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## **Anthonina, Monsanto's Pirated Purple Carrot from Turkey**

*by Edward Hammond*

Anthonina is a Monsanto offering in the growing market for richly colored carrots – red, gold, white and, in this case, purple, a color particularly associated by health-conscious consumers with anthocyanin “antioxidants”, the natural plant pigments believed to protect against heart disease.

Most people think of carrots as being orange. That is mainly the result of work by Dutch plant breeders who, in the 16<sup>th</sup> and 17<sup>th</sup> centuries, bred carrots that color in order to indulge their royalty, giving rise to the wide adoption of orange varieties as being the customary color for carrots.

How did Monsanto subsidiary Seminis, then, go back to a purple carrot if plant breeders haven't paid much attention to them in 300 years? A program of intense plant breeding? No. Genetic engineering? No.

To bring a purple carrot to market, Seminis went to a part of the world where colored carrots never stopped being cultivated – in this case southern Turkey – and purchased some farmers' seed. After a simple process of selection, the company called this carrot its own, and has obtained plant variety rights (PVR) over it in both the United States<sup>1</sup> and Europe.<sup>2</sup>

The US plant variety protection certificate shows how little innovation is necessary to appropriate somebody else's seed under PVR laws. The certificate reads:

*During November 1999, a former Seminis representative, Mr. John Wester, purchased seeds of a landrace [farmer's variety], open-pollinated carrot variety at a farmers market in Adana, Turkey. He then sent this seed to the Seminis carrot breeder... The seed container ... did not have a name on the package, so it was named 'Turkey Black Carrot'...*

Then, as if embarrassed by its own claim, the company justified shopping for its intellectual property at farmers markets, describing the seed collection thus:

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<sup>1</sup> US PVPA Certificate 200400327.

<sup>2</sup> European Union CPVO Certificate 20050779.

*It is worth nothing that this type of collection activity is similar to the ongoing activities of the USDA and any other seed collection conservatory where wild sources of germplasm are collected from remote isolated areas, as they can provide all kinds of new and exciting diversity.*

All kinds of new and exciting diversity but in the Seminis case, it is not for conservation, but for intellectual property claims and profits.<sup>3</sup>

The process to turn the so-called “Turkey Black Carrot” farmers’ variety into Anthonina, intellectual property of Seminis, was not at all complicated. Turkey Black Carrot was not bred with any other variety. Seminis simply planted the Turkish seeds and quickly selected the best carrots that cropped up for their purpose – mainly, plants that were slow to bolt and which had a desirable root shape and shade of purple color.

The straightforward selection of Anthonina out of Turkey Black Carrot was completed over six generations grown in California between late 2000 and early 2004. Seminis then applied for and received PVR in the United States and, later, Europe.

What more is known about the background of “Turkey Black Carrot”? Seminis notes:

*Mr. Wester left the employment of Seminis several years ago and it is unfortunate that we do not know where he is currently located.*

Apparently, Seminis would give Mr. Wester credit, but not the farmers who created the seed he collected.

Defenders of PVR would likely say that nothing is amiss with Monsanto’s appropriation of Anthonina, arguing that Turkish farmers can still plant “Turkey Black Carrot”. No harm done? Not so. While it’s true that Turkish farmers can still plant their own carrots, that’s not the point. The argument skirts critical issues:

First, Seminis did very little to make the carrot its own. Anthonina is essentially the same carrot that Turkish farmers created, especially with respect to the carrot’s most marketable feature – its color. Monsanto owns PVR to what is fundamentally something it did not create. Secondly, benefit sharing appears to be completely absent. Having accessed, and continuing to utilize Turkish genetic resources (Turkey ratified the Convention on Biological Diversity in 1997, two years before the carrot seeds were sent to the US), Monsanto’s use of Turkish purple carrot leads to no benefit for the farmers who created it.

In this unusual case, the key details of the origin of the seed were disclosed, documenting the underwhelming process by which Monsanto came to own the innovation of others. More typically, however, plant variety rights applicants are less forthcoming, or are not asked to even disclose, where they obtained their source seeds, an unacceptable fault in plant variety protection laws that leads to the theft of farmers’ resources and innovation.

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<sup>3</sup> In the interest of accuracy, Seminis is not correct to suggest that Adana, a city with more than 1.5 million inhabitants at the center of an agricultural heartland is a “remote isolated area”.