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Institut National de la Recherche Agronomique

Bulletin des Sommaires des Périodiques Scientifiques

Septembre 2013

Avis aux lecteurs

Le présent bulletin des sommaires concerne le sommaire des périodiques reçus au Service de Documentation de l'INRA.

La consultation du sommaire des périodiques est rendue facile grâce à la liste alphabétique des titres des périodiques ci-jointe. Cette liste renvoie aux pages des sommaires dans ce bulletin, ainsi les articles qui vous intéressent peuvent être commandés auprès du Service en respectant de mentionner les données suivantes :

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Le volume et le numéro du périodique ;
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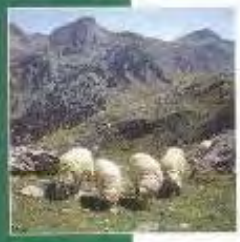

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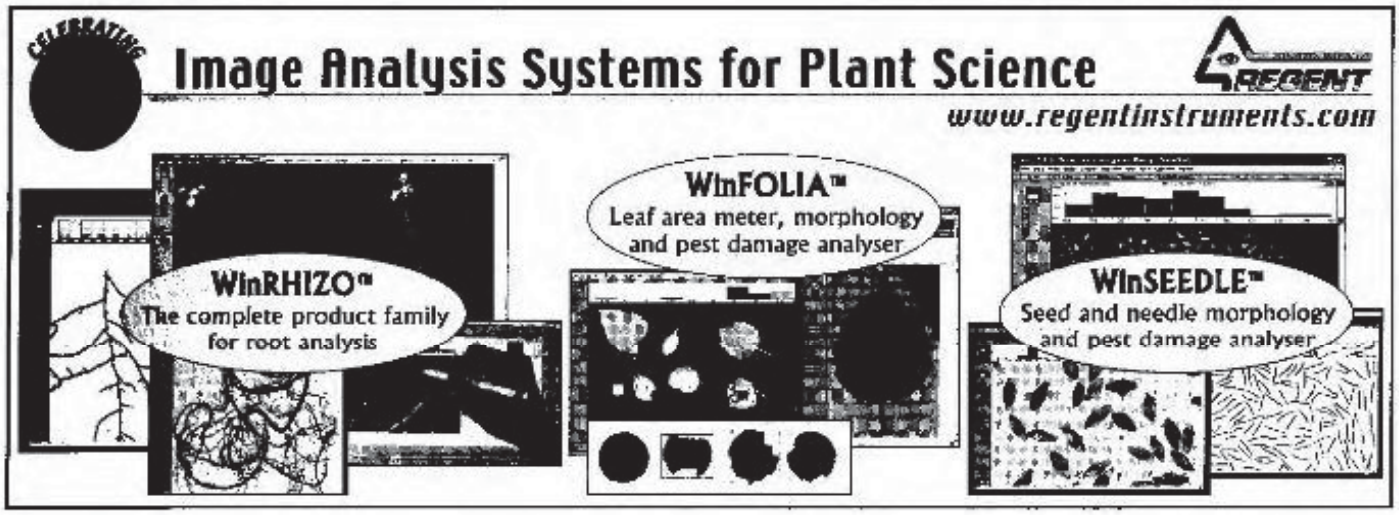

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ON THE COVER

Central Asia is a center of diversity for many important fruit and nut tree species, including wild and cultivated apricots (*Prunus armeniaca* L.). The cover photos provide examples of the fruit diversity of the Central Asian apricot trees growing at the Rutgers University Fruit and Ornamental Research and Extension Station, Cream Ridge, NJ. For more information on Central Asian apricots, see the paper by Zaurov et al. on page 681. Photos: J. Goffreda and S. Eisenman.

BC/P1141

Direction de l'information et de la Communication I.N.R.A.

édito

Prévision à la hausse de la production de blé en 2013*

Les prévisions de juin 2013 de la FAO (Organisation des Nations Unies pour l'alimentation et l'agriculture) concernant la production de blé en 2013 ont été révisées à la hausse de 7 millions de tonnes par rapport à celles établies en mai. La récolte atteindrait ainsi un nouveau niveau record de 702 millions de tonnes. À ce niveau, la production mondiale de blé dépasserait de 6,5 % la mauvaise récolte de 2012. L'essentiel de la reprise devrait être concentré dans certains des principaux pays producteurs qui avaient connu de faibles récoltes en 2012, en particulier en Europe et dans la région de la mer Noire.

La hausse prévue de la production est une évolution positive, d'autant plus que le recul enregistré en 2012/13 a entraîné les stocks mondiaux vers leur plus bas niveau depuis 2009. Les premières prévisions de la FAO concernant les stocks mondiaux à la clôture des campagnes de 2014 indiquent un fort rebond par rapport aux faibles niveaux d'ouverture. Compte tenu des prévisions actuelles concernant l'utilisation mondiale en 2013/14, la reconstitution des stocks devrait se traduire par une progression du rapport stocks mondiaux-utilisation. Les accumulations de réserves les plus importantes devraient être enregistrées en Chine, qui se prépare à une nouvelle récolte record, et dans l'UE et la Fédération de Russie.

Malgré la progression prévue de l'utilisation totale de blé après un recul en 2012/13, l'augmentation ne devrait concerner que la consommation alimentaire de blé, car l'utilisation fourragère, qui avait fortement augmenté en 2011/12 en raison de l'offre réduite et des prix élevés des céréales secondaires, devrait rester proche du niveau de 2012/13.

Les premières prévisions de la FAO concernant le commerce mondial de blé en 2013/14 indiquent un recul de 2,5 % par rapport à 2012/13. Cette contraction s'explique principalement par une réduction des importations à destination de certains pays qui prévoient une amélioration de l'offre en 2013/14, notamment certains pays exportateurs traditionnels, tels que la Fédération de Russie et l'Ukraine. Sur la base de cette appréciation préliminaire de l'offre et de la demande pour 2013/14 et en l'absence d'événements majeurs et inattendus, surtout en ce qui concerne la production, les marchés mondiaux devraient connaître des conditions plus stables et les prix devraient fléchir par rapport aux sommets enregistrés au cours de la campagne de commercialisation 2012/13.

La rédaction vous souhaite une enrichissante lecture.

* Perspectives de l'alimentation - Analyse des marchés mondiaux - Juin 2013 - Faits saillants www.fao.org/docrep/018/al999f/al999f.pdf

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Edited by Luca Rastrelli and Luigi Mondello

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On the cover: The soybean aphid (*Aphis glycines*) is a major phloem-feeding pest of soybean (*Glycine max*). *A. glycines* feeding can cause the diversion of photosynthates and transmission of plant viruses, resulting in significant yield losses. One important feature of the lifecycle of the insect is the ability of wingless female soybean aphids (aptera) to reproduce parthenogenetically to produce live, female offspring (nymphs) on soybean during the summer months (shown in the photos). To successfully colonize susceptible plants, aphids must overcome many defense barriers. A study analyzing the transcriptional response to long-term soybean aphid colonization of two related soybean cultivars, one with the *Rag1* aphid-resistance gene and one aphid-susceptible cultivar (without *Rag1*), revealed hundreds of transcripts involved in the susceptible response, while only one transcript changed in the resistant response to aphids. Many defense-related transcripts are constitutively expressed in resistant plants, while these same genes are activated in susceptible plants only during aphid infestation, which may explain the difference observed. Analysis of phytohormone-related transcripts suggests that aphids are able to suppress defense hormone signals in susceptible plants. For the article by Studham and MacIntosh, see page 116. Photo credit: Ted MacRae.

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MPMI December 2012 was issued on November 7, 2012.

APS PRESS

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On the cover: Plant virologists have long considered the genus *Nicotiana* to be valuable for cataloging virus-host interactions. For example, *N. benthamiana* and *N. tabacum* have frequently been used as model hosts in the study of plant virology, but other species have also been useful. Angel and Schoelz screened 22 *Nicotiana* species for resistance to *Tomato bushy stunt virus* (TBSV) and found that 13 responded with a classic hypersensitive response (HR) to virion inoculations. The virion inoculations were followed by agroinfiltration of individual TBSV proteins to identify those proteins responsible for triggering HR. Previous studies had shown that TBSV P19 and P22 proteins elicited HR in a few *Nicotiana* species, such as *N. tabacum* and *N. glutinosa*, respectively. The agroinfiltration screen confirmed those elicitors and showed that the TBSV coat protein also triggered HR in several species of section *Alatae*, as illustrated with *N. langsdorffii* in the top and bottom right panels on the cover. This paper illustrates the breadth and variety of resistance responses to tombusviruses that exists in the *Nicotiana* genus. Since many other plant viruses elicit HR in *Nicotiana* species, it should be possible to couple the TBSV survey with those of other viruses to gain a comprehensive view of resistance responses in the *Nicotiana* genus. For the article by Angel and Schoelz, see page 240.

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***Molecular Plant-Microbe Interactions*® (ISSN 0894-0282) is published twelve times per year by APS PRESS, 3340 Pilot Knob Road, St. Paul, MN 55121. Periodicals postage paid at St. Paul, MN, and additional mailing offices. USPS 001963. POSTMASTER: Send address changes to *Molecular Plant-Microbe Interactions*, 3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.**

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MPMI January 2013 was issued on November 29, 2012.

APS PRESS
3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.
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On the cover: Two necrosis- and ethylene-inducing-like proteins (NLP1 and NLP2) of the vascular wilt pathogen *Verticillium dahliae* display cytotoxic activity and act as virulence factors during host colonization. NLP1 furthermore affects vegetative growth and conidiospore production. Shown is the morphological appearance of wild-type *V. dahliae* (left) and an *NLP1* deletion strain (right) after 14 days of growth on potato dextrose agar at room temperature, revealing extensive development of aerial hyphae in the *NLP1* deletion strain. For the article by Santhanam et al., see page 278.

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MPMI February 2013 was issued on January 8, 2013.

APS PRESS

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On the cover: Infection by Flavescence Dorée phytoplasma in broadbean plants induces general decline and leaf decoloration and deformation (lower side of the panel). For the article by Musetti et al., see page 379.

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***Molecular Plant-Microbe Interactions*® (ISSN 0894-0282) is published twelve times per year by APS PRESS, 3340 Pilot Knob Road, St. Paul, MN 55121. Periodicals postage paid at St. Paul, MN, and additional mailing offices. USPS 001963. POSTMASTER: Send address changes to *Molecular Plant-Microbe Interactions*, 3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.**

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MPMI March 2013 was issued on February 6, 2013.

APS PRESS
3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.
Telephone: +1.651.454.7250; Fax: +1.651.454.0766
E-mail: pubdept@scisoc.org; www.APS*net*.org

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An International Journal of Applied Plant Pathology

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An International Journal of Applied Plant Pathology

plant disease

Volume 97, Number 3
March 2013

BCPR1127

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* Interpretive summary is available in the online version of PLANT DISEASE at: http://apsjournals.apsnet.org/loi/pdis

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Postharvest rot of lime fruit caused by *Penicillium digitatum* (courtesy S. T. Koike); knot disease caused by *Pseudomonas savastanoi* on sweet olive (courtesy T. Cinelli et al., see page 419).

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BC/P1127

An International Journal of Applied Plant Pathology

plant disease

Volume 97, Number 4
April 2013

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Short form of smooth cordgrass (*Spartina alterniflora*) in salt pan (courtesy W. H. Elmer et al., see page 436); ringspots on kudzu (*Pueraria montana*) caused by *Tobacco ringspot virus* (courtesy S. Khankhum et al., see page 561).

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3340 Pilot Knob Road
St. Paul, MN 55121
+1.651.454.7250
http://apsjournals.apsnet.org

RAUMFORSCHUNG UND RAUMORDNUNG

Band 71 · Heft 3 · Juni 2013

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Photographie de couverture:
Nouvelle «peste» des fruits, la mouche *Drosophila suzukii* (ici une femelle adulte sur une fraise) a été étroitement surveillée par Agroscope en 2012 (voir l'éditorial et l'article de Baroffio *et al.* en p. 212). (Photo Arnaud Conne, Agroscope)

Erratum
Dans le numéro précédent de la revue (vol. 45 (3)), une erreur s'est glissée dans le tableau 1 de la page 149: en tête de la quatrième colonne, il fallait lire «Gain de temps à la récolte» au lieu de «Gain de place à la récolte».

Cette revue est référencée dans les banques de données internationales SCE Agricola, AGRIS, CAB, ELFIS et FSTA.

Editeur
AVTRA (Association pour la mise en valeur des travaux de la recherche agronomique), CP 1006, 1260 Nyon 1, Suisse. www.revue-vitiarboriti.ch
ISSN 0375-1430

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Publicité
Inédit Publications SA, Serge Borrand
Avenue Daples 7, CP 930, 1001 Lausanne, tél. +41 21 695 95 67

Prépresse
Inédit Publications SA, 1001 Lausanne

Impression
Courvoisier-Attinger Arts graphiques SA

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Tarifs des abonnements

Abonnement annuel:	simple (imprimé ou électronique)	combiné (imprimé et électronique)
Suisse	CHF 48.–	CHF 58.–
Autres pays	CHF 55.–	CHF 65.–

Abonnements et commandes
Antoinette Dumartheray, Agroscope
CP 1012, 1260 Nyon 1, Suisse
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