The Flavor – Nutrition Connection





What is our **BIGGEST** problem?

Obesity 1960 USA

13.4%

Obesity today USA

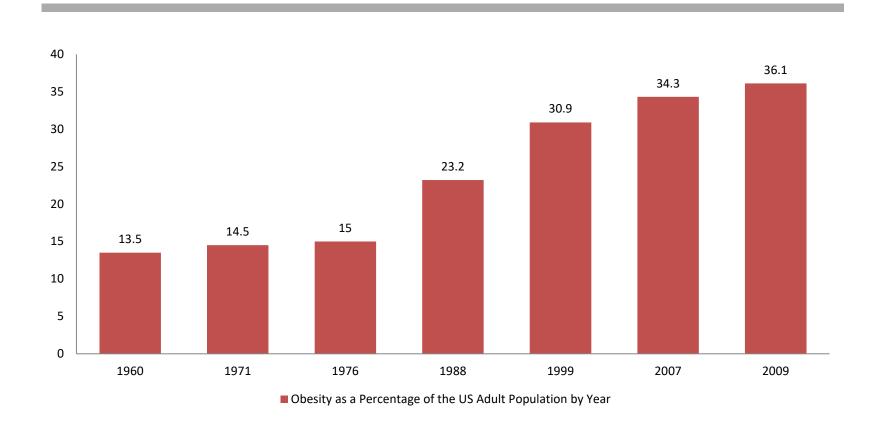
Obesity today Canada

Obesity+
Overweight
today
Canada

Obesity today Denmark

Obesity+
Overweight
today
Denmark

We're now this big...







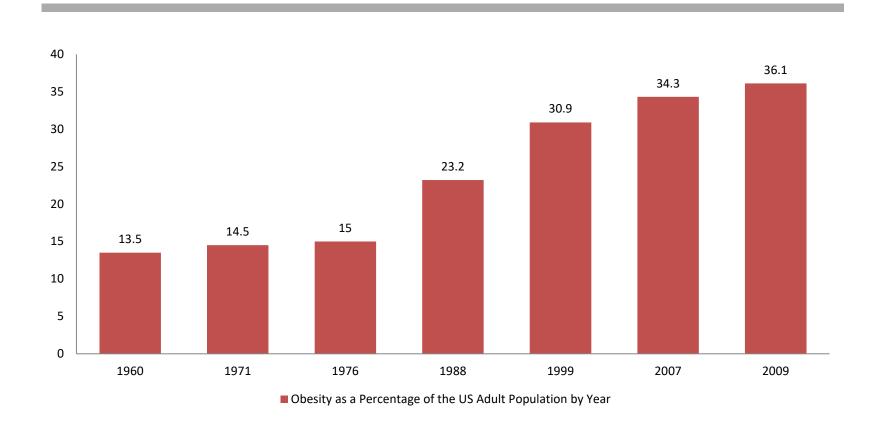
our BIGGEST problem

2nd leading cause of preventable **death** (smoking is #1!)

our BIGGEST problem

1st leading cause of preventable **morbidity**

We're now this big...









Daritas Portilla Chifis

Did you know there are two kinds of Doritos Tortilla Chips?

This bag contains regular DDR/TOS Tortilla Chips with



For a different teste sensation

TACO FLAVOR

Vaco favor DORTOS Tortilla Chica have a taste that zipe up most a thing from source to sips. DORTOS Took a Chips are from the mekers of



Ruffles



Dorites are with it!

WITH OTHER FOODS



Serve DOFTOS Tone: Chies with land suppose be let or cooke. They're del ricks with sander her, soler source.

WITH DIPS



Srive DORTOS Territa Chips with FRITOS Brand Dip Milesti

- S Just add mix so solv creats or creats cheese for delicity; satisfied dip.
- Available in green celes, I les cheere, toatted belon, diffi, con gasso and brook-telon flavors
- (a) Look for them on his fribet of Frito-Lay mack shelves.

WITH RECIPES



Maka Nachos-Ediy, Cheese-fopped appearant

- Arrenge Boards Torrib Orpros balling sheet
- I light a mound of crommy result sharp cliente on top O practs
- Top with stred miled by a jobpono proport state for enthalp
- Bake of 400" until cheese black.





Corn Yields

1932 - **27** bushels/acre

1967 - **80.1** bushels/acre



Corn Yields

1932 - **27** bushels/acre

1967 - **80.1** bushels/acre

2021 - **173** bushels/acre



Orange Yields

1932 - **176** boxes/ acre

1967 - **282** boxes/acre

2014 - **328** boxes/acre



Strawberry Yields

1932 - **84** cwt/acre

1967 - **261** cwt/acre

2014 - **720** cwt/acre

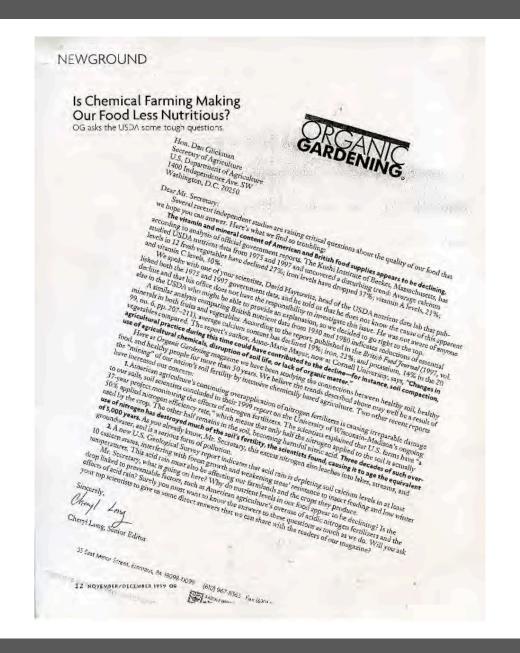


Tomato Yields

1932 - 27 cwt/acre

1967 - 170 cwt/acre

2014 - 315 cwt/acre



Original Research

Changes in USDA Food Composition Data for 43 Garder Crops, 1950 to 1999

Donald R. Davis, PhD, FACN, Melvin D. Epp, PhD and Hugh D. Riordan, MD

Bio-Communications Research Institute, Wichita, Kansas (D.R.D., M.D.E., H.D.R.), Biochemical Institute, The University of Texas, Austin, Texas (D.R.D.)

Key words: Nutritive value, history, food analysis, agriculture

Objectives: To evaluate possible changes in USDA nutrient content data for 43 garden crops between 1950 and 1999 and consider their potential causes.

Look Up " "
Search with Google
Copy
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e compare USDA nutrient content data published in 1950 and 1999 for 13 nutrients and water is, mostly vegetables. After adjusting for differences in moisture content, we calculate ratios of R (1999/1950), for each food and nutrient. To evaluate the foods as a group, we calculate actric mean R-values for the 13 nutrients and water. To evaluate R-values for individual foods th hypothetical confidence intervals, we use USDA's standard errors (SEs) of the 1999 values, generate 2 estimates for the SEs of the 1950 values.

a group, the 43 foods show apparent, statistically reliable declines (R < 1) for 6 nutrients (protein, Ca, P, Fe, riboflavin and ascorbic acid), but no statistically reliable changes for 7 other nutrients. Declines in the medians range from 6% for protein to 38% for riboflavin. When evaluated for individual foods and nutrients, R-values are usually not distinguishable from 1 with current data. Depending on whether we use low or high estimates of the 1950 SEs, respectively 33% or 20% of the apparent R-values differ reliably from 1. Significantly, about 28% of these R-values exceed 1.

Conclusions: We suggest that any real declines are generally most easily explained by changes in cultivated varieties between 1950 and 1999, in which there may be trade-offs between yield and nutrient content.

Nutrient Changes

Calcium down by 16%

Iron down by 15%

Potassium down by 9%

Vitamin C down by 15%

Riboflavin down by 38%







But nutrients have no flavor...







Where Flavor Comes From

Volatile	Structure	Precursor	(nl/g FW/hour cerasiforme)	Concentration (nl/g FW/hour Flora-Dade)	Odor threshold (ppb)
cis-3-Hexenal	нр	Fatty acid	16.28	5.25	0.25
β-lonone		Carotenoid	0.03	0.02	0.007
Hexanal	на о	Fatty acid	27.21	17.15	5
β-Damascenone	HE ON S	Carotenoid	ND	ND	0.002
1-Penten-3-one	H ₂ C CH ₃	Fatty acid	0.21	0.03	t
2-Methylbutanal	OH ₃ CH ₃	Isoleucine	0.75	0.25	1
3-Methylbutanal	4,0	Leucine	0.67	0.18	0.2
trans-2-Hexenal	HC OO	Fatty acid	0.7	0.26	17







DUE AND THE STREET

Cases Committee Committee



WITH OTHER FOODS



DIPS



AND RECIPES

© 1968 FRITO-LAY, INC. NATIONAL HEADQUARTERS DALLAS, TEXAS 75235 PLANTS FROM COAST TO COAST

INGREDIENTS: Corn, Vegetable Oil with BHA and BHT as preservativm, Torvia Yeast, Salt, Manasadium Glutamate, Flour, Cocco, Spices and Flevorings.

> don't be a litter bug. Keep America Beautiful

Doritos.

Taco Flavor To tilla Chips



Doritos, Taco Flavor Tortilla Chips

© 1968 FRITO-LAY, INC

Taco Flavor Tortilla Chip

A CANDENDER OF THE PROPERTY OF THE PARTY OF

This bag contains spicy Taco Flavor DORITOS Brand Tortilla Chips.

For a different taste sensation try regular flavor DORITOS Brand Tortilla Chips with



DORITOS Brand Tortilla Chips are from the makers of



Corn Chips

Products of



Frito-Lay - Doritos Taco Flavor 15-cent bag - 1970's



AND RECIPES

D1968 FRITO-LAY, INC.
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Keep America
Beautiful

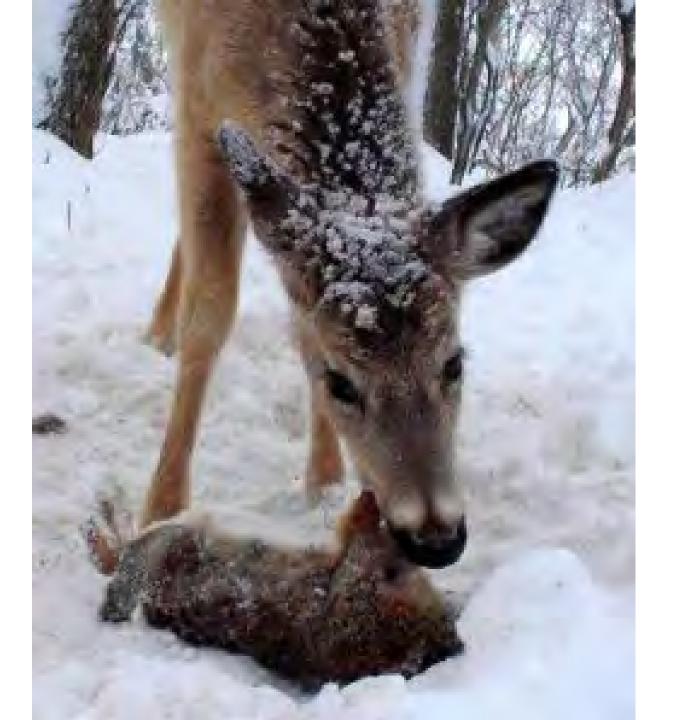


Doritos, 1



Why does **food** have **flavor** anyway?





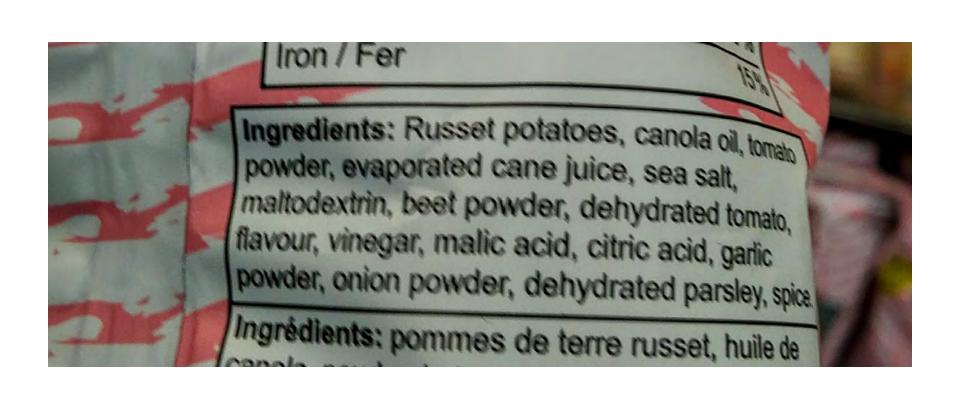




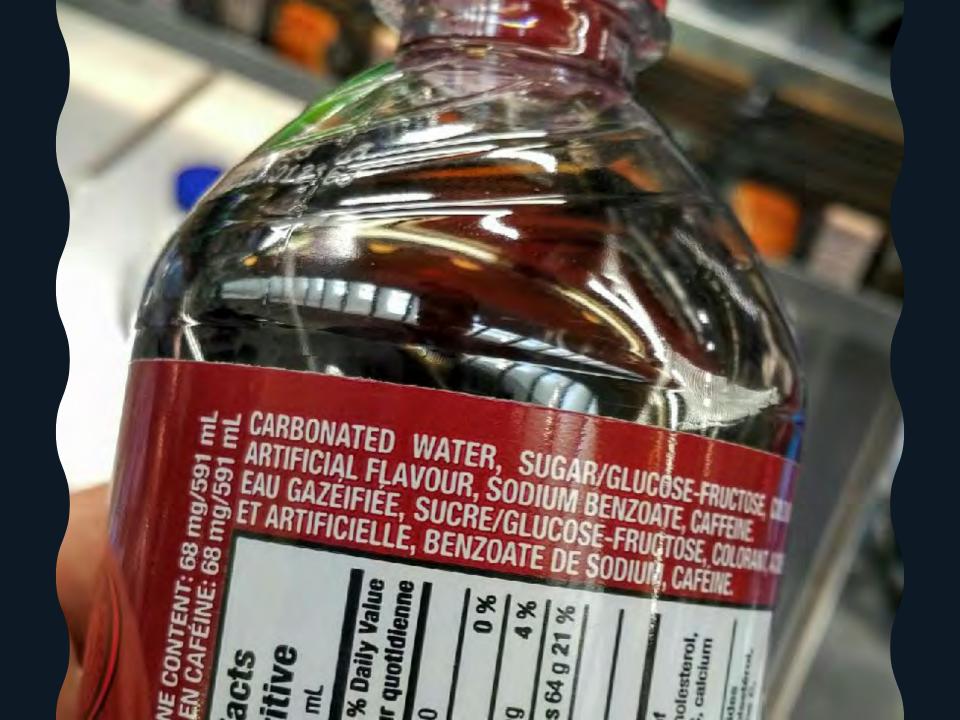
What Happened to Tomatoes

Volatile	Structure	Precursor	Concentration (nl/g FW/hour cerasiforme)	Concentration (nl/g FW/hour Flora-Dade)	Odor threshold (ppb)
cis-3-Hexenal	Hp	Fatty acid	16.28	5.25	0.25
β-lonone	OH, OH,	Carotenoid	0.03	0.02	0.007
Hexanal	н,с~~~о	Fatty acid	27.21	17.15	5
β-Damascenone	HIC ON S	Carotenoid	ND	ND	0.002
1-Penten-3-one	Hic John	Fatty acid	0.21	0.03	t
2-Methylbutanal	CH ₃ CH ₃	Isoleucine	0.75	0.25	1
3-Methylbutanal	GH ₆	Leucine	0.67	0.18	0.2
trans-2-Hexenal	HE ~~~	Fatty acid	0,7	0.26	17









sauces, rich enviable risottos, sizzling sautés, and extraordinary flavored butters

When Should I Use Unsalted Plugrá® European-Style Butter?

Unsalted butter is ideally used in recipes because it allows you to control the sall

Close

Plugrá European-Style Butter Unsalted 8 oz. Ingredients: Pasteurized Cream, Natural Flavor, Contains: Milk

Nutritional Facts: Serving Size 1 Tbsp (14g); Servings Per Container about 16; Amount Per Serving: Calories 100; Calories from Fat 100; Total Fat 11g (17%); Saturated Fat 7g (35%); Trans Fat 0g (0%); Cholesterol 30mg (10%); Sodium 0mg (0%); Total Carbohydrate 0g (0%); Protein 0g, (0%); Vitamin A 8%. Percent Daily Values are based on a 2.000 calorie diet.

Plugrá European-Style Butter Salted 8-oz. Ingredients: Pasteurized Cream, Salt, Natural Flavor, Contains: Milk

Nutritional Facts: Serving Size 1 Tbsp (14g); Servings Per Container about 16; Amount Per Serving: Calories 100; Calories from Fat 100; Total Fat 11g (17%); Saturated Fat 7g (35%); Trans Fat 0g (0%); Cholesterol 30mg (10%); Sodium 90mg (4%); Total Carbohydrate 0g (0%); Protein 0g (0%); Vitamin A 8%. Percent Daily Values are based on a 2,000 calorie diet.

es on individual plates effect, stamp slices wit ag, or curl it with a

ter. Lower moisture help e evenly, and flakier



8 oz. Unsalted 8oz. Salted Solid



8 oz. Salted Tub



16 oz. Unsalted 16 oz. Salted Solid

Product Locator



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Smithfield Pork Shoulder Picnic Pork Roast

Be the first to write a review About this product

Print

Shop at Walmart	Pickup Information		
In stores only	Check store availability for this product.		
Add to: My List*			

Product availability, styles, promotions and prices may vary between stores and online.

About this product

Top of Page

- Item Description
- Ingredients
- Specifications
- Nutrition Facts

Product Reviews
 Q&A Exchange

Item Description

Top of Page

Smithfield Pork Shoulder Picnic Pork Roast:

- Excellent source of protein
- · Self-basting
- . U.S. inspected and passed by Department of Agriculture
- Weight may vary

Do you have questions about this product? Ask a question.

Ingredients

Top of Page

Solution: Pork Broth, Potassium Lactate, Salt, Sodium Phosphates, Natural Flavoring.

Specifications

Top of Page

Model No.: 70800909280
Walmart No.: 009369666

Nutrition Facts

Top of Page

Nutrition Facts

Serving Size 112 G Servings Per Container Varied

Amount Per Serving

Calories 140 Calories from Fat 50

% Daily Value*

(-) Information is currently not available for this nutrient.

- * Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:**
- ** Percent Daily Values listed below are intended for advised and children over 4 years of age. Foods represented or purported to be for use by infants, children less than 4 years of age, pregnant women, or lactating women shall use the RDI's that are specified for the intended group provided by the FDA.



PRODUCT IMAGE

NUTRITION FACTS



PRINT PAGE



Ocean Spray | Cranberry Cocktail | Cranberry Sauce > Cra Dried Cranberries Pomegranate Juice Infused

Craisins® Sweetened Dried Cranberries Pomegranate Infused

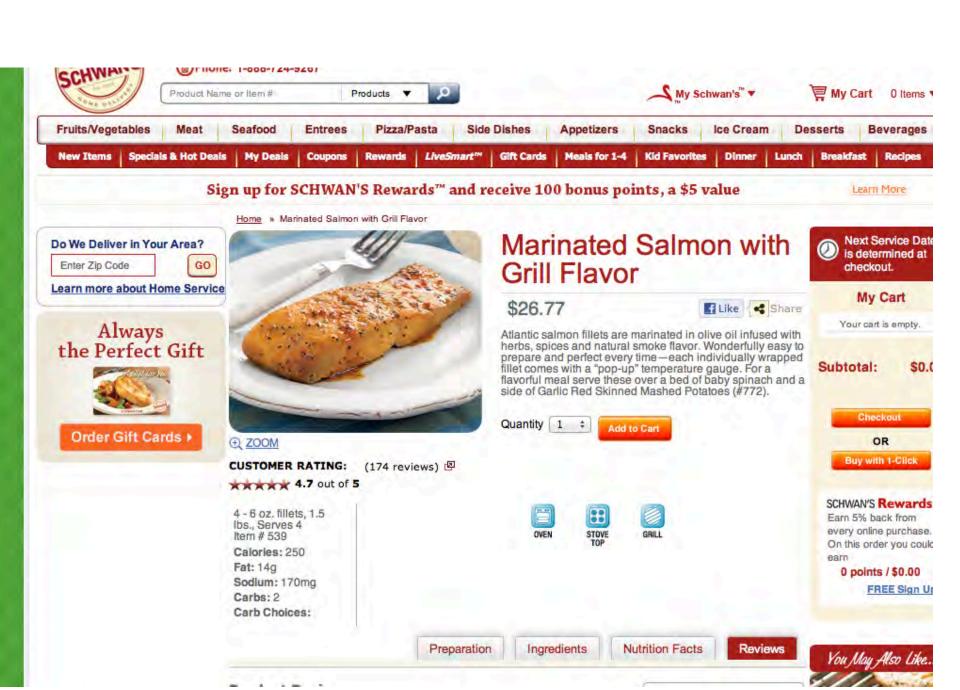
INGREDIENTS

Cranberries, sugar, pomegranate juice from concentrate, r sunflower oil, elderberry juice concentrate.

No artificial colours, flavours or preservatives.



- Role of ingredients
- Nutrition Facts







Chem



Raspberry



Pineapple

Cholesterol	5mg	2%
Sodium	110mg	5%
Potassium	290mg	8%
Total Carbohydrates	28g	9%
Dietary Fiber	< 1g	2%
Sugars	26g	
Protein	6g	12%
Vitamin A		0%
Vitamin C		4%
Thiamin (Vitamin B1)		4%
Riboflavin		25%
Vitamin B6		4%
Vitamin B12		10%
Biotin		0%
Iron		0%
Vitamin D		0%
Calcium		25%
Phosphorus		20%
Magnesium		6%
Pantothenic Acid		4%
Zinc		6%
Selenium		0%

^{*%}DV means % Daily Value based on a 2000calorie diet

Ingredients:

Cultured grade A lowfat milk, strawberries, sugar, fructose syrup, high fructose corn syrup, contains less than 1% of pectin, modified corn starch, natural flavor, kosher gelatin, purple carrot juice concentrate, carmine and turmeric (for color), malic acid, calcium phosphate. Contains active yogurt cultures including *L. acidophilus*.









Young Chicken

Product Information

PRODUCT INFO NUTRITIONAL INFO RECIPES WHERE TO BUY **Nutrition Facts** Serving Size: 4 OZ. SERVING (112g)Servings Per Container: Varied Amount Per Serving Calories 210 Calories from Fat 130 % Daily Value* 23% Total Fat 15g Saturated Fat 4.5g 23% Trans Fat 0g Polyunsaturated Fat 3g Monounsaturated Fat 7g Cholesterol 90mg 30% Sodium 150mg 6% Total Carbohydrate 0g 0% Dietary Fiber 0g 0% Sugars Og Protein 19g 38% Vitamin A 0% Vitamin C 0% Calcium 0% Iron 2% * Percent daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calone needs.

INGREDIENTS

Premium Fresh Young Chicken. Parts of Giblets may be Missing. CONTAINS: Up to 12% chicken broth. All natural chicken broth ingredients: Chicken broth, sea salt, natural flavorings.

CONTAINS NO ALLERGENS

Everything is turning into **Doritos**



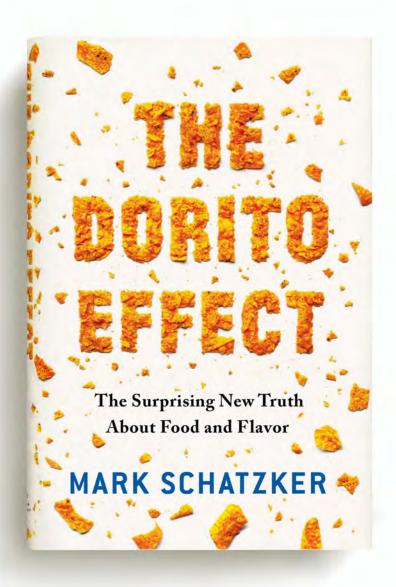


Garden Treasure



Rutgers Scarlet Lettuce





"A treatise on deliciousness—the pure, sensorial appreciation of good food; in writing it,

Schatzker brilliantly charts a road map not just for healthy eating, but for joyous eating, too."

DAN BARBER, chef and co-owner of Blue Hill and New York Times bestselling author of The Third Plate

THE END OF CRAVING

Recovering the Lost Wisdom of Eating Well



Mark Schatzker

AUTHOR OF THE DORITO EFFECT

http://hos.ufl.edu/ kleeweb/ newcultivars.html