: 12-4 p.m. Monday, 10 a.m.-4 p.m. Tue–Sun Email: info@japanesegarden.com phone (503) 223-1321 Directions</p>
12:40 PM	Depart Japanese Gardens Box lunch on the bus	Quiznos – Either beef, chicken, or vegetarian, please specify
1:40 PM	Arrive at Terra Nova Nurseries	<p><u>Terra Nova Nurseries</u> Our beautiful plants are the result of the innovation of our amazing breeders. New flower colors, new flower shapes, and fascinating foliage fill every designer's niche. See novel improvements in the plants we are famous for, and a few surprising introductions in new genera!</p> <p>Tours by appointment only Phone: 800-215-9450 Fax: 503-263-3152 Address: 10051 S. Macksburg Rd., Canby, OR 97013 Contact: dan@TerraNovanurseries.com</p>
3:15 PM	Depart Terra Nova Nurseries	
4:45 PM	Arrive Chinese Gardens	<p><u>Lan Su Chinese Garden</u> is one of Portland's greatest treasures—a powerfully inspiring experience that takes you through time, offering a window into Chinese culture, history and way of thinking. Ever changing, Lan Su always has something new to offer - by the minute, by the hour, and with the seasons. Enter the wonderland.</p> <p>Hours of operation, Directions, Phone 503.228.8131 Fax 503.228.7844 Email: web@lansugarden.org</p>
5:45 PM	Depart Chinese Gardens Walk to Fong Chong Restaurant	
6:10 PM	Arrive Fong Chong Restaurant	<p>Fong Chong 301 Northwest 4th Avenue, Portland, OR 97209-3807 Phone: (503) 228-6868 Known for their dim sum · ginger chicken · barbecue pork · pot stickers</p>
8:00 PM	Depart Fong Chong Restaurant	
8:15 PM	Arrive Embassy Suites	