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Canada

Tipsheet

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Wine and Cheese Matchmaking

It's been a long day and dinner is still a while away. What would really hit the spot is a glass of wine and a little something to hold you over until the meal. Well… two Agriculture and Agri-Food Canada scientists in Summerland, B.C., have been doing research to make this experience an even more enjoyable treat for the palate. Their study looked at how certain pairs of wine and cheese are better suited than others.

Canadian wines from British Columbia and cheeses from the Dairy Farmers of Canada were evaluated by 27 judges that included vintners, winemakers and restaurateurs. A rating scale was used to evaluate the power of flavour in both the cheeses and wine. The "ideal pair" occurred when neither the cheese nor wine dominated the coupling and the two together made for a more pleasant flavour combination than each individually.

The study revealed white wines were more versatile for pairing, namely a Riesling, a Sauvignon blanc and a Pinot gris, while a Pinot noir was the most versatile red wine. Sweeter wines were more difficult to match with cheeses, and stronger flavoured cheeses better complimented most of the wine tested. The Blue Benedictine, Oka and Provolone cheeses were the most suitable match with these wines. Armed with scientific proof of which wines and cheeses offer the most delightful taste experience, you can now choose your indulgence wisely: buy Canadian, sit back, relax and enjoy!

Tomatosphere

What do 500,000 tomato seeds and an astronaut have in common? They have both travelled to a place where they are exposed to weightlessness and higher radiation than on Earth, having spent time on the International Space Station (ISS). They are also part of an educational science, space, agriculture and engineering outreach program offered to schools across Canada and the world. Students participating in the Tomatosphere Program have the opportunity to grow tomato plants from two different types of seeds: a control group and seeds that have spent 18 months on board the ISS. Over 7,000 classrooms across the country have already signed up to participate. The results gathered by students will help scientists determine how extended periods of time in space affect the germination and growth of plants.

Agriculture and Agri Food Canada is an active partner in the Tomatosphere Program, developed to encourage students in both elementary and secondary school to look toward future careers in science and technology to advance space travel and habitation. The program is hands on experimentation and fits nicely into science taught in grades 3, 6, 8, 9 and 10 in most provinces. For more information on the partners of the program and the results please visit: www.tomatosphere.org

Eden: A Pure White Apple Straight From Paradise

The flesh of a perfect apple would be aromatic, sweet, juicy, firm, and crisp, but most of all, would not turn brown after being cut. Such a fruit now exists thanks to a team of Agriculture and Agri-Food Canada (AAFC) scientists in Quebec. More than just tasting great, the claim to fame for the newest apple bred by AAFC is its resistance to browning, which is most likely due to low levels of phenolic compounds, the key substances responsible for causing browning in apples.

In laboratory tests, the new apple, named Eden, remained crisp with no signs of browning after two to three days at room temperature. It will remain fresh in cold storage for up to five months. "Together these qualities make it ideal for fresh eating in salads, packaged as dried apple chips or processed for juice," claims Dr. Khanizadeh who headed the team of AAFC scientists working on this project. Also, once the fruit has matured, it does not fall off from the tree, which translates into less crop losses for producers. It even hangs on during the winter! Traditional crop breeding methods were used to transfer the genes responsible for the non-browning trait.

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Dip, Dip, Hooray! No More Blushing Baby Carrots

Agriculture and Agri-Food Canada scientists in Summerland, B.C., have developed a way to keep baby carrots from losing their orange colour. Abrasion peeling to produce cut-and-peel baby carrots often results in the formation of "white blush" –a greyish white film– on the surface of the vegetable. To prevent this, scientist discovered that placing carrots in an acidic fructose-based dip helps to maintain their sweetness and colour up to three weeks. The acidity in the dip prevents white blush to form on the carrots by inhibiting the enzymes that cause it. Meanwhile, the fructose acts as a hygroscopic agent, holding the moisture on the surface of the vegetable. The formula has now been accepted for commercial application in cut-and-peel baby carrots.

Tracking Farmland from Space

As farmers across the country prepare their land for the growing season, satellites hundreds of kilometers above Earth are capturing images of these tillage activities and changes in crop residue remaining on the surface. In Lethbridge, Ottawa, and Charlottetown, scientists from Agriculture and Agri-Food Canada are involved in cutting-edge research to identify tillage activities and residue cover using Earth-orbiting satellites. The research provides benchmark data to monitor progress in improving environmental stewardship practices, implementing conservation tillage practices and identifying land vulnerable to soil erosion. It also supports soil carbon modelling work to derive estimates of potential carbon sequestration, or storage, that results from different kinds of agricultural land management practices.

Review of Corn Seeding Rate, Study Suggests

Producers should review their seeding rates for silage corn production as many are likely seeding at less-than-optimum rates, researchers at Agriculture and Agri-Food Canada (AAFC) are finding out in a study on the crop's production in southern Alberta. Corn silage production is a relatively new practice in this part of the country, and it is beginning to replace barley as the preferred crop for feedlot operators. Higher energy values are achieved with corn silage compared to barley. Corn silage also offers diversity for this irrigated region as well as diversity in the feeding rations of livestock.

But, how do farmers get the best yield out of their corn silage planting? Since no past studies are relevant to growing conditions in southern Alberta, researchers at AAFC teamed up with BenchMark Seeds in Lethbridge, Alberta, to do just that.

After one year of study, the team discovered that the 15-inch row spacing at 34,000 kernels per acre provided the highest yields – 6.24 tons per acre. The 30-inch row spacing required a seeding rate of 38,000 kernels per acre to reach its maximum, and even at that higher density seeding, yielded a lower amount. These early results indicate that the industry seeding standards of 28,000 kernels per acre may not be enough, and producers should consider higher plant densities. However, additional seed input costs could be offset if producers would move to a 15-inch spacing as opposed to the 30-inch row spacing. Although the study is only in its first year, the researchers do not expect these preliminary results to vary much in the next two years of the study.

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