Hass Avocado Sensory Research

Spectrum Community Narrative Panel (SCAN) Report
By Sensory Spectrum, April 2013
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Objectives and Method

Objectives

• Understand the process for choosing avocados, and the implications this has on the quality of the eating experience
• Explore avocado consumption habits: when, how, why, priorities, and range of uses
• Characterize the appearance, aroma, flavor, texture and “experiential” aspects while tasting the avocado in four forms (the fruit alone, on a salad, as part of a turkey sandwich, and in guacamole).
• Deep dive into language to describe the characteristics of avocados from a sensory perspective
• Identify characteristics that define the uniqueness of avocados, their relationship to enjoyment, and establish a hierarchy of importance for these attributes
• Understand how the unique characteristics of avocados influence and reinforce consumer perceptions for nutrition, wellness, satiety, and its place in recipes
Objectives and Method

Method

• One ½-day session and one full day session with the Sensory Spectrum Community Narrative Panel (SCAN) was held in New Providence, NJ. The sessions were led by a trained facilitator.
  – February 28, 2013, ½-day session (N=10)
  – March 19, 2013, full day session (N=9)

❖ Participants were light, moderate and super-heavy users of avocados
Executive Summary
Avocado Essence

Avocados are a healthy, satisfying treat that add a unique dimension to recipes. They are described as “nature’s superfood” containing nutrients and healthy oils that make them a “guilt-free” component in dishes. Emotional responses to avocados are visceral and extremely positive. When ordered or served there is a sense of anticipation for the decadent experience to come. There is no substitute for the “WOW factor” avocados add to recipes, and they are seen as a sophisticated ingredient that can “lift your mood”.

The Essence of Avocados

Panelists developed language to describe avocados throughout Sessions 1 and 2, then chose the attributes that capture the essence of the fruit.

Endless Possibilities
- Clean and Green
- Creamy (flavor and texture)
- Super Food
- Versatile
- All Natural
- No Substitute
- Rich texture
- Filling
- Earthy

Attributes are listed by the number of “votes” – highest to lowest

5 “votes”

1 “vote”
Avocado Summary

**Avocado Selection**
- Dark green verging on brownish/black
- Firm yet yields to pressure
- Bounces back
- Selected based upon eventual use

**Avocado Consumption**
- Endless possibilities
- Any time of day, any meal
- Casual and elegant
- A welcome treat

**The Sensory Experience**
- Creamy, buttery, smooth
- Subtle yet complex
  - Appearance
  - Distinctive colors: bright yellow and green
  - Maintains its shape
- Aroma
  - floral; green; grassy = freshness, earthy
- Flavor
  - Distinctive
  - Mild, delicate
  - Green/grassy, fresh, and slightly sweet
  - Plays well with others
  - Substitute for meat/protein
- Texture
  - Melt-in-your-mouth
  - Maintains its shape
  - Buttery, rich, satisfying mouthcoat
Choosing Avocados

In choosing an avocado, SCAN considers color first, with the preferred shade being dark green verging on brownish/black, and most agree that very dark or black avocados are generally overripe. Panelists also consider the size of the avocado: smaller avocados are perceived to be more consistently ripe and ready to eat than larger, bright green fruit.

The feel of the avocado in the hand is the next signal for ripeness. The fruit should be firm while still yielding to pressure so that the skin indents slightly, but it should immediately bounce back when pressure is released.

SCAN panelists often choose avocados based upon the eventual use and may select a less ripe, firmer fruit if it will not be used on the day of purchase. While SCAN stated that a perfectly ripe avocado is hard to obtain and “worth announcing”, they do feel that avocados at most ripeness levels enhance the recipes that incorporate the fruit.
SCAN panelists describe the avocado as having endless possibilities and use them in a variety of ways: mashed in guacamole or as a spread, sliced in salads and sandwiches, cubed in salads and garnishes, and halved on its own or as a vessel for salads or dressing.

Avocados can be consumed any time of day and for any meal. SCAN was interested and surprised to see images of avocados for breakfast, but they quickly understood that the fruit they identify as a superfood would be a healthy addition to the morning meal.

Occasions for avocado usage are also broad since the fruit fits easily at both casual and elegant events. In terms of emotional and sensorial reactions to avocados, panelists experience a sense of anticipation and excitement for the way an avocado will enhance a common meal – “it’s always a treat” - whether consumed on the day of purchase or stored for future use.
Creamy, buttery and smoothness are important attributes in avocados that have both flavor and textural components.

- **Flavor**
  - Creamy is described as a “naturally occurring” oil that binds flavors without tasting oily.
  - Smoothness in ripe avocados refers to its mildness and uniformity. Other foods with this characteristic include ripe bananas, cream cheese or soft ripe cheeses such as Brie, mashed sweet potatoes, and hard-boiled egg yolks.
  - Buttery “flavor” represents a richness that leads to a satiating experience.
  - The overall flavor event is described as addictive: a buttery, creamy richness similar to dark chocolate that doesn’t overwhelm, so you keep coming back for more.

- **Texture**
  - Creamy texture relates to the thickness of the flesh as well as the ease of manipulation during chew-down. Panelists find the initial bite to be firm like a ripe banana, and then the avocado dissolves easily without much effort and distributes evenly in the mouth, similar to mashed potatoes.
  - The avocado is described as having a creamy smoothness that is compared to the yolk of a hard-boiled egg. This is consistent with the extremely high denseness (compact in molars on initial bite) and uniformity of chew (evenness of force to chew through) noted in the descriptive analysis.
  - Buttery texture makes the avocado velvety and spreadable, and relates more to fattiness rather than dairy.
  - Both the creamy and buttery textures create a melt-in-your-mouth quality and leave a noticeable mouthcoat that comes from the avocado’s healthy oils.
Although relatively subtle, there is a complexity in both the flavor and texture of avocados that enhances most ingredients it is paired with. Our research indicates that in addition to standing alone as a satisfying meal or snack, when added to recipes avocados are the foundation that binds ingredients and a vehicle that adds richness.

The distinctive flavor of a plain ripe avocado is described as smooth - even and consistent throughout with no sharp or spiky notes. When used in application, the avocado serves as an integrator that “plays well with others” to round-out the overall flavor of dishes. In application, the avocado tempers the sharpness of the onion in the guacamole and the turkey in the sandwich, creating a blended experience that is described by SCAN as “smoothing the rest of the flavors”.

Avocados are considered a healthy substitute for mayonnaise - in fact they are more satisfying. Panelists believe the avocado’s melt-in-your-mouth quality adds a moistness and creaminess in application that goes beyond mayonnaise: the pleasant mouthcoat, healthy oils and added “bulk” (heartiness) make it a more satisfying addition to recipes.
THE SENSORY EXPERIENCE ALONE AND IN APPLICATION

Appearance
The flesh of the avocado progresses from yellow (at the center/pit) to green (at the skin) with moderate color intensity (darkness) and moderately high chroma (brightness). The colors and brightness remain in each application (cubes, slices and mashed). The fruit is moist and velvety, which signals to SCAN that it will have a creamy flavor and texture. The cubes and slices maintain their shape in each application; the cubes add dimension to the salad and the slices are a nice contrast to the whiteness of the sandwich. Panelists also refer to the slices as curved, crescent-shaped, and smiles.

- Distinctive, bright yellow and green
- Moist and velvety appearance = creamy flavor and texture
- Maintains shape

Aroma
The impact of the avocado’s aroma is low yet distinctive to the fruit, and SCAN describes this aroma as “floral”, “green” and “grassy”, which are positive terms that signal freshness in a ripe avocado. This is consistent with the descriptive analysis, which categorizes the green notes as reminiscent of grass and vines/stems. SCAN panelists also describe an aroma similar to pumpkin or gourds and earthy notes that might be related to the skin of the avocado.

- Floral; Green; Grassy = freshness
- Earthy
THE SENSORY EXPERIENCE ALONE AND IN APPLICATION

Flavor
Avocados have a *distinctive yet delicate* flavor with a *depth and richness that lends substance*. Panelists describe this flavor as *mild, green, fresh, and slightly sweet with a mineral element*.

SCAN *equates the “greenness” to grassy, stem-y and floral*. This is consistent with the descriptive analysis, which categorizes the green notes as grassy, vine-y, stem-y, and olive-like. These green notes are slightly masked in the salad and sandwich but enhanced in the guacamole. While green notes can be industry indicators of less-than-ripe avocados, they are a positive attribute that contribute to consumer enjoyment of the fruit.

Avocados have an *earthy quality reminiscent of mushrooms*. This attribute is enhanced by the lemon in the salad dressing and guacamole. Many panelists state they would *substitute avocado for meat/protein in their dishes*. This may be related to the savory or umami quality some noted when tasting the plain avocado, or the nutty/seedy notes reminiscent of raw nut meat described in the descriptive analysis.

The buttery creamy attributes of the avocado blend well with the ingredients in all three applications (salad, sandwich and guacamole). The avocado aftertaste panelists noted in the fruit alone is enhanced in the salad and sandwich but overpowered by the other ingredients in the guacamole.
The Sensory Experience Alone and in Application

Texture

The texture of the plain avocado is described as creamy but with a slightly drying aspect similar to a hard-boiled egg. The buttery, melt-in-your-mouth texture adds moisture to the salad and sandwich: it is a nice contrast to the crunchy lettuce and a welcome addition to the dry sandwich.

The inside of the avocado appears to be consistently firm and maintains its shape when scooped out of the shell as well as in the salad and sandwich. There is also a coolness to avocado that is felt as part of the texture, especially when paired with spicy ingredients or dishes.

Avocados leave a residual mouthcoat that SCAN describes as buttery, fatty, rich and satisfying. This is consistent with the low to moderate oily film found in the descriptive analysis.
Essential Attributes That Define Avocados

Throughout Sessions 1 and 2 SCAN developed language that describes both the sensory and experiential characteristics of avocados. Panelists grouped these attributes into three categories: Treat/Unique, Nutritional, and Satisfying. At the end of Session 2, SCAN selected the attributes that best describe avocados in each category.

Treat/Bonus Unique/Special

- Rich texture
- Sophisticated
- Super Food
- Lifts your Mood
- Decadent
- Endless Possibilities
- “Spices-up” dishes
- Heart Healthy
- “Think outside the mayo jar”
- Party Food

6 “votes”

Attributes are listed by the number of “votes” – highest to lowest

1 “vote”
Essential Attributes That Define Avocados

Attributes are listed by the number of “votes” – highest to lowest

**Nutritional**
- Heart Healthy
- Super Food
- Natural, Whole Fruit
- Clean and Green
- Antioxidants, Vitamins
- “The Un-Mayo”

**Satisfying**
- Rich texture
- Filling
- Delicious
- Substantial
- Good Fats
- All Natural
- Pleasurable

8 “votes”

1 “vote”

1 “vote”
As an introduction to the topic SCAN was asked for their immediate response to the word “avocado”. Experiential and sensory responses are listed below.

**Experiential Responses**
- Yummy
- Delicious
- Guacamole
- Multi-purpose
- Healthy
- Super food
- Fattening - but good fat (like nuts and olives)

**Sensory Characteristics**
- Chunky
- Creamy
- Spreadable
- Soft
- Green
- Vinegar
- You have to touch them
## Detailed Findings

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
<th>Page</th>
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</thead>
</table>
| **Avocado Usage and Selection** | • Top-of-mind responses to avocados (sensory characteristics, preference/emotional response).  
• Avocados Usage - when, how, range of uses, recipes  
• Selecting “ripe and ready to eat” avocados                                                                                                                      | 19   |
| **Avocado Tasting**           | The sensory experience (appearance, flavor and texture) of avocados in four applications (plain, in salad, on a sandwich, and in guacamole)                                                                  | 23   |
| **Emotional Response to Avocados** | Language development through discussion of panelists feelings about avocados and a creative writing exercise                                                                                           | 27   |
| **Visual Stimuli**            | Language development via visual stimuli: avocados in four forms (halved, cubed, sliced, and mashed)                                                                                                            | 29   |
| **Converge on Key Avocado Language** | Attributes that capture the essence of avocados in three categories: Treat/Bonus/Unique/Special, Nutritional, and Satisfying                                                                               | 33   |
Avocado Usage

Exploration of the world of avocados continued through discussion of usage. Panelists were asked to describe range of uses as well as the sensory characteristics that contribute to avocado usage.

- Avocados add a rich and satisfying component to recipes
  - Avocados are versatile, create variety, and add dimension and density to recipes
  - Avocados are a special, “bonus ingredient”
- The fruit can replace chicken or salmon, adding a “meatiness” and/or protein to dishes
- Panelists note that avocados have a cooling factor that offsets spicy foods
- Avocados are healthy
  - Guilt-free because they are good for you AND delicious
  - Classified by some as a “superfood”
    - Rich in anti-oxidants
    - Healthy fat
    - Vitamin-rich
    - Omega?
- The soft texture contrasts with the crispy-crunch of lettuce in salads

“Adds density and meatiness to what you’re eating”

“If lettuce is on my sandwich I don’t think ‘YAY!’ but I do when I get a piece of avocado”
Avocados at different levels of ripeness may be used for different occasions. Guacamole requires a soft, easily mashed avocado, while a firmer fruit that may be under-ripe by industry standards is desired for slices and cubes.

Avocados can be used in place of condiments and recipe ingredients

- Mayo/fat
  - “good fat”
  - slippery texture
  - moistness

- Salad dressing
- Sour cream
- Cheese
- Side dishes such as rice or starch

SCAN panelists have varied responses to avocado usage in relation to the level of ripeness

- Ripeness is hard to perfect. If you find an avocado at the perfect ripeness its “spectacular” and ”worth an announcement”.
- Some panelists will plan a meal around the ripeness of the avocados in the house. Others will buy them at different levels of ripeness for different recipes and to stagger rate of usage.
- If avocados are not ready to eat, panelists will store them on the counter to ripen, then use when ready or put in refrigerator to hold ripeness for future use.
- Panelists believe an extremely hard avocado will not ripen well. They also felt that over-ripe avocados are visually unappealing, and the stringy, mushy texture is less satisfying.

“It creates a bit of an occasion – it’s enough of a change to make it a treat”
SCAN was presented with a group of avocados at various levels of ripeness and asked to choose one that was “ripe and ready to eat”. They were then asked to describe why they chose the avocado in terms of appearance and touch/texture, as well as how they would use the avocado.

- **Visual cues that indicate ripeness**
  - Color
    - Darker green
    - Verging on brown
    - Black/brown
    - Green undertones w/brown overtones
    - Bright green = under-ripe
    - Black=overripe
  - Smaller size

- **Tactile cues that indicate ripeness**
  - “Firm but with enough give“
  - Skin indents slightly but fingers do not sink in too deeply
  - Skin bounces back, doesn’t remain indented at point of pressure
  - No soft spots; feel is consistent across entire avocado
  - Bumpy = less flavorful
SCAN described the following uses for the “ripe and ready to eat” avocados they chose. Consistent with the usage discussion prior to this exercise, SCAN chose avocados with varied levels of firmness based upon how they planned to utilize the fruit.

• Slices/cubes in salads and sandwiches. Avocados selected for these uses should not be so ripe that they become hard to cut/control.
• Guacamole. Avocados should be softer and easy to mash.
• Fajitas
• Sushi
• Alone, with salt/pepper/vinaigrette/olive oil
• Garnish for tortilla soup
• Vessel for salmon salad
• Mango salsa
SCAN tasted ripe avocados in both sessions and was asked to describe the experience from a sensory perspective (appearance, aroma, flavor, and texture).

### “Ripe and Ready to Eat” (avocados selected by panelists, Session 1)

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Ripe Avocado (Session 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright yellow-green with no dark/brown spots</td>
<td>Perfect ripeness-maintains shape when cut &amp; scooped out of shell</td>
</tr>
<tr>
<td></td>
<td>Very few brown spots</td>
</tr>
<tr>
<td></td>
<td>Gradient strong green to yellow</td>
</tr>
<tr>
<td></td>
<td>At the peak of ripeness</td>
</tr>
<tr>
<td></td>
<td>Moist</td>
</tr>
<tr>
<td></td>
<td>Pear-shaped</td>
</tr>
<tr>
<td></td>
<td>Oval-shaped</td>
</tr>
<tr>
<td>Yellow similar to a hard-boiled egg yolk</td>
<td>Need yellow for ripeness</td>
</tr>
<tr>
<td>Fibers at outer edges of the flesh; can be easily removed or ignored</td>
<td></td>
</tr>
<tr>
<td>Moist with a velvety finish = soft and creamy flavor/texture</td>
<td></td>
</tr>
<tr>
<td>Cubes &amp; slices maintain their shape</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Aroma</td>
<td>Green (floral, not stems)</td>
</tr>
<tr>
<td></td>
<td>Grassy</td>
</tr>
<tr>
<td></td>
<td>Green part of a honeydew melon nearest rind</td>
</tr>
<tr>
<td></td>
<td>Earthy = potato, minerals found in dirt, pumpkin/gourd</td>
</tr>
<tr>
<td></td>
<td>Green &amp; earthy</td>
</tr>
<tr>
<td></td>
<td>fresh and ripe</td>
</tr>
<tr>
<td></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td>something green that has just been broken or cut</td>
</tr>
<tr>
<td></td>
<td>Too green=metallic-y</td>
</tr>
</tbody>
</table>
### Avocado Tasting – Avocado Alone

<table>
<thead>
<tr>
<th>“Ripe and Ready to Eat”</th>
<th>Ripe Avocado (Session 2)</th>
</tr>
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<tr>
<td>(avocados selected by panelists, Session 1)</td>
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</table>

#### Flavor
- Distinctive
- Mild
- Rich
- Substantial
- Creamy
- Buttery
- Earthy (tinny, minerals)
- Fresh
- Green
- Addictive
- Nutty
- Rich
- Creamy
- Buttery
- Fresh
- Green
- Delicate; almost the absence of flavor
- Smooth (=ripe)

#### Texture
- Buttery (fatty)
- Rich, satisfying
- Mouthcoat
- Velvety
- Smooth
- Creamy
- Melts in your mouth
- Cooling
- Yellow flesh firmer; green flesh softer
- Ripe
  - Smooth
  - Even & consistent firmness
- Creamy

*HASS AVOCADO BOARD*
During Session 2, SCAN tasted ripe avocados in 3 applications and was asked to describe the experience from a sensory perspective (appearance, flavor and texture).

<table>
<thead>
<tr>
<th></th>
<th><strong>Cubed Avocado in Salad</strong></th>
<th><strong>Sliced Avocado in Turkey Sandwich</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>❖ Holds its form</td>
<td>❖ Stands out—the “main attraction”</td>
</tr>
<tr>
<td></td>
<td>❖ Nice variety of color &amp; shape</td>
<td>❖ Bright colors contrast and pop against white bread and turkey</td>
</tr>
<tr>
<td></td>
<td>❖ Adds dimension, substance</td>
<td>❖ Holds its shape</td>
</tr>
<tr>
<td></td>
<td>❖ Gradient coloring: strong green to yellow</td>
<td>❖ Adds dimension</td>
</tr>
<tr>
<td></td>
<td>❖ Bright colors contrast and pop against white bread and turkey</td>
<td>❖ Adds interest</td>
</tr>
<tr>
<td></td>
<td>❖ Holds its shape</td>
<td>❖ Crescent -shaped, curved</td>
</tr>
<tr>
<td></td>
<td>❖ Adds dimension</td>
<td></td>
</tr>
<tr>
<td></td>
<td>❖ Adds interest</td>
<td></td>
</tr>
<tr>
<td><strong>Flavor</strong></td>
<td>❖ Dressing brightens avocado flavor</td>
<td>❖ Slight green flavor</td>
</tr>
<tr>
<td></td>
<td>❖ Lemon enhances earthiness</td>
<td>❖ Smoothes out the sandwich meat and bread</td>
</tr>
<tr>
<td></td>
<td>❖ Mild</td>
<td>❖ Low avocado flavor, but “important for blending” other sandwich ingredients</td>
</tr>
<tr>
<td></td>
<td>❖ Avocado aftertaste</td>
<td>❖ Rich</td>
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<td></td>
<td></td>
<td>❖ Makes sandwich less bland</td>
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<td></td>
<td></td>
<td>❖ Earthy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>❖ Sweetness from bread</td>
</tr>
<tr>
<td></td>
<td></td>
<td>❖ Saltiness from turkey</td>
</tr>
<tr>
<td><strong>Texture</strong></td>
<td>❖ Adds creaminess to salad</td>
<td>❖ Adds moisture</td>
</tr>
<tr>
<td></td>
<td>❖ Creamy during chew-down</td>
<td>❖ Creamy</td>
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<tr>
<td></td>
<td>❖ Adds heartiness, satisfaction to salad, bulks it up</td>
<td>❖ Cooling</td>
</tr>
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<td></td>
<td>❖ Mouthcoat lasts longer than plain avocado</td>
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<tr>
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## Avocado Tasting – Recipes

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In order to get at the emotional response to avocados, panelists were asked to describe how they feel before, during and after eating the fruit. SCAN also discussed how they feel when they serve avocados, when avocados are served to them, and the atmosphere at events where they might eat avocados.

- Happy
- Excited
- Hungry
- Decadent
- Chose well
- Unique
- Satisfied
- Bonus
- Hit the jackpot
- Food is enhanced
- Wowed
- Guilty pleasure
- Healthy
- Proud
- Good chef
- Impressed
- Will comment on it
- Fresh air
- Anticipation
- Good food
- Social, friendly
- Good drinks
- Refreshing
- Food outside tastes better
- Freshness combines with lime to temper heat of guacamole
- Informal
- Casual
- Different
- Fun
- Romantic
- Torn or cautious: high in fat, but good fat & vitamin/ mineral-rich, 300 calories/avocado
- Eat sparingly so don’t get tired of them-then they are no longer a treat
- When the avocado is gone:
  - Bummed-out
  - The salad is done
  - Lost interest
  - Deflated
  - No “WOW factor”
Panelists were asked to role-play in a creative writing exercise by first working individually and then sharing their stories with the group. (See Appendix for PR stories). As each story was read, SCAN identified key words and phrases.

“‘You work for the advertising/PR agency that represents avocados. Your task is to convey to consumers the joy of avocados by writing a story that describes the benefits about the avocado experience.’”

- No substitute
- Mouthwatering
- Gold standard of food
- Endless possibilities
- Its own container
- Superhero of super foods
- “Think outside the mayo jar”
- Luxurious taste
- Pleasurable
- Versatile
- Good Mother Earth
- Sophisticated slices
- Always a treat
- Cute cubes
- All natural
- Wholesome
- Clean and green
- Nature’s super food
- Heart healthy
- Vitamins
- Richly layered
- Lifts your mood
- Any time of day
Avocados in four forms (halved, cubed, sliced, and mashed) were presented to SCAN as visual stimuli to generate language describing the appearance and potential uses of avocados.

While each form has its own unique attributes, panelists state that avocados in all four forms are ready for consumption.

- Whole avocados are fresh - “from nature to you”- and portable. When simply cut in ½ they provide endless usage possibilities.
- Cubes of avocado give salsa and guacamole a fresher, more natural look. SCAN describes the cubes as fun, cute, bite-sized, toss-able, and convenient.
- Avocado slices are “sandwich ready”. They make a sophisticated, gourmet-style presentation and are perceived to be the most elegant of the four forms. They are also described as inviting, delicate/dainty, sleek, special and decadent.
- Mashed avocados are the least visually appealing, but using them as a spread “allows you to get avocado in every bite”. They are also versatile; possible uses include sandwiches, salads, as a condiment and baby food, and possibly as part of a salad bar.
Halved

- Wholesome
- Filling
- Portable
- Whole
- Versatile
- Natural
- Untouched
- Healthy
- Hearty
- Fresh
- Ready to eat
- Straight from nature
- From nature to you
- Thick

- Solid
- Endless possibilities
- A vessel for salad, salsa, dressing

Cubed

- Ready to eat
- Ready to store
- Chunky
- Hearty
- “Lump avocado” (i.e. lump crab meat)
- Skewered
- Fresh
- Fun
- Cute
- Bite sized
- Toss-able
- Convenient
- Firm, hold their shape
- Not enticing on its own, need to see cubes in a recipe/dish

“Once you’ve cut or cubed it you’ve made a decision.”
Consumer Language: Visual Stimuli

- Sandwich-ready
- Inviting
- Flexible
- Look like smiles
- Presentable
- Rich
- Elegant
- Delicate
- Light
- Portioned
- Neat
- Special
- Sophisticated
- Substantial
- Sleek
- Luxurious
- Decadent
- Scrumptious
- Pretty
- Split
- Dainty
Consumer Language: Visual Stimuli

- Ready to be added
- Ready for anything
- Dip
- Dimensional
- Experimental
- Edible
- Natural baby food
- Mixed
- Spreadable
- Lumpy
- Wet
- Messy
- Creamy
- Chunky

- Loose
- Dense
- Filling
- Not as noticeable, doesn’t make avocado stand out
- Allows you to get avocado in every bite
- More processed-looking
- Hard to tell how fresh it is
- Less satisfying than slices
- Too yellow
- Not overly appealing
- Doesn’t say indulgent
- Mashed potatoes
- Guacamole
During Session 2 SCAN panelists were asked to categorize the attributes of avocados using groupings suggested by the Hass Avocado Board. After tasting the avocado alone SCAN identified three key “buckets” that exemplified avocados:

- Treat/Bonus/Unique/Special
- Nutritional
- Satisfying

The panel was then asked for descriptive language that supports each category, including terms identified in Session 1.

At the end of each tasting and creative exercise these themes were revisited to give SCAN the opportunity to build additional language. Relevant sensory characteristics and emotional responses were added to each category.

The words and phrases identified by SCAN are detailed in the following slides.
### Sensory Characteristics
- Unmistakable look and taste
- Its own container
- Portable
- Rich
- Buttery
- Fat (bacon, chocolate, egg yolk: yummy but cannot eat all the time)
- Definitive taste, different flavor
- Short shelf life
- Adds density, dimension
- Mild, plays well with others

### Experiential Characteristics
- Fun
- Social
- Party food
- Enhances
- Lifts your mood
- Luxurious flavor
- Endless possibilities
- Expensive, adds high value
- Versatile
- Spices up, adds interest
- Sophisticated (slices and cubes)
- Hi-end/designer
- Appreciated as good food
- Takes time to prepare
- No guilt
- Worth announcing when perfectly ripe

**Consumer Language:** Treat/Bonus/Unique/Special
<table>
<thead>
<tr>
<th><strong>SENSORY CHARACTERISTICS</strong></th>
<th><strong>EXPERIENTIAL CHARACTERISTICS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>❖ Natural, unadulterated, nothing added</td>
<td>❖ Good fats</td>
</tr>
<tr>
<td>❖ Not processed (whole, sliced, cubed)</td>
<td>❖ Anti-oxidant</td>
</tr>
<tr>
<td>❖ Green (stem-y, grassy, leafy, can eat it raw)</td>
<td>❖ Fights cancer</td>
</tr>
<tr>
<td>❖ Earthy flavor and aroma (potatoes, carrots, root vegetables, minerals)</td>
<td>❖ Oils good for skin, hair</td>
</tr>
<tr>
<td>❖ Visual cues (green color, outer skin/peel that protects inner flesh)</td>
<td>❖ Fat/meat replacement</td>
</tr>
<tr>
<td>❖ Fresh (aroma, flavor, eat in raw state)</td>
<td>❖ Light meal</td>
</tr>
<tr>
<td></td>
<td>❖ Healthy (in the right doses)</td>
</tr>
</tbody>
</table>
## Consumer Language: Satisfying

### Sensory Characteristics
- Rich texture
- Meaty texture
- Mouthcoat
- Creamy
- Smooth
- Chunky
- Bright appearance
- Color contrast
- Sliced
- Filling
- Hearty
- Adds contrasting texture
- Buttery
- Lingers
- Adds moisture

### Experiential Characteristics
- Addictive
- Satisfying
- Delicious
- Fat replacement
- Meat/protein replacement
- Not bland
- Special
- Comfort food
- Why you order the sandwich
- Excited
- Refreshing
## Appendices

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Creative Writing Exercise

Imagine you're having lunch at an outdoor café at the beach - your standard healthy lunch. Now imagine it has avocado with it. Your boring grilled chicken has sprung to life! Your mouth is watering. The avocado has been sprinkled with fresh lime and salt. Now it's a special, nutritious lunch that has never tasted so good. Avocado - there is no substitute.

The very versatile, unmistakable, avocado! You can dice it on a salad, slice it on a sandwich, or mix it into guacamole. No matter what you do with it, you can't replace its unmistakable buttery, creamy, earthy, packed with nutrients taste. They are the super heroes of food. They are rich in vitamins and anti-oxidants. And they are great with tequila too! So go ahead- slice, dice, and blend them! Anytime! They are the very versatile Avocado! Think outside the mayo jar.

Start on a white page with one halved avocado & words “endless possibilities”. Turn the page to see photos of all the possibilities.

Start with a black and white ad showing Mom spreading mayo out of jar. Introduce the avocado, and Mom gets an idea. Everything turns to color. “Think outside the mayo jar”.

www.hassavocadoboard.com
I wanted to make a salad for my son to teach him how to eat avocados. I didn’t think that he would like anything green, so I figured I would make guacamole and add different vegetables to it. The smooth and creamy consistency would be inviting to him. The chips that I served with it were successful and he loved it!

The only versatile, wholesome, and all-natural super food. It goes well on almost any dish or as an accompaniment to your meal. Contains many healthy vitamins, and is heart healthy. It's clean and green, (and a disease fighting machine.)

Eat avocados daily and enjoy an indulgent and nutritional food experience. Avocados are a superfood that is luscious, delicious, and extremely versatile and satisfying. When you serve them or eat them it says you are a sophisticated consumer who appreciates food for its luxurious taste and nutritional benefits. Avocados represent the gold standard of foods and can highly enhance and accentuate any meal throughout the day. They always evoke a pleasurable and richly layered food experience.
Enjoy avocados anytime of the day to lift your mood and add valuable nutrients to your diet. Try sliced avocado in the morning along with your eggs and toast as a rich buttery, enjoyable accompaniment. Add some avocado to your favorite salad as a decadent, nutritious addition, or onto your sandwich in place of mayo as a creamy, indulgent, healthy addition. Mash it up, chunky or smooth, add your favorite seasoning and smother on chips for a fun, filling, natural snack. At dinner time, use your imagination and add it to any dish where you want to add that wow factor. Enjoy nature’s super food, the avocado. The possibilities are endless.

The very versatile, unmistakable, avocado! You can dice it on a salad, slice it on a sandwich, or mix it into guacamole. No matter what you do with it, you can’t replace its unmistakable buttery, creamy, earthy, packed with nutrients taste. They are the super heroes of food. They are rich in vitamins and anti-oxidants. And they are great with tequila too! So go ahead- slice, dice, and blend them! Anytime! They are the very versatile Avocado! Think outside the mayo jar.
That sliced avocado is more than good looks. It's a powerhouse of nutrition. Eating this one small item can add in all the nutrients of a truckload of fruits and vegetables. And it's so easy to prepare. Nature made the complete food. It even has its own container. The mild flavor will go with any food you think of. Even its fat is good for you.

Enjoy amazing avocados on anything. Avocados are super foods that are whole and natural and come from our good mother earth. Avocados add dimension to any salsa, snack, or anything you choose to put it on. They can be used as a condiment and are filled with vitamins and anti-oxidants. They can be used as any replacement. Their green deep color can be served in a sophisticated slice or a cute little cube. Amazing avocados. Always a treat.

Versatile, creamy, delicious, healthy. Avocados deliver heart healthy oils and nutrients in a delicious, unique way. They are versatile and can be served with many different types of foods for breakfast, lunch, dinner, and even dessert. The smooth creamy texture makes it taste like a guilty pleasure, but it's actually good for you.
AVOCADO ALONE

Serves: 1

Ingredients: 1 large (8 oz) ripe avocado

Instructions:
- Cut avocado in ½
- Slice ½ avocado into cubes & leave in shell:
  - 1x lengthwise down center of avocado
  - 6x across to make cubes
- Slice ½ avocado using OXO tool
- Remove from shell & place on plate

AVOCADO IN GREEN SALAD

Serves: 1

Ingredients
1 cup spring mix lettuce
¼ large (8 oz) ripe Hass avocado, cut into cubes

Dressing; whisk together:
- 2 tsp. extra virgin olive oil
- 1 tsp. freshly squeezed lemon juice
- Dash of salt

Instructions
Avocado cubes
- Cut avocado in ½, then again for 4 equal quarters
- Slice each ¼ avocado into cubes:
  - 1x lengthwise down center of avocado
  - 6x across to make cubes

Salad
- Place 1 cup mixed salad greens in the center of plate
- Arrange cubes of avocado over salad greens, dividing evenly
- Drizzle dressing over salad
AVOCADO AND TURKEY SANDWICH
Serves: 1

Ingredients
¼ large (8 oz.) ripe Hass avocado
2 slices of Pepperidge Farm sandwich bread
1 Slice Boar’s Head Oven Roasted Turkey Breast
(deli counter)

Instructions
Avocado slices
- Cut avocado in ½, then again for 4 equal quarters
- Slice each ¼ avocado using OXO tool

Sandwiches
- Place 1 slice turkey, folded in ½, on 1 slice of bread
- Place slices of ¼ avocado on top of turkey
- Place 2nd slice of bread on top of avocado
- Cut sandwich in ½ to make 2 rectangles

BASIC GUACAMOLE
Serves: 4

Ingredients
2 large (8 oz) ripe Hass avocados
1 tsp. finely chopped yellow onion
½ Tbsp. freshly squeezed lemon juice
¼ tsp. salt
¼ tsp. pepper

Instructions
- In a medium bowl, mash the avocado with a fork until creamy but not smooth
- Gently fold in the remaining ingredients
Qualitative SCAN Panel Study on Avocados, Session 1
Discussion Guide
Thursday, February 28, 2013 9:30 a.m. – 12 noon

The following Discussion Guide is provided in order to ensure that all topics and questions posed by our client are understood by Sensory Spectrum and will be covered during the SCAN discussion. However, since SCAN is a very creative, spontaneous group and this is a fluid process, we may not always stick strictly to the order of this document. As valuable discussion develops it will be pursued, returning to the Guide when appropriate.

Objectives
• Explore avocado consumption habits
• Develop consumer language to describe sensory cues (appearance, aroma, flavor, texture) for selecting and eating an avocado by itself
  o Understand the consumer process for choosing and assessing the ripeness of avocados
  o Develop consumer descriptors and understand usage for avocados deemed ripe by users
  o Understand implications the level of ripeness has on the quality of the eating experience
• Understand implications the level of ripeness has on the quality of the eating experience
• Explore sensory characteristics in relation to avocado enjoyment

Warm-up via Moment to Moment
In this exercise, panelists evaluate references and develop sensory language outside of the avocado context. This information can then be applied in the world of avocados to uncover deeper learning about their sensory characteristics.

- Panelists will be told they are here today to evaluate the sensory experiences with different types of foods.
- Panelists will taste 3 reference samples and complete individual worksheets to describe the experience from a sensory perspective (appearance, aroma, flavor, texture)
  o All panelists will taste the same reference sample at the same time
  o Reference samples:
    ▪ cubes of cream cheese (room temp)
    ▪ cubes of boiled sweet potato (room temp)
    ▪ slices of semi-ripe banana
- Moderator will lead a discussion of the sensory experience for each reference
  o Probe on
    ▪ Appearance, aroma, flavor, texture
    ▪ What differentiates this sample from other (dairy, vegetables, fruits)? What makes it unique?

Avocado Introduction
Panelists will be asked what immediately comes to mind when they think about avocados (sensory characteristics, preference/emotional response, recipes/uses).

Moderator will scribe initial reactions on flip chart

Avocado Usage
The discussion will move on to avocado usage. Moderator will probe on:
- In what ways do you eat avocados?
  o Probe on when, how, range of uses, recipes
- For what reasons do you choose avocados?
  o Probe on
    ▪ Appearance, aroma, flavor, texture
    ▪ Are avocados a unique item in recipes? Why/why not?
    ▪ What do avocados add to recipes that other items/condiments do not?
    ▪ Are avocados healthy? Why/why not?
      o Probe on nutritional value, “good for you”, natural
      o Thinking about eating avocados, is there anything about the experience that re-enforces or supports your assessment of the healthiness of avocados?
- How do you feel when/after eating avocados?
- When you are planning to use avocados, when do you buy them?

Avocado Selection
- All chosen avocados will be measured using the penetrometer and measurements will be recorded
- Panelist will be instructed to work individually
- Panelists will be asked to look at a group of avocados (ripe/5lbs; breaking/10lbs; firm/15 lbs.) and choose the one they feel is “ripe and ready to eat”
- Panelists will complete individual worksheets describing why they chose the avocado in terms of appearance and touch/texture, as well as how they would use the avocado
- Moderator will lead a discussion of the sensory properties of each avocado chosen
  o Discuss the selection process and sensory cues that influence choosing a ripe avocado
  ▪ Describe the appearance of the ripe avocado you chose
  ▪ Describe the touch/texture of the ripe avocado you chose
  o In what ways will you use this ripe avocado? (Recipes, salad, sandwich, etc.)
    ▪ Do you use it right away? Why/why not?
Panelists will taste the ripe avocado they chose from among the 3 groups (ripe/5lbs; breaking/10lbs; firm/15 lbs)

Panelists will be asked to note their comments individually on worksheets in terms of appearance, aroma, flavor and texture.

Moderator will lead discussion of the sensory properties, probing on:
- Describe the appearance of the avocado
- Describe the aroma and flavor of the avocado
- Describe the texture of the avocado
- Did the eating experience meet your expectations?
- How might you use this avocado?
- Now that you’ve selected and tasted your avocado, does anything from these experiences support or detract from its “healthfulness” as discussed earlier?

This exercise serves to review all sensory descriptors generated throughout the session.

Moderator and panelists will review language on flip charts in relation to avocados (usage, emotional experiences, health benefits, sensory characteristics)

Panelists are given opportunity to add new terms gleaned during previous exercises

Moderator will scribe on flip chart

Panelists will be presented an avocado from ripeness level(s) not already discussed; moderator will lead group discussion of sensory properties and probe on:
- Would you choose this avocado? Why/why not?
- Would you use this avocado? Why/why not?
- Probe on recipes, salad, sandwich; storage for future use, etc.

Moderator will scribe on flip chart

Panelists will be asked to identify the top 3 terms that describe the overall essence of an avocado using colored dots

Terms with the most “votes” will be reviewed; reasons for votes will be discussed

Questions from Client / Wrap-up
Scan Discussion Guide –
Session 2, March 19, 2013

Objectives

• Characterize the appearance, aroma, flavor, texture and “experiential” aspects while tasting the avocado in four forms (the fruit alone, as part of a turkey sandwich, on a salad, and in guacamole).

• Deeper dive into language that describes avocados

• Identify attributes that define the uniqueness of avocados, their relationship to enjoyment, and establish a hierarchy of importance for these attributes

• Understand how the unique characteristics of avocados influence and reinforce consumer perceptions for nutrition, wellness, satiety, and its place in recipes

INTRODUCTION

Panelists will be told they are here today to experience avocados from a sensory perspective (appearance, flavor and texture) and continue to build language to describe the uniqueness of the fruit.

The language developed in Session 1 will be displayed on the wall. SCAN will

• be asked to review this language

• have the opportunity to add new terms

• be instructed to consider these descriptors while tasting avocados

As the recipes are evaluated new and/or deeper language to describe the avocado experience will be developed.

AVOCADO TASTING

• SCAN will be asked to focus first on the characteristics of a plain, ripe avocado to set a baseline, and will then evaluate ripe avocados in the 3 additional preparations (salad, sandwich, guacamole).

• Panelists will be asked to note their comments individually on worksheets in terms of appearance, aroma, flavor and texture of the avocado. Panelists will be reminded not to focus on the other ingredients, but specifically on the avocado experience.

• Moderator will lead discussion of the sensory properties

Probes for AVOCADO ALONE

• Moderator will probe on the sensory attributes of avocado and dive deeper into language that describes these attributes

• Describe the appearance aroma, flavor, and texture of the avocado

  ▪ What is the role of (appearance, aroma, flavor, texture) in the overall experience?

  ▪ Was this avocado experience what you expected? Why or Why not?

  • If necessary, use references to explore the flavor and texture of “creamy” and “buttery”

    ▪ Creamy flavor and texture will be explored using creamy peanut butter and heavy cream

    ▪ Buttery flavor and texture will be explored using pats of butter

  • Are avocados healthy, enjoyable? What about the experience supports your belief?

Probes for SALAD/SANDWICH/GUACAMOLE

• Describe you experience with the (appearance, aroma, flavor and texture) of the avocado in the recipe.

• Explore any differences in the recipe vs. avocado alone

  ▪ Initial bite, chew down and finish

  ▪ Did the components blend?

  ▪ Describe the interplay between the avocado and the other ingredients

  ▪ Did the avocado cubes/slices:

    • Enhance or detract from the texture of the avocado? In what way?

    • Would slices or another form work in the salad?

    ▪ Blend or stand out from the other ingredients? In what way?

    ▪ In what other applications might you use cubed/sliced avocado?

    ▪ What might be the benefits?

      (Listen for enjoyment, increased appetite for avocados)

CREATIVE WRITING

This exercise is intended to build language to describe avocados and convey their unique properties to consumers. Panelists will be asked to role-play:

You work for the advertising/PR agency that represents avocados. Your task is to convey to consumers the joy of avocados by writing a story that describes all the wonderful things about the avocado experience.

Panelists will share their stories and Moderator will scribe on flip chart.
## Uniqueness of Avocados

The unique properties of avocados will be explored, including how they support the perception that avocados are healthy, nutritious, satiating. Probes:

- What makes avocados unique?
- What makes avocados enjoyable?
  - Appearance, aroma, flavor, texture
- How do you use avocados?
  - Recipes
  - Occasions?
- How do you feel when you are about to eat an avocado? How about during the eating experience? Afterwards?

*Moderator will scribe on flip chart*

## Hierarchy of Uniqueness

- Panelists will be asked to identify the top 3 terms that convey the uniqueness of avocados using colored dots
- Terms will be ranked for importance in conveying the uniqueness of avocados and reasons for rankings will be discussed

## Questions from Client / Wrap-up