Did You Know?

What can be better than the aroma of a fresh, hot stack of fluffy pancakes, waffles or French toast right off the griddle? A stack with warm maple syrup, of course! Beginning in the late 1940s, scientists at ARS' Eastern Regional Research Center (ERRC) in Wyndmoor, PA, have helped make improvements to maple syrup processing. That work has also continued at ARS' Southern Regional Research Center (SRRC) in New Orleans, LA, where food technologists recently made improvements to maple syrup processing.

Maple syrup is a minor crop. U.S. syrup production is generated from 10 states and totaled 1.91 million gallons in 2012, generated from a total of approximately 9.77 taps, according to recent National Agricultural Statistics Service data. Maple syrup mostly comes from sugar maple, red maple or black maple trees, although other maples can produce sap.

Maple trees need the right conditions—cold nights and mild days—to be able to "pour out" their liquid gold. Sap is extracted from the trees using a tap during late winter and early spring. The sugar from this sap is concentrated by boiling to make maple syrup.

Early U.S. settlers learned from Native American Indians the process of tapping trees by using metal spouts and buckets to get the sap to make syrup. ARS research has resulted in modernizing every aspect of this process from improving sap collection to finishing the syrup. One major development included a method to intensify the natural flavor and color of maple syrup, which helped expand the maple syrup market. In addition, ERRC researchers developed an inexpensive way to remove "off flavors" in maple syrup that's been in use since 1977 by both the United States and Canada—the world's leading maple syrup producer, accounting for three quarters of the world's maple syrup.

SRRC scientists conducted research to look at using air injection in syrup processing. Lighter colored maple syrup is more desirable to consumers than darker colored syrup, and research from this group showed that air injection can produce light-colored syrup more economically and efficiently without changing the syrup's composition.

So the next time you whip up your morning, afternoon or dinner favorites (see recipe), before you pour on the maple syrup, remember to thank an ARS scientist for his or her role in making this sweet development even better!

*Written by **Tara T. Weaver-Missick**, ARS Information Staff.*

Vermont Maple Chunky Beef Stew

(Serves 6)

1/4 C. flour

2 garlic cloves, chopped

1 large onion, sliced

1 stalk of celery, chopped

1 1/2 lbs. beef, cut into half-inch cubes

1 19 oz. can of tomatoes

1/2 C. dry red wine

1/2 C. pure Vermont maple syrup

4 medium-size potatoes, cubed

2 large carrots, sliced

salt and pepper to taste

Preheat oven to 325 degrees F. Combine flour, beef and seasonings in a plastic bag and shake to coat beef. Sauté garlic and onion together in 1 tablespoon of olive oil until tender. Combine all ingredients into a casserole dish, pour in 1/2 cup of water, cover and bake for 4 hours. (Can be cooked in a slow cooker.)

Source: Recipe and photo used with permission from the Vermont Maple Sugar Makers Association.

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