

# Low socioeconomic Mississippi Delta children willing to try fruits and veggies, but few available

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The good nutrition news is that children in poor, rural parts of the Lower Mississippi Delta are a lot more willing to try fresh fruits and vegetables than generally believed, even by their parents or the kids themselves. The bad news is that such foods are often in short supply in an area where gas stations and convenience stores are the closest places to buy food and where growing family gardens has given way to long work commutes by parents - and that the situation is growing worse with a worsening economy.

Two presentations drawing from a multi-year [nutrition](#) research program in Delta summer camps and schools were presented on April 19 at the Experimental Biology 2009 meeting in New Orleans as part of the scientific program of the American Society for Nutrition. The ongoing research program is being conducted under the direction of research nutritionist Dr. Beverly McCabe-Sellers, US Department of Agriculture/Agricultural Research Service, Little Rock, Arkansas, and is part of the Delta [Obesity](#) Prevention Research Unit (OPRU) headed by Executive Director Dr. Margaret Bogle.

The research arm of the Delta OPRU works with local communities to understand obstacles to better nutrition in the Lower Delta (including rural parts of Arkansas, Louisiana and Mississippi), which leads the nation in the rising prevalence of obesity in both adults and children.

Using 2008 data from a five-week summer day camp in Marvell, Arkansas, Dr. Steve Onufrak, research epidemiologist at the Delta Human Nutrition Research Program at the Agricultural Research Service/U.S. Department of Agriculture, Stoneville, Mississippi, looked specifically at the willingness to try fruits and vegetables of 84 African American children, ages five to 12, attending the camp. Dr. McCabe-Sellers and other researchers had been told repeatedly by parents that children would not try these new foods and, indeed, in a pre-test questionnaire given the children attending this camp session, the children themselves said they would not try the often unfamiliar fruits and vegetables the researchers planned to offer them.

The children were given lunch as part of the camp program and, later each afternoon, a snack. In the past, camp snacks had consisted of potato chips, cookies, and other foods that would have been right at home on convenience store shelves. During the study, however, children were instead offered a different fruit or vegetable each day, such as raw carrots, celery with dip, broccoli, apricots, honey melon, mandarin oranges and plums. On average, each child was exposed to more than 16 fruits or vegetables. Many were unfamiliar to the children. The portions were pre-weighed, allowing researchers to record not only whether a child took the snack but also how much of it he or she actually ate.

Over half of the children tried at least 75 percent of the different fruits and vegetables offered during the five-week program, eating at least 20 percent of the snack weight. Sweeter foods such as fruits and baby carrots were clear favorites, but 60 percent of the children tried broccoli as well.

Dr. Onufrak's conclusion: "Don't blame the kids." If they are given fresh fruits and vegetables, he found almost all will eat some of them and at least half will consume a large variety and quantity.

Dr. McCabe-Sellers has been conducting research about fruit and vegetable consumption by children attending summer camps and school programs throughout the Delta since 2004. In a 2008 summer day camp program, she also found that exposure to fruits and vegetables during an afternoon snack increased overall the willingness of younger children to try and consume more fruits and vegetables. In a school-based program, she also found that older children, in grades four to six, showed a greater willingness to try fruits and vegetables than they themselves had predicted.

Yes, that is the good news, she says, but her presentation at Experimental Biology 2009 focuses largely on the troubling changes she has seen over the past two years. She says the changes she found illustrate the challenges Lower Delta communities, parents, even researchers trying to do nutritional research, face in their efforts to provide healthier diets to children.

For starters, says Dr. McCabe-Sellers, many of these poorer, rural communities do not have grocery stores or even fast food restaurants where one might buy a salad. Convenience stores are the predominant source of food purchases. Prepared foods in the stores are almost invariably fried.

But even when schools or camps such as the ones in which she has conducted her research since 2004 tried to use fruits and vegetables, problems in quality and delivery have developed. The investigators ordered fruits and vegetables for weekly delivery from a national food distributor, which also provides school lunches to some districts. During the first two years, 2006 and 2007, food quality was good. In 2008, with an increase in fuel and food costs, quality of both fresh and canned fruits and vegetables dropped dramatically. Fresh fruit was often overripe, and fresh [fruit](#) and vegetables deteriorated rapidly, suggesting it was older at the time it was shipped. More than one of every four cans of food

arrived dented. The investigators rearranged their weekly menus to use food when it was at its best. Many times they drove 20 or more miles to the nearest store to try to replace food, each time finding the cost was rising.

The challenge to having more fruits and [vegetables](#) in the diets of youngsters is not their unwillingness, she says, nor is it necessarily the admittedly low income in the area. Potato chips are not inexpensive, but the [children](#) often had small bags of them for every meal. The largest challenge, she believes from her experience, is the difficulty in obtaining quality fresh produce at a reasonable cost in these rural areas far away from distribution centers. Dr. McCabe-Sellers; Dr. Steve Onufrak; research associate Dalia Lovera; and Dr. Margaret Bogle, Executive Director of the Delta Obesity Prevention Research Unit, are co-authors on both studies.

Source: Federation of American Societies for Experimental Biology  
([news](#) : [web](#))

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