

Culinary Uses of herbs: A Cross-cultural Approach



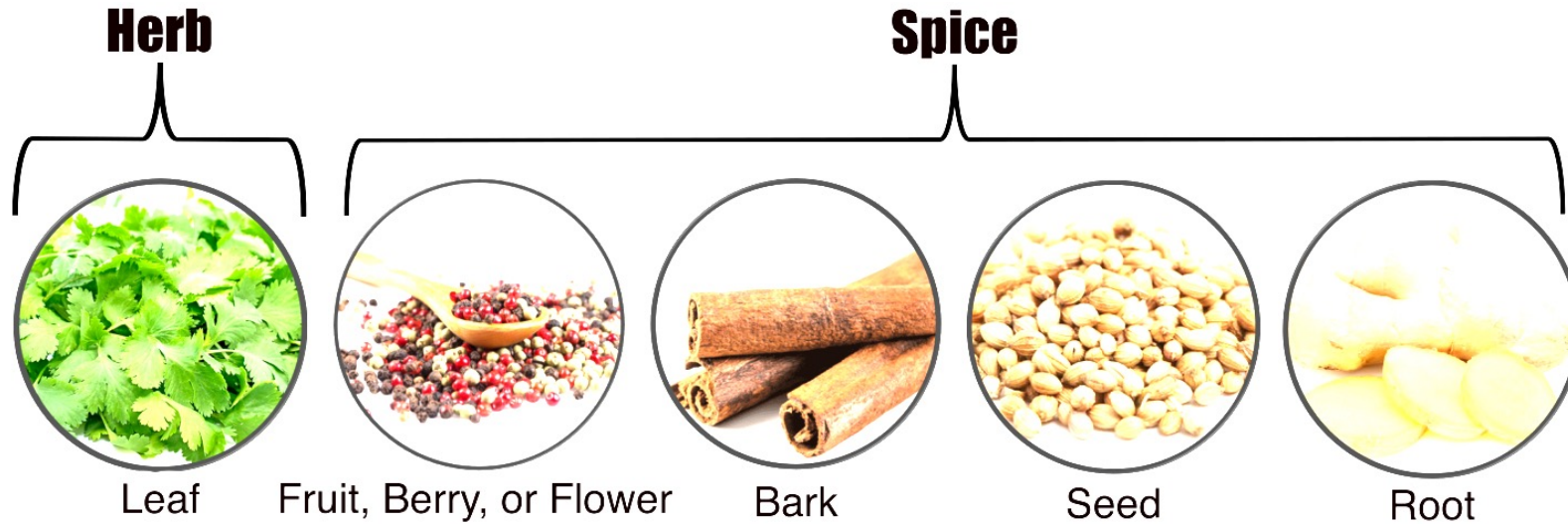
Chef Kevin Appleton

Culinary Uses of Herbs: A Cross Cultural Approach



- How herbs, spices and aromatics contribute to flavor
- Palate mapping and flavor perception
- Perceptions of herbs/flavor vary and evolve individually
- perceptions of herbs/flavor vary and evolve across cultures
- Cultural perspectives on using, balancing and combining herbs
- How to use herbs harmoniously within a dish and across a meal
- Practical strategies for cooking with herbs

Definition of herbs, spices and aromatics for today



- Herbs come from the stems/leaves of plants that usually do not have a woody stem and die down to the ground after flowering
- Spices come from roots, flowers, fruits, seeds, or bark
- Plants that give both: Fennel, Cilantro, Dill
- Aromatics are herbs, spices, vegetables and sometimes meat

How herbs, spices & aromatics contribute to flavor



- Provide primary, complimentary, balancing or background flavors and aroma
- Aromatics
 - Often cooked in oil as a base for the flavor of a dish
 - Cooking in oil helps to release flavors and aromas, creating a flavor foundation for soups, stews, sauces, meat fillings and more
- Today we typically use herbs and spices to enhance flavors and make good food taste even better
- Before refrigeration spices were often used to hide less fresh foods taste and flavors and to prolong the freshness of food – particularly in warm climates

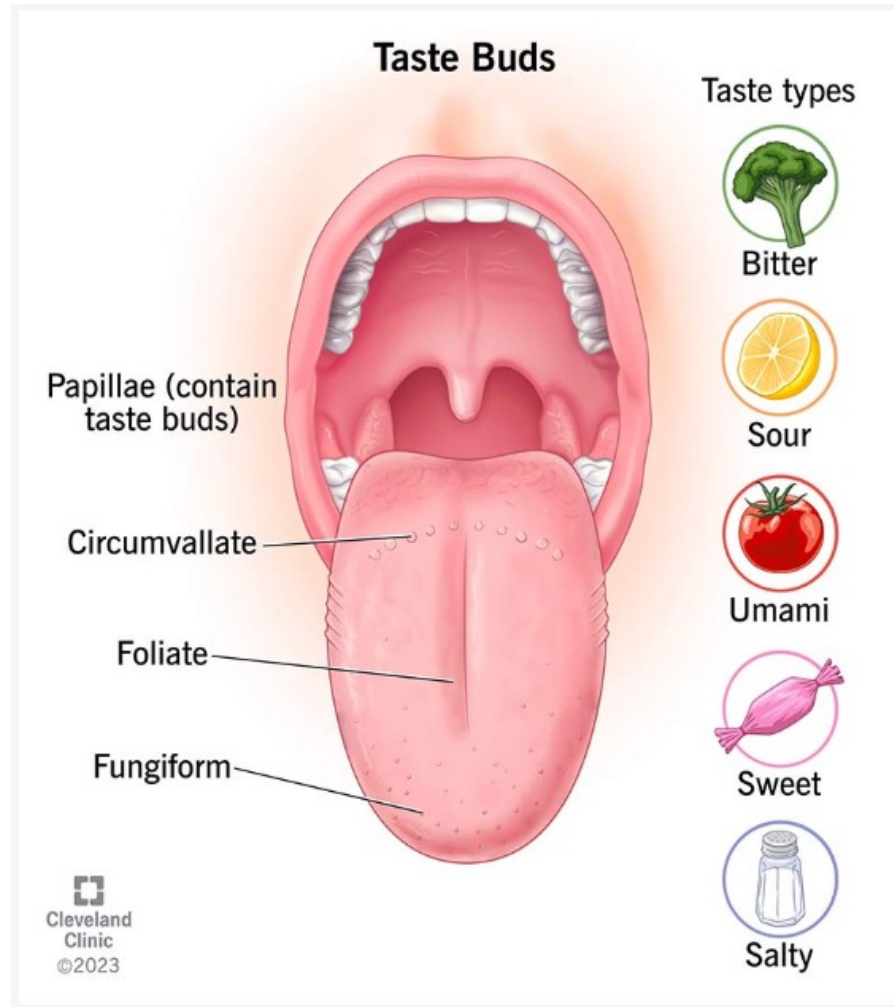
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Inner Ring
Flavor or Aroma

Middle Ring
Intensity and Nuance

Outer Ring
Spices

Palate Mapping and Flavor Perception



- Taste receptors in the oral cavity respond to all tastes
- We do not taste with our lips, underside of tongue, hard palate or the inside our cheeks
- Receptors also located in soft palate, pharynx and epiglottis
- Cells with taste receptors through gastro-intestinal tract may help regulate digestion & respiration
- Taste Receptors may taste Fats/Fatty Acids?

Three different papillae contain taste buds, allowing you to detect the five basic tastes.

Perceptions of herbs/flavor vary and evolve individually



- Genetics - Taste bud density
- Genetics – Gene/allele expressions for bitter veg, cilantro,...
- Age - As you age, taste discrimination tends to decrease
- Sinus & health issues, smoking, pregnancy...
- Personal history and food associations
- Current moment feelings and expectations

Genetics – Taste Bud Density

- Super Tasters
 - High Taste Bud Density/About 25% of population
 - Sugar is sweeter, sodium is saltier, bitterness is almost intolerable.
 - Coffee, hard liquor, sweet desserts, green vegetables too intense.
 - Test by Papillae count, propylthiouracil (PROP), phenylthiocarbamide (PTC)
- Medium Tasters
 - About 50% of population
 - Tend to have more diverse palate
 - Not adverse to bitter or stronger tasting foods
- Non Tasters
 - Low taste bud density/About 25% of population
 - Often complain food is bland and boring
 - Tend to compensate by enjoying spice, heat and lots of seasoning

Perceptions of herbs/flavor vary individually



Personal history and food associations

- Familiarity
- Happy Memories
- Trauma

Current Moment Feelings and Expectations

- How hungry are you?
 - How are you feeling?
 - Presentation, Aroma
-
- Good cooks/chefs cook for an audience and describe food well

Perceptions of herbs/flavor vary individually



Good Cooks and Chefs

- Know and cook for their audience
- Describe food well to prepare diner's palates and maximize their experience
- Look for “sweet spots” between individuals and groups

Perceptions of herbs/flower vary and evolve across cultures



- Different ways of thinking about and balancing flavors
 - E.G. Europe, India, China, Middle East
- Spiciness and flavor preferences
- Local foods and terroir
- Spices, herbs and aromatics can vary greatly depending on locale
 - E.G. Cinnamon, Oregano, Paprika

Different cultures think, approach and balance flavors differently



- Europe/Traditional American
 - Primary, Secondary and Supporting Background flavors
- India – Balance 6 flavor types and their roles according to Aryurveda
 - Sweet, Sour, Salty, Spicy/Pungent, Bitter and Astringent
- China - Harmony of Flavor, texture, color, and aroma
 - Flavors: Salty, Spicy, Sour, Sweet and Bitter
- Middle Eastern – Wall of flavor

Different Cultures think, approach and balance flavors differently



India: Six flavor types to balance

- Sour: Mango Powder (Amchoor), Anardana, Tamarind, Citrus Fruits, Yogurt
- Sweet: Cinnamon, Cloves, Cardamom
- Salty: Salt
- Spicy/Pungent: Peppercorns, Chiles, Mustard Seeds, Hing (Asafoetida)
- Bitter: Turmeric, Ajwain, Fenugreek (Methi)
- Astringent: Turmeric, Pomegranate, Fennel, Bay leaf, Tea Leaves

Different cultures think, approach and balance flavors differently



China: Harmony of Flavor, texture, color, and aroma

Salty: Soy, Brine & Pickles

Spicy: Sichuan peppercorns, Chiles, Ginger, Horse Radish

Sour: Citrus, Tamarind, Cilantro

Sweet: Cinnamon, Anise

Bitter: Mustard, Greens

Many signature Chinese sauces have ingredients and balance all or many of these flavors:

Oyster Sauce, Hoisin, Plum Sauce, Fish Sauce, Fermented Bean Sauces/Pastes, Shrimp Paste,...

Spices, herbs & aromatics vary depending on locale



- Paprika
 - Domestic is deep red, mild, and sweet
 - Spanish has a light chili scent and flavor with smoky notes
 - Hungarian ranges from mild to spicy
- Oregano
 - Turkey, Italy, Greece, France, Morocco, Israel - mint family, *Origanum vulgare*
 - Mexican Oregano comes from a flowering plant in the verbena family, *Lippia graveolens*

Cinnamon

- *Cinnamomum verum* (Ceylon Cinnamon)
- *Cinnamomum burmannii* (Korintje Cinnamon)
- *Cinnamomum cassia* (Saigon Cinnamon)
- *Cinnamomum loureiroi* (Royal/Vietnam Cinnamon)

Aromatics Across Cultures



- France Mire Poix: onions, Celery, Carrots
- US Cajun Mire Poix: onions, celery, bell peppers
- Italy Milan Gremolata: lemon zest, parsley, garlic, olive oil, salt, pepper
- Portuguese Refogado: aromatic of garlic, onion, saffron and smoked paprika
- Spain Sofrito: onions, peppers, garlic, tomatoes, smoked Spanish paprika
- Puerto Rico Sofrito: onions, garlic, peppers, annatto, tomato often with the addition of cilantro, bay leaves, salt pork, olives and capers
- Chinese GGS: ginger, garlic, scallions (whites) often with the addition of black pepper, chili, chive, 5 spice powder, star anise and cilantro
- Thai: Classic flavors are garlic, shallot, ginger or galangal, kaffir lime leaves, lemon grass often with the addition of chili, cilantro, mint, basil and scallion
- India: garlic, ginger, onion, ghee often with the addition of turmeric, cumin, coriander, curry leaves, garam masala, cardamom, chili and cilantro

Using herbs harmoniously within a dish and across a meal



- What Herbs/Spices go together in a dish can be highly subjective
- Can follow a particular cultural palate/approach - like paint families
- Choose Primary, Complimenting and Balancing Background flavors
- Using the same or similar herbs spices across a meal

Garlic, Rosemary, Basil, Thyme, Marjoram, Oregano, Parsley

- Flow of a meal:
 - Start off light and/or delicate
 - Good strategy to build up to a crescendo
 - Palate cleansers

Practical strategies for cooking with herbs



- Selection and storage
- Processing and preparing them for cooking and beverages
 - Dried vs. fresh Herbs
 - Ground vs. whole Spices
 - Whole herbs vs. chopped rough vs. chopped fine
- Infusing and developing flavors
- How and when to add them in the cooking process
- Sweet vs. savory applications

Practical strategies: Selection



Selection of dried herbs & spices

- Herbs/Spices proper size (if not a powder)
- Herbs/Spices proper color
(Turmeric bright yellow, Dill medium green, Sage...)
- Aroma – Smell/crumple if you have the option
- Taste if you have the option
(always maintain proper sanitation)
- Don't purchase more than you will use in 6 months

Practical strategies: Selection and storage



Selection of fresh herbs

- Look for fresh color, firm stems
- Aroma – Smell/crumple if you have the option
- Taste if you have the option
- Avoid excessively moist or dry herbs
- Avoid brown spots, excessive dirt/sand
- Look for spoiled herbs hiding intertwined in the bundle

Practical strategies: Selection and storage



Storage of dried herbs and spices

- Store in cool in a cool dry place in airtight container out of sunlight
- Your biggest enemies are heat, humidity, sunlight and oxidation
- Avoid storing next to or over a heat source like oven, air fryer, toaster...
- Go through your spice cabinet every six months or at least every year

Storage of fresh herbs

- To wash or not to wash?
- Wrap bottoms of stems in moist paper towel and place sealed container or bag
- Store tender herbs like cilantro/parsley upright w/water & covered – deli's good

Practical strategies: Selection and storage



Freezing fresh herbs (Serious Eats)

1. Chop and freeze with nothing added in zipper-lock bag
2. Chop and freeze in ice cube tray covered with water
3. Blanched briefly in boiling water, chill, chop and freeze in an ice cube tray covered with water
4. Chop and freeze in ice cube tray covered with oil

Or make a compound Butter!

Practical strategies: Creative Uses



- Herbal Sugar and Salt
- Herbal Vinegar
- Water Infusion: Steeping
- Simple Syrups
- Flavored Honey
- Compound Butters
 - Mango Basil Sriracha, Ginger Lemon (Basil, Mint, Cilantro) Calamansi Herb
 - Thai Basil, Lemon Grass, Cilantro
- Flavored Cream Cheese or Goat Cheese
 - Chicken Breast filled with herbed goat cheese wrapped in prosciutto or bacon
- Great in Salads/Salad Dressings

Herbs R Easy: Backyard Patch Herbs - Marcy Lautanen-Raleigh

Practical strategies: processing and preparing



- **Dried vs. fresh herbs**

- Fresh generally preferable except when using as part of aromatics
- Some herbs are better in dried form than others
- Dried herbs more concentrated - Use about 1/3 as much or 3x fresh

- **Ground vs. whole spices**

- Whole spices need to cook longer and often must be removed
- For ground spices, fresh has best flavor and keeps fresh longer

- Bouquet Garni, Sachet d'Epices,...

Practical strategies: Processing and preparing



Whole herbs vs. chopped rough vs. chopped fine

- Whole herbs can give burst of flavor, but may over power
 - Garnishing with whole herbs out of favor
- Chopped rough good for rustic dishes
 - Can give little bursts of flavor, but less likely to overpower
 - Great for garnish
- Chopped fine good for more refined dishes
 - Flavors blend together more easily, especially stronger flavored herbs
 - Great for garnish

Use sharp knife for chopping herbs – make sure herbs aren't wet

Practical strategies: How to extract flavor



Infusing and developing flavors

- Fats/Oils - great strategy because often herbs, spices and aromatics flavors come from oils within the plant
- Water/flavored liquids - good strategy for fresh or crushed dried herbs at end
 - May not get same flavor development
- Alcohol
 - Can add flavor and complexity by bonding with fat and water molecules carrying flavors and aromas throughout the dish
 - Can be used in marinades, poaching liquids, making pan sauces, and desserts.
 - Most common use is deglazing, which adds depth of flavor.
- Consider combined approach

Practical strategies: How/when to add



How and when to add herbs and spices in the cooking process

- Aromatics and dried herbs and whole spices at beginning
- Flavors change and develop as the dish cooks: E.G. Cumin
- Chefs will sometimes add herbs/spices at beginning, middle and end
- Dried herbs sometimes added near end of cooking to adjust flavor
- Fresh herbs often added near end of cooking
- More delicate fresh herbs are added right as heat is turned off
- Herbs and spices can be sauteed in oil or butter and added at end

Practical strategies



Sweet vs. savory applications

- Adding herbs and spices to sweet dishes adds complexity and flavor
- Nutmeg, cinnamon, cloves, allspice, ginger, vanilla great for sweets
- Nutmeg, Cinnamon and Vanilla increase perceived sweetness
- Salt reduces bitterness
- Interesting sweet combinations

Interesting sweet combinations



- Lemon and Bay – Sorbet, Granita, Iced tea
- Honey and Lavender – Cookies, cupcakes, lemonade, iced tea
- Rhubarb and Mint – Rhubarb crumble with mint whipped cream
- Citrus and Rosemary, Thyme or Mint
 - Orange or Lemon and Thyme Pignoli/Pine Nut Cookies
 - Salad of Thyme Roasted Fennel with Orange Sections and Greens
 - Lemon Pound Cake with Mint Glaze, Lemon Mint Lemonade
 - Mojitos and other cocktails
- Pear or Apple with Rosemary/Sage
 - Apple Pie, Muffins or Coffee Cake with Rosemary Streusel
 - Ice Cream Topped with Poached Pears and served with Sage Shortbread Cookies
- Cherries and Sage
 - Cherries, Shallot and Sage Sauce for chicken, turkey or pork – especially swell w/meatballs
 - Cherry Pie with Sage, Walnut, Brown Sugar Crumble Topping
 - Beverages: Cherry Sage Sangria, Cherry Sage Gimlet, Cherry Sage Ginger and Lime Smash

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Thanks for coming!

Q & A?