***Editorial Views***

*By Dr. Rob Crassweller*

***“Artic Apples1”***

The big news last month was USDA’s APHIS approval of allowing the sale of the Artic brand of apples in the U.S. There were two articles in trade journals about their release.

One was in Good Fruit Grower by Mike Willett and another in the Growing magazine by Curt Harler. Both were well written and pertinent. Mike questioned whether growers are willing to invest the money to establish a new orchard for older cultivars and how important is a non-browning characteristic to the average consumer. A survey by the RosBREED group found that fruit texture, postharvest quality and flavor were the top three characteristics that breeders were working to achieve. Chris’s article2 explained that the Artic series was quickly approved after approving the reduced-bruising Innate potato was approved in November. He also indicated that

in a few short years there should be an Artic Gala and Artic Fuji. This could be a boon to the restaurant and food service industry when more apples can be used in salad bars and as agged slices. The company releasing the Artic series anticipates there will be 25,000 trees available for

planting this year. Of course that means it will be another three to four years before any sizable quantity will hit the market.

Of course there are differences in what exactly is a GMO. The majority of GMO plants were created by altering the genetic code of the plant by inserting DNA from a non-plant organism such as Bt to manufacture a specific protein, or to express a different form of a normally

occurring enzyme as in the case of RoundUp ready plants. In the case of apples, the Artic series was developed not by inserting a gene from a different organism but rather by altering the expression of the fruit’s gene that controls oxidation or browning of the flesh. In reality, apples like Jonagold or Empire might be considered as GMOs. Pollen from a specific cultivar was placed on the stigma of the flower of another specific apple cultivar. The breeder then planted the seeds and “selected” the best offspring for testing. Scab resistant apples were selected by crossing the Floribunda crab apple with other cultivars and the offspring were selected because they inherited the V*f* gene that conferred resistance to the pathogen that caused apple scab.

In the meantime, the Pew Research Institute reported a survey they conducted on public opinion on GMO safety3. Thirty-seven percent of the U.S. adults felt that eating genetically modified foods was generally safe; while 88% of the members of the American Academy of Science felt it was generally safe. The gap of 51% between the two groups points to a problem in how the general public develops their opinions. Rather than looking at scientific studies, they are more persuaded by public media. All this year the National Geographic magazine has been

publishing articles about the coming food crisis and the “disconnect” between what science says and what the public perceives in science. The GMO issue is but one of those disconnects. I am sure you can think of other areas that the public believes on way and science portrays a different picture. In all likelihood these perceptions will continue but we must continue to insist on good science and logic in making decisions. The question will be how will the general public perceive the fruit, and more importantly, will it impact the general apple market positively or negatively. Time will tell.

References

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3. http://www.pewinternet.org/2015/01/29/public-andscientists-views-on-science-and-society/

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