Occurrence of toxigenic fungi, aflatoxins and ochratoxin a in wheat, rice, dried fruits, and spices commercialized in Algeria. A. RIBA[1,2], C. VERHEECKE[3], S. ZEBIRI[2], K. BOUTI[2], N. AZZOUNE[1,2], N. MAHDI[2] and N. SABAOU[2]. [1]*Université M'hamed Bougara, Faculté des Sciences, département de Biologie, Boumerdès. Algeria;* [2]*Ecole Normale Supérieure de Kouba. Laboratoire de Biologie des Systèmes Microbiens (LBSM), Kouba, Alger, Algeria;* [3]*Université de Toulouse, INPT-ENSAT, Laboratoire de Génie Chimique, UMR 5503 (CNRS/INPT/UPS), 1 Avenue de l'Agrobiopole BP 32607 Auzeville Tolosane 31326 Castanet-Tolosan. France. E-mail: riba_amar@yahoo.fr*

This study aimed to determine the occurrence of toxigenic fungi, aflatoxins (AFs) and ochratoxin A (OTA) in wheat, dried fruits, spices and rice consumed in Algeria. A total of 380 samples (210 wheat and derivates products, 44 spices, 96 dried fruits, and 30 rice) were analyzed. Wheat samples were collected during the following phases: pre-harvest, storage in silos and after processing. Spices, dried fruits and rice samples were collected randomly from locally popular markets. Dilution plating and direct plating were respectively used for isolation of fungi for ground and grain samples. Aflatoxins and OTA contamination levels were determined by detection using high-performance liquid chromatography coupled with fluorescence. Mould analysis showed that the commonly isolated fungi were species of *Aspergillus*, *Penicillium*, *Fusarium, Mucor* and *Eurotium*. Species belonging to the section *Nigri* and to the section *Flavi* were predominantly isolated in all samples. Among isolates of *Aspergillus* section *Flavi* examined, 45% produced high levels of aflatoxins. The most frequent chemotypes correspond to isolates able to produce both aflatoxin B and cyclopiazonic acid, followed by the producers of only aflatoxin B. The ability to produce OTA by isolates belonging to species of *Aspergillus* and *Penicillium* spp., revealed that 40% of isolates were OTA-producers. All isolated strains of *A. ochraceus*, *A. alliaceus* and *A. carbonarius* produced high levels of OTA. Aflatoxin B1 was detected in 56.6% of the wheat samples with contamination levels ranging from 0.13 to 37.42 μg kg^{-1}. This mycotoxin was detected in 90% of the dried fruits with contamination levels ranging from 0.16 to 25.82 μg kg^{-1}. Twenty-three of the 36 spices (63.9%) were found to be positive for aflatoxin B1 with quantities ranging from 0.10 to 26.50 μg kg^{-1}. Ochratoxin A was detected in 40% of the wheat samples at levels ranging from 0.20 to 41.55 μg kg^{-1}. The study has revealed the widespread occurrence of aflatoxigenic and ochratoxigenic strains in Algerian food, and highlight the importance of the post-harvest care of grains. Also, it is necessary for Algerian authorities to establish the maximum limits for ochratoxin A.

Effects of seed dressing pesticides on the spread of *Faba bean necrotic yellows virus* on faba bean and *Barley yellow dwarf virus-pav* on barley and oat. S.G. KUMARI[1], A. EKZAYEZ[1] and A. NAJAR[2]. [1]*International Center for Agricultural Research in the Dry Areas (ICARDA), Tunis, Tunisia;* [2]*Institut National de Recherches Agronomiques, (INRAT), Tunisia. E-mail: s.kumari@cgiar.org*

The effects of two seed-dressing pesticides in reducing the spread of aphid-transmitted *Faba bean necrotic yellows virus* (FBNYV, genus *Nanovirus*, family *Nanoviridae*) and *Barley yellow dwarf virus-PAV* (BYDV-PAV, genus *Luteovirus*, Family *Luteoviridae*) wer investigated under field conditions at Mornag Research Station, Tunisia, for two growing seasons (2012/2013 and 2013/2014), using artificial virus inoculation. Four faba bean (Najah, Bachar, Badii and Baj-90), two barley (Rihan and Manal) and two oat (Bizantha and Meliane) Tunisian varieties were used for the experiments. Seeds were treated before sowing with Celest top (25 g L^{-1} difenoconazole + 25 g L^{-1} fludioxonil + 262.5 g L^{-1} thiamethoxam) at three rates (0.75, 1.5, 3.0 cc kg^{-1} of seeds) and with Apron Star 45 WS (200 g kg^{-1} thiamethoxam, 200 g kg^{-1} mefenoxam, 20 g kg^{-1} difenoconazole) at three rates (1.25, 2.5, 5 g kg^{-1} of seeds), and untreated seeds were used as experimental controls. The experiments were carried out in a randomized complete block design with two replicates for each treatment. Four weeks after sowing, all faba bean plants were artificially inoculated with FBNYV using the *Acyrthosiphon pisum* as a vector, and barley and oat plants were inoculated with BYDV-PAV using *Rhopalosiphum padi* as a vector. Aphid populations were also observed for 48 h after inoculation to investigate the effect of seed treatment on the viruliferous aphids. Virus infection was recorded visually 4–5 weeks after inoculation, based characteristic symptoms of the two viruses. Spread of both viruses and yield losses were significantly decreased in treated plots compared with untreated plots. For example, incidence of BYDV in barley and oat, and FBNYV in faba bean was reduced from 100% (cvs. Bachar, Najah, Rihan, Bizantha) in untreated plots to 0, 4, 3 and 12% in plots treated with Celest top (3 cc kg^{-1} of seeds), and 3, 5, 45 and 3% in plots treated with Apron star (5 g kg^{-1} of seeds). Based on these results, seed treatment with Celest top and Apron Star can effectively reduce the incidence of two persistently transmitted aphid-borne viruses, BYDV and FBNYV, affecting cereal and legume crops, respectively. Detailed information on the inoculation methodology and the differences among treatments and growing seasons will be presented.

Spreading of *Alfalfa mosaic virus* in lavandin in Croatia. K. VRANDEČIĆ[1], J. ĆOSIĆ[1], I. STANKOVIĆ[2], K: MILOJEVIĆ[2], A. BULAJIĆ[2] and B. KRSTIĆ[2]. [1]*University of J.J. Strossmayer, Faculty of Agriculture, Kralja Petra Svačića 1d, 31000 Osijek, Croatia;* [2]*Institute of Phytomedicine, Department of Phytopathology, University of Belgrade-*