

Podcasting!

What's All the Buzz?

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Last year's *Educational Update* described what was happening on the Internet with web syndication and how the Department of Horticulture & Crop Science utilized RSS (Really Simple Syndication) to distribute the department's electronic newsletter to anyone with a news reader program on their computer. Well, RSS continues to provide a conduit for more and more information.

If we think of websites as being repositories of information that you have to travel to and browse for yourself (not unlike "brick-and-mortar" stores) then RSS is the equivalent of electronic shopping. It's all there in front of you and you never have to leave your home or office to shop for anything you need. In other words, RSS is the means by which

news, weather, sports, and any other information feeds that you desire can be subscribed to and delivered electronically as soon as it becomes available.

Now let's fast-forward one year and look at what is happening with the Apple iPod. The combination of iTunes Music software, iTunes Music Store and the iPod has provided the world with a solution to the problems of legal distribution of digital music, buying digital music (and video) online, managing and enforcing digital rights management of audio files on a computer. A new technology icon for over 10 million people, the iPod plays audio, video, slide shows with music and even does presentations when connected to a LCD projector and it is only 5.5 ounces.

However, as good as all this sounds, we are only talking about hardware and software that one uses to manage and interact with their own content. What about the possibility of receiving audio, video, and narrated slide shows from others and getting it FREE everyday? What about the possibility of creating those same products on your computer and having a way to deliver it to anyone on the Internet? This is the essence of Podcasting.

From Web Publishing to Podcasting

As discussed last year, RSS web syndication is similar to a newspaper being delivered to your house each day. Web developers have extended RSS standards to now include audio, video and graphic attachments, in addition to text, and call this a podcast. More than just a new way to access web-based content, podcasts are personalized, portable, narrowcast, multimedia educational packages. With automatic updating via a subscription, users now “catch” syndicated packages, instead of searching/browsing websites for new content.

Podcasting is an automatic mechanism by which multimedia computer files are transferred from a server to a client. Subscribers receive notice of any and all podcasts as soon as they are created by an author. You then download your own copy of the audio and/or video file with any embedded photos. Once downloading is complete, your podcast software will update your archive and allow you to listen and/or view any story. As such, podcast users are pulling in timely audio and video content from self-selected sources.

Podcasting also implies the possibility of portability. If you desire to listen (or watch) any of your podcast stories on a portable music/video device you will need the appropriate software for synchronizing your podcast archive between the computer and portable device. For iPod users, this software is iTunes and it's free from Apple Computer for both Macintosh and PC computer systems.

By implication, podcasting not only embodies a new form of content packaging and delivery, but also facilitates unrestricted access to content. Until now, web users were simply browsing content that resided on some other computer on the Internet. With the development of podcasting, users are now free to carry and access their own library of audio and video packages anytime, any-place, anywhere.

Ohio State HCS News Podcast Development

Beginning in November, 2005, Ohio State's Horticulture & Crop Science News became the university's first published podcast. This timely news-centered publication began with the story, “Ohio State Wins Weed Science Competition.” Since that time, 35 enhanced podcast packages have been created and are available online. Enhanced podcasts include photos, chapter markers, and hyperlinks for easy visualization and navigation, and link to reference websites.

Ohio State HCS News allows alumni and friends to stay up-to-date with the accomplishments of the faculty, staff, students, alumni and programs at The Ohio State University. News stories inform users about the teaching, research and extension outreach programs in ornamental horticulture, turfgrass science, floriculture, crop science, seed biology, agronomy, landscape, nursery, genetics, molecular biology and gardening.

link: hcs.osu.edu/news

Additional details of the motivation for publishing the News as a podcast can be found in the fourth episode titled, “Ohio State HCS News Launches Podcasting.” [See Figure 1]


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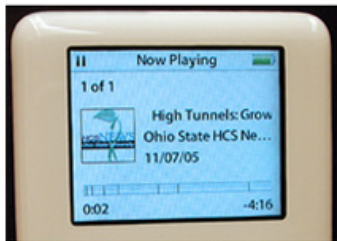


In an effort to expand the reach of the Ohio State Horticulture & Crop Science News, enhanced podcasts of stories are now available for easy download to your desktop computer and your portable music player.

Utilizing the free iTunes digital audio content manager, users can subscribe to the [Ohio State HCS News](#) podcast. Each time a new podcast story is published, iTunes automatically downloads the audio and adds it to your list of previous HCS stories.

Users will then be able to listen to the audio story and watch the enhanced podcast on their computer. The enhanced podcast benefits users by including photos and chapter markers for easy navigation within a story. With an Internet connection, the enhanced podcast links users to specific reference websites that support the story.

Podcasts are available for free through the iTunes subscription service. This subscription system helps users by automatically searching for new content, thus relieving the user of the need to browse many different sites looking for updated audio files.



Users can download the enhanced podcast of the News to a portable music device and listen to stories at their convenience.

The podcast will also be transferred to your iPod automatically the next time you 'sync' with iTunes and thus be available for listening wherever you go. The combination of podcast stories, iTunes content management and iPod technology allows users to determine when and where to listen to the News. Imagine driving in your car or sitting by the beach and listening to your favorite music, audio books, and HCS News stories. Users with iPods that are able

to display photos will be able to see the images that accompany the enhanced podcast.

Since being launched in March 2002, [Ohio State HCS News](#) has delivered over 350 timely stories about the successes of the faculty, staff, students and alumni of Horticulture & Crop Science. This searchable archive of illustrated stories has evolved to include larger photos, "printer-friendly" format, "e-mail-to-a-friend" capability, RSS feed access, and now audio podcasts.



Figure 1: Ohio State HCS News available at hcs.osu.edu/news

Steps for Subscribing to Ohio State HCS News

1. Download and install iTunes music software from Apple Computer.
link: www.apple.com/itunes/download/
2. Go to the Ohio State HCS News website and click on “Subscribe at iTunes” graphic – Figure 2.
3. Browse and sample current archives of Ohio State HCS News at iTunes Music Store. Click on Subscribe – Figure 3.
4. View directory of Ohio State HCS News stories. Most recent story is automatically downloaded. Click on “Get” to download additional episodes – Figure 4.

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Retractable Roof Greenhouses Offer Advantages

Containerized tree liners grown in retractable roof greenhouses before being transferred to field production have higher growth and survivability rates than field bare...

Tree layout inside the OSU retractable roof greenhouse.

The re... support for the use of retractable roof nursery markets. "The significance of retractable roof greenhouses continues to be marketed as a superior product," said Ohio State nursery and landscape E...

A tree liner, or whip, is referred to as a transplanted to become a larger plant nursery stock. The West has cornered production, producing field-grown wh... the Midwest and East for spring plan...

The retractable roof greenhouse in the OSU nursery production area.

Retrac... which a peac... close... sides... temper... allow... humid... wind and light conditions. One use f... to expand tree liner production beyo...

Free SUBSCRIBE

Podcast Description

Stay up-to-date with the accomplishments of the faculty, staff, students, alumni and programs in the Department of Horticulture & Crop Science at The Ohio State University. Learn about the teaching, research and extension outreach programs in ornamental horticulture, turfgrass science, floriculture, nursery science, seed biology, agronomy, landscape, crop science, genetics, molecular biology and gardening. This timely, educational and enhanced Podcast utilizing photos and hyperlinks is produced by the Horticulture & Crop Science Digital Technology Team of Tim Rhodus, Victor van Buchem, Bud Witney and Elaine Eberlin.

Website Report a Concern

Name	Time	Artist	Release Date	Description
1 Alum Deeter a Distinguished Tea...	2:51	Victor van Buchem	4/4/06	ATT's Dr. Laura Deeter was honored for her superior tea...
2 Pre-PGM Students Have High Hop...	3:10	Victor van Buchem	3/30/06	Ohio State students have high hopes for a professional g...
3 Extending the Life of Flowering Pl...	3:07	Victor van Buchem	3/22/06	Dr. Michelle Jones is studying molecular and biochemical...
4 Garrity Earns Distinguished Alum...	2:12	Victor van Buchem	3/21/06	The Ohio State University College of Food, Agricultural &...
5 Retractable Roof Greenhouses Of...	3:29	Victor van Buchem	3/20/06	Containerized tree liners grown in retractable roof green...
6 Konjoian Earns Distinguished Alu...	3:01	Victor van Buchem	3/15/06	The Ohio State University College of Food, Agricultural &...
7 Corn Breeding Dissertation Helps...	3:03	Victor van Buchem	3/3/06	Graduate student Godfrey Asea earned a PhD for his corr...
8 2006 ONLA Phil Kozel Scholarshi...	2:22	Victor van Buchem	3/2/06	Ohio State H&CS students Aaron Heilers, Anastasia Tonti...
9 Dave Barker Earns Advising Award	1:50	Victor van Buchem	2/27/06	In recognition of his dedication to outstanding student a...
10 One-Stop Agronomic Resource R...	2:27	Victor van Buchem	2/24/06	Horticulture & Crop Science faculty contributed to newly...
11 Appreciating Locally Grown Foods	2:17	Victor van Buchem	2/14/06	To help restore the vital connection between growers an...
12 Ohio State Students Help in Hurri...	2:17	Victor van Buchem	2/10/06	Horticulture students Anna Leis, Nate Tschaenn and Aar...
13 Turfgrass Science Student Schola...	2:37	Victor van Buchem	2/9/06	Ohio State Turfgrass Science students earned many acad...
14 Dobbels Earns Professional Staff ...	2:09	Victor van Buchem	2/3/06	H&CS Research Associate Tony Dobbels earned the North...
15 PAX Poinsettias Raise Student Fun...	2:42	Victor van Buchem	1/27/06	With its annual Poinsettia Sale, the Floriculture and Horti...
16 Award Recognizes OSU's Commitm...	2:35	Victor van Buchem	1/23/06	Richard Pratt was awarded the 2005 African Crop Science...
17 New Tests Added to Corn Perfor...	1:57	Victor van Buchem	1/20/06	The scope of this year's Ohio State University Ohio Corn...
18 Researchers Investigate Nursery S...	2:22	Victor van Buchem	1/18/06	Extension specialist Hannah Mathers is investigating the...
19 Students Give International Flavor...	2:36	Victor van Buchem	1/9/06	Through the International Internship Program, five intern...
20 Our Ohio Features Tomato Resea...	2:12	Victor van Buchem	1/8/06	The Our Ohio television program recently visited The Oh...
21 Trials Help Poinsettias Get New L...	3:31	Victor van Buchem	1/6/06	Ohio State University floriculture experts and OFA collab...
22 Master Gardeners Serve Extensio...	3:32	Victor van Buchem	1/5/06	In 2005, Master Gardeners donated over 6100 hours tow...
23 Students Benefit from Agronomic...	3:32	Victor van Buchem	12/7/05	Crop Science majors gain valuable industry exposure an...
24 Tailgaters Cheer Buckeyes to Vict...	2:49	Victor van Buchem	12/2/05	The 4th Annual Beat Michigan Tailgate brought together...
25 Beuerlein Honored for Crop Scien...	2:21	Victor van Buchem	11/28/05	OSU Extension agronomist Dr. James E. Beuerlein receive...
26 X-ray Technology Improves Seed ...	3:46	Victor van Buchem	11/21/05	Ohio State University's Ornamental Plant Germplasm Cen...
27 HCS News Launches Podcasting	2:50	Victor van Buchem	11/16/05	Enhanced podcasts of Ohio State Horticulture & Crop Sci...
28 Extension Outreach Trains Hicna	2:20	Victor van Buchem	11/15/05	An OSU Farm Grant has funded a series of training sessi...

Figure 2: Recently published article on retractable roof greenhouse research.

Figure 3: Apple iTunes Music Store archives Ohio State HCS News Podcast stories and facilitates new user subscriptions.

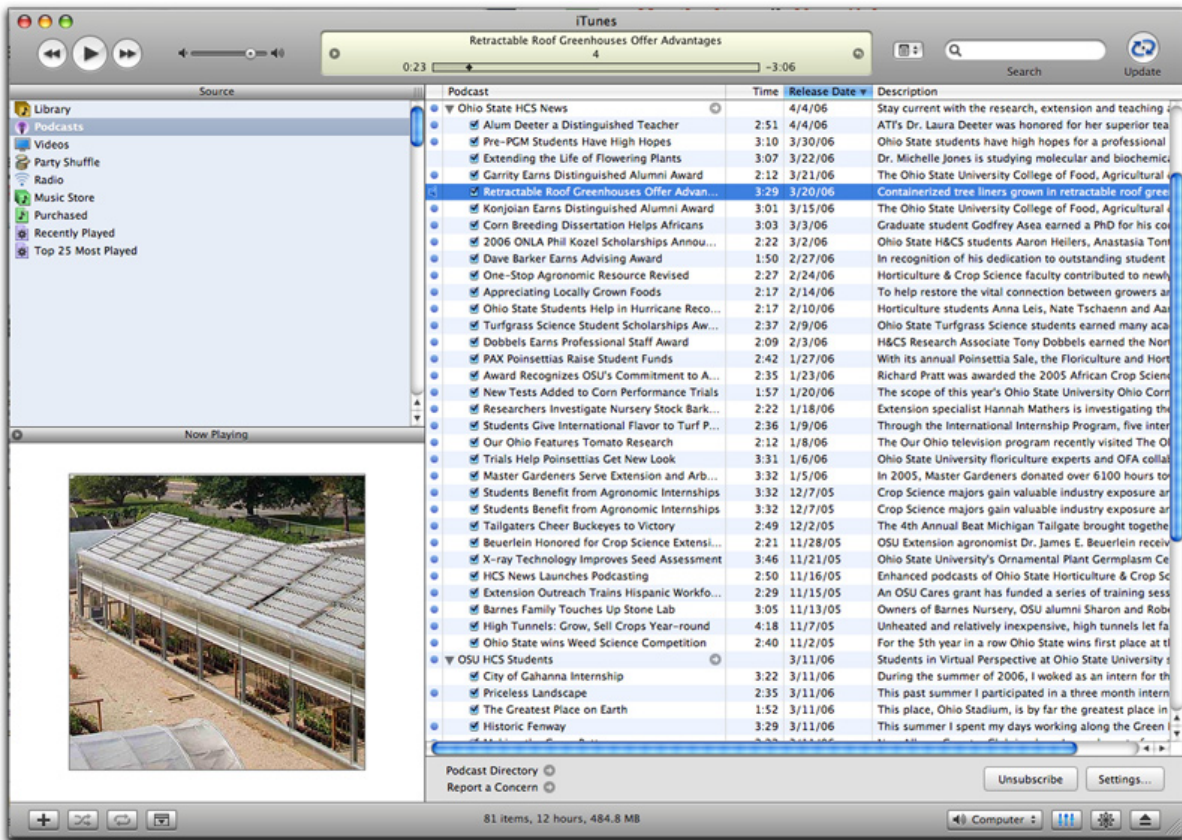


Figure 4: Once subscribed, Apple iTunes Music software plays a Podcast story and manages a user's archive. Software also handles updating of stories with portable iPod device.

How do you Find What Else Is Available?

Podcasts are most easily found by searching an online podcast directory. There are numerous directories that list available feeds. For example,

- Podcast.Net: <http://www.podcast.net/>
- Podcast Directory: <http://www.podcastdirectory.com/>
- Yahoo!Podcasts: <http://podcasts.yahoo.com/>
- Podcast Alley: <http://www.podcastalley.com/>
- Podcast Directory: <http://www.podcastingnews.com/forum/links.php>
- NPR Podcast Directory: http://www.npr.org/rss/podcast/podcast_directory.php
- iPodder.org: <http://www.ipodder.org/directory/4/podcasts>
- Podcast Pickle: <http://www.podcastpickle.com/>
- Podfeed.net: <http://podfeed.net/>
- Podcasts for Educators: <http://recap.ltd.uk/podcasting/>

Selected Plant-related Podcasts

In addition to the Ohio State HCS News podcast mentioned earlier, other plant related podcasts are available from both extension communications departments and landscape professionals. Selected audio and video podcasts are listed below.

- **Nebraska Backyard Farmer** - Wide variety of topics that are well titled and include original dates. A search on “perennials” found 91 results. The only problem was there wasn’t a way to order the results.

link: byf.unl.edu/podcast.shtml

- **Iowa State University Extension Podcasts** - Additional audio and video programming including Market News, WOI’s Midday, BugCast and ISU Extension.

link: www.extension.iastate.edu/emms/podcast/

- **UMass Extension Fruit Specialist** - Jon Clements - This site has a large, relatively current, archive of well-titled, well-described podcasts. The topics are limited to fruit trees for commercial and hobby growers in the Northeast.

link: www.umass.edu/fruitadvisor/clements/video/rss/umextfsvodcast.xml

- **Gardening in the Zone** - Iowa State University Extension has some of the best video podcasts available in terms of plant information, video and audio quality, topic titling and description. They have good, current information, but don’t try to cover too much in one session. They are technically good in terms of video and audio. You can choose the topic information you want to see.

link: emms-ws12.exnet.iastate.edu/gardening/

- **Oklahoma Gardening Video Clips** - Only the most recent 5 episodes are available on iTunes, but the website has archives of other recent audio and video episodes. There’s a nice mix of additional information on the site and content, provided by Oklahoma State, is more educational. Contains video podcasts.

link: quicksilver.okstate.edu/okg/OKG/Videos/Videos.html

- **4 Seasons of Gardening Conversations** - Martha Foley - From North County Public Radio, this series with NCPR’s Martha Foley and Cooperative Extension’s Amy Ivy originally aired in 1998 and 10 episodes are currently available as podcasts. Others may follow. The titles are specific and descriptions are very detailed probably because this series was previously released on CD.

link: www.northcountypublicradio.org/topicalRSS.php?topic=gardening&podcast=true

• **KUOW 94.9 Weekday's Gardening Notes** - These are new podcasts of old Public Radio shows by now retired Carl Elliott. The descriptions do list original air dates, but the podcast release date can be somewhat misleading. However, the topics covered appear to be annual ones for the region and probably not considered out-of-date.

link: www.kuow.org/weekday_garden.asp

• **Gardening with Jerry and Jeriann WHO TV** - WHO TV News in Des Moines, Iowa, offers a variety of podcasts including answering viewer's gardening questions with Earl May Nursery's Jerry Kluver and Channel 13's Jeriann Ritter. These video podcasts are current and run about 5 minutes each. Unfortunately, topic descriptions are very general.

link: feeds.feedburner.com/GardeningWithJerryAndJeriann

• **WBT - Carolina Gardener** - David Blankenberg hosts this radio program 1 hour in duration, which includes all news updates, weather, traffic, sports, and commercials. There's no information in description regarding any topic content.

link: www.wbt.com/podcast/cg.cfm

• **A Gardener's Notebook with Douglas E. Welch** - These podcasts progressed from a blog that seems to serve as a journal. The content is somewhat less technical, but contains many links and is updated on a relatively regularly based on the list of archives.

link: welchwrite.com/agn/blog/

• **Davis Garden Show** - This is an hour long radio show with Don Shor and Lois Richter on KDRT in Davis, California. The broadcast is live once a week and replayed on Saturdays and, beginning this year, podcast, too. The information is current and about plants, but that's as much as we know about it without listening to the entire broadcast.

link: gotouring.com/podcasts/index.html

• **Wiggly Wigglers** - This is a fun site from the UK, categorized as science in iTunes, but has a lot of gardening information. Audio podcast titles are only listed by numbers; descriptions could actually be titles, but are unique and creative.

link: www.wigglywigglers.co.uk/podcasts/

Indexing Podcast Content

Over the past decade, the practice of indexing the web (or portions of it) by search engines and web crawlers has been the domain of many different researchers and commercial companies. One of the interesting stages of this history was when AltaVista.com first began offering an image, audio/MP3, or video search for content, in addition to their normal web search. This service has since been imitated by other search engines but not to the extent that AltaVista does. For multimedia content developers, this was a great way to get their photos and audio/video creations in front of users who may have never seen any of their web pages containing the original art or video.

That same is likely to happen for podcast content. Utilizing the cataloging information presently associated with each podcast feed, search engines will be able to distinguish between a digital audio recording of “Days of Wine and Roses” by Henry Mancini and a video podcast episode from a California winery captured during their annual Days of Wine and Roses festival.

As a result, it will be reasonable to anticipate that individual podcast episodes will come to be viewed as modular content that can be inserted and utilized in web publishing applications separate and apart from their original publication series. Just like we insert plant photos or audio/video files describing proper pruning techniques into a wide variety of digital fact sheets, garden calendars, and diagnostic databases, so to can we insert episodic podcast content. In other words, a podcast episode that describes a new rose cultivar can be just as valuable in a digital catalog as it can be in a landscape maintenance guide. We just have to think of digital content, no matter what it was originally created for, as being flexible units that can be reorganized and inserted into unforeseen projects of the future.

What is the Future of Podcasting?

The use of text, audio, and video-based content for decision making has been and will continue to be a fundamental way in which we conduct business and function in society. With the existence of the world wide web, we are able to access these decision aids on a planet-wide scale.

The techniques of podcasting represent an evolution to the process of creating, delivering and accessing information packages beyond what the web has traditionally offered. As such, the use of podcasting and the existence of portable network devices for accessing and storing podcast content will be increasingly common. The specific configuration of an iPod/podcast device with network access, and browser functions, may be hard to describe but it is not hard to imagine.

These portable Internet devices will soon be designed to assist with a variety of routine horticultural tasks such as: pest diagnosis, ornamental plant identification, landscape plant selection, growing and maintenance recommendations. In addition, they will facilitate our access to educational/learning systems designed to satisfy our need for just-in-time and just-enough information. These portable expert systems represent the future of podcasting.

About the HCS Digital Technology Team...

The OSU Horticulture & Crop Science Digital Technology Team consists of Dr. Tim Rhodus, Professor; Bud Witney, Systems Manager, Victor van Buchem, Associate Editor, and Elaine Eberlin, Systems Specialist.

The team is responsible for the design and maintenance of the systems, databases, and much of the content contained in the numerous web sites positioned within Horticulture & Crop Science in Virtual Perspective (hcs.osu.edu). For additional information, e-mail: Rhodus.1@osu.edu