

EcoPort Slide Shows on the Internet Related to Citrus and Citrus Diseases

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ABSTRACT. The EcoPort website was launched in 2000 to provide a knowledge database of biodiversity. As of September, 2005, the EcoPort website contained over one half million references, over 97,000 pictures and over 200 slide shows, of which 59 pertain to citrus and citrus virus and virus-like diseases. As well as English, 10 slide shows on citrus diseases are currently in French, Spanish or Portuguese. All slide shows and pictures (in JPEG and GIF format) are accessible online and can be downloaded. Texts are continually updated with the latest information and research and can be edited online. Inputs from researchers are welcome and appreciated.

In 1987 the Food and Agricultural Organization (FAO) created the first electronic multimedia compendium of plant protection information, the Global Plant & Pest Information System (GPPIS), an internet version of the Pacific Plant Protection Information System (2, 3). In 2000, EcoPort was launched, with the University of Florida, the FAO and the National Museum of Natural History cooperating jointly to provide services (4). It replaced GPPIS, whose content was just a fraction of what is in EcoPort (1), and is fulfilling the vision of Wilson (5) for an electronic encyclopedia with a page for each species.

The mission of the EcoPort website is: 1) to establish and sustain a "Knowledge Commons" where individuals and communities can work and learn together to develop sustainable ways to manage the Earth's natural resources; 2) to facilitate access to information as a public service that will enable participants to own and update the knowledge database created by their collective effort through application of EcoPort procedures; 3) to promote the availability and use of EcoPort information and procedures as a Global Public Good providing education to communities and individuals engaged in natural resources

management and conservation; and 4) to make provisions to ensure data quality through peer review and to preserve and display individual ownership of shared information.

Over one half million references and over 97,000 pictures are accessible on the EcoPort website, as well as over 200 slide shows with 59 on citrus diseases and related problems of citrus (Table 1). These slide shows are readily accessible for use online or for downloading. Pictures are available for study and lectures, and can be copied for personal presentations. As of September, 2005, 11 slide shows have been translated to languages other than English (French, Spanish and Portuguese). Lectures are continually updated with the latest information and research.

Accessing individual pictures. To access individual pictures and slide shows in EcoPort, use the internet browser and type: <http://www.EcoPort.org>. This takes you to the EcoPort homepage which presents pictures and accolades from Nelson Mandela and E. O. Wilson. In the center between the two pictures you will find a button titled "Click here to enter EcoPort".

1. Click on this button. This links to the "Entities: Basic Search" page.
2. Two menu bars will appear across the page. To access pictures

TABLE 1
PROGRAMS IN ECOPORT RELATED TO CITRUS (SEPTEMBER, 2005)

No.	Slide show	KB	Slides	Contributor(s)
70	Abnormal bud union on rough lemon	715	26	C. N. Roistacher
116	Abnormal bud unions - General	2184	71	C. N. Roistacher
118	Arguments for and benefits of Mandatory Cert.	3339	98	C. N. Roistacher & R. F. Lee
109	Blight	1900	64	C. N. Roistacher & R. F. Lee
76	Cachexia	1363	61	C. N. Roistacher
126	Cachexie (French)	1228	56	C. N. Roistacher; M. Marini translator
164	Calif. Citrus Clonal Protection Program (CCCPP)	1645	49	C. N. Roistacher & J. A. Bash
88	Canker on limes in the Maldiv Islands	2137	95	C. N. Roistacher
38	Citrus chlorotic dwarf	793	32	C. N. Roistacher
9	Citrus variegated chlorosis	1302	39	R. F. Lee
57	Concave gum	1065	46	C. N. Roistacher
124	Concavit� gommeuse (French)	1064	45	C. N. Roistacher; M. Marini translator
20	Cristacortis	680	28	C. N. Roistacher
128	Cristacortis (French)	644	27	C. N. Roistacher; M. Marini translator
177	Cristacortis (Portuguese)	586	25	C. N. Roistacher; G. M�ller & W. Nunes
125	Egypt - Developing a Certification Program	4756	117	C. N. Roistacher & A. M. D'Onghia
75	Exocortis	1914	85	C. N. Roistacher
99	Florida workshop on exotic diseases	1900	64	R. F. Lee, W. Dixon, L. Levy & T. Gottwald
117	Germplasm repository - USDA	489	19	Robert Krueger
106	Greenhouse as Plant Laboratory	2462	79	C. N. Roistacher
85	Greening (a brochure comic book)	1227	42	C. N. Roistacher
181	Greening disease (see Huanglongbing)	2310	46	C. N. Roistacher
58	Gum pocket	474	22	C. N. Roistacher
131	Gum pocket (French)	568	22	C. N. Roistacher; M. Marini translator
44	Gummy Bark	605	22	C. N. Roistacher
173	Gummy bark (French)	606	21	C. N. Roistacher; M. Marini translator
181	Huanglongbing (ex greening disease)	2310	46	C. N. Roistacher
55	Impietratura	966	35	C. N. Roistacher
68	Infectious variegation	1022	41	C. N. Roistacher
127	Infectious var. (French panachure infectieuse)	865	34	C. N. Roistacher M. Marini translator
64	Leprosis	1412	34	C. N. Roistacher
56	Lighting - Supplemental winter lighting	487	25	C. N. Roistacher
118	Mandatory Certification of citrus	3339	98	C. N. Roistacher & R. F. Lee
47	Mandatory Certification of citrus - Why?	904	38	R. F. Lee
79	Parent navel orange - history	875	29	C. N. Roistacher
65	Psoriasis Part 1	874	34	C. N. Roistacher
129	Psoriasis Part 1 (French)	803	31	C. N. Roistacher; M. Marini translator
66	Psoriasis Part 2	1386	85	C. N. Roistacher
130	Psoriasis Part 2 (French)	1232	82	C. N. Roistacher; M. Marini translator
61	Satsuma dwarf	705	38	T. Miyakawa & C. N. Roistacher
143	Shoot tip grafting	2776	84	C. N. Roistacher & L. Navarro
87	Stubborn disease	1635	64	C. N. Roistacher
141	Sudden death in Brazil	373	11	M. Machado & Gerd M�ller

All slide presentations can be accessed directly at the following URL: <http://ecoport.org/ep?SearchType=domainContents&id=9&type=group>.

TABLE 1 (CONTINUED)
PROGRAMS IN ECOPORT RELATED TO CITRUS (SEPTEMBER, 2005)

No.	Slide show	KB	Slides	Contributor(s)
72	Tatter leaf	1418	62	C. N. Roistacher
73	Techniques (Inoculation techniques)	1330	76	C. N. Roistacher
42	Thermotherapy	742	42	C. N. Roistacher
194	<i>Toxoptera citricida</i> in Portugal & Spain	1145	18	K. Al-Rouechdi et al.
14	Tristeza	602	24	R. F. Lee
97	Tristeza-1 History	1621	55	C. N. Roistacher
98	Tristeza-2 The virus	2486	94	C. N. Roistacher
102	Tristeza-3 Epidemiology	3361	123	C. N. Roistacher
103	Tristeza-4 Cross protection	2676	109	C. N. Roistacher
142	Tristeza-5 Cross protection in Peru	2436	65	K. Bederski, C. N. Roistacher & Gerd Müller
82	UC System for plant growth	2745	121	C. N. Roistacher
60	Vein enation	1040	38	C. N. Roistacher
36	Witches Broom disease of limes in Oman	1116	43	A. D. al-Zadjali & R. F. Lee
77	Wood pocket	1709	69	C. N. Roistacher & J. Velazquez
179	Wood pocket (Spanish)	1652	52	C. N. Roistacher & J. Velazquez

All slide presentations can be accessed directly at the following URL: <http://ecoport.org/ep?SearchType=domainContents&id=9&type=group>.

related to citrus diseases, click on the “Pictures” tab (third tab from the left of the page) in the topmost menu bar.

3. Clicking the “Pictures” tab links you to the “Pictures: Search Pictures” page, from which you can access individual pictures.

Information boxes on the “Pictures: Search Pictures” page allow searches using individual picture ID numbers, subject matter, picture captions, author name, contributor name, key words, and the date pictures were taken. If you know the picture ID number, this will take you directly to the picture and its text. Names of contributing authors also can be used to locate pictures. For example, entering “Machado” in the Author Name information box and clicking on the “Find Pictures” button brings up a webpage listing information related to 13 pictures submitted by Dr. Marcos Machado which are related to the slide program on Citrus sudden death. Clicking on the ID number link in the far left column will take you directly to a webpage with picture and text.

Entering ‘tristeza’ in the “Subject” or “Keyword” box and clicking on “Find Pictures”, brings up a webpage listing 305 pictures related to tristeza with a link in the “Subject” column to an individual webpage for each picture. If ‘psorosis’ is entered as the keyword or subject, a menu with links to 101 pictures appears. Entering ‘stubborn’ will show links to 50 pictures. However, if you enter ‘blight’, a menu with links to 336 pictures will appear covering various other blight diseases such as potato blight. It is best to enter as the subject or key word “citrus blight” which will bring up a correct menu listing 60 pictures and text pertaining only to the blight disease of citrus. Similarly it is best to enter “citrus tristeza” or “citrus psorosis” to maximize success in linking to the correct information. The numbers presented here relating to pictures in EcoPort were current as of September, 2005. These numbers of course will change as additions are made.

Accessing slide shows. Accessing slideshows is similar to accessing individual pictures. On the

“Pictures: Search Pictures” webpage, click on the “Slideshows” tab on the lower menu bar. This links to the “Pictures: Slideshows” search page. Slideshows can be accessed by their ID number, their title, language, subject or author. If you know the ID number of the specific slide show, enter this number and click on the “Search Slideshows” button. This brings you to a webpage which shows the slideshow ID number, language, contributor, title, number of slides and downloadable file size in kilobytes (kb). If you click on the ID number for each slide show in the leftmost column, this link will take you directly to the online slideshow. A download link (rightmost column) permits downloading the slide show to a PC or disc as a compressed (“.”zip) file.

Entering ‘tristeza’ in the “Picture Subject” box and subsequently clicking “Search Slide Shows” brings up a webpage which provides access to 15 slide shows. Thirteen slide shows in English and two in French can be accessed online or downloaded. Entering “psoriasis” in the “Picture Subject” box and clicking “Search Slide Shows” brings up a webpage with access to seven slideshows, five in English and two in French. Table 1 lists over 50 slide shows related to

citrus, giving their ID number, a description of the show, file size, the number of slides in the show, the contributor or contributors and acknowledgment for translation.

For a quick and simplified format, a special website (<http://citrus.ecoport.org/>) is available to access slide shows on citrus and on citrus virus and virus-like diseases. In this website, slide shows can also be downloaded but linkages are limited. The great advantage of these slideshows is that they can be edited by addition of new information as it becomes available. This allows input and editing from a worldwide audience.

A very important aspect of the EcoPort slideshows is that the texts and pictures are continually updated with the latest information and research. The editors and reviewers are the mass of scientists and users whose input and critiques are valuable and vital. Their information and inputs can be readily entered by the authors and the texts corrected and updated. Inputs from researchers are valued, appreciated and acknowledged.

As is fitting for an evolving resource, in the period since the IOCV conference in 2004, the number of pictures in EcoPort has grown to over 95,000.

LITERATURE CITED

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