



Lesson 4:

Plant Energetics

Getting To Know Your Plant Allies

Now we get to talk about plants! We've spent a lot of time learning about tissue states up to this point, and for good reason. Oftentimes in practice, we do an intake and then go right to "oh this plant would be good for this" without taking the time to properly assess the terrain or tissue state that we're aiming to bring balance to. We'll talk more about specific strategies for tying all these concepts together in the next lesson when we discuss formulation. But for now, we've finally arrived at the part where we learn how to use our herbs on a deeper level!

Similar to our constitution types and natural inclinations towards certain tissue states, plants have affinities for certain tissues, and will influence the internal terrain in specific ways, such as:

- Cooling
- Warming
- Moistening
- Drying
- Relaxing
- Tightening/Tonifying

Understanding herbal energetics all starts with getting to know your plants through a variety of lenses. For this, I love **Sajah Popham's 5 Keys to Understanding a Plant:**

- Taste
- Herbal Actions
- Organ affinities
- Energetics
- Special Indications/Potency (spiritual indications, personality types, cluster of symptoms/tissue state manifestations etc.)



The only thing I'd add to this list is direct experience. If you wanted to get to know someone, how would you do that? You'd spend time with them! Plants are the same. If we want to get to know them, we need to spend some time with them.

Below are some ways we can connect with our plant allies and teachers to begin to understand them on a deeper, holistic level:

- **Find them** in their natural habitat.



- » What do they look like? (the doctrine of signatures states that plants can reveal some of their medicine by what they look like i.e. the roots of devil's claw (*Harpagophytum procumbens*) look like gnarled joints, which is the tissue it can support in the body)
- » Where do they like to grow? (do they like sun, shade, moisture, or dryness)
- » What plants are around them? (who are their friends?)
- **Sit with them** and use your heart perception to tune into their vitality, their message, and their aliveness.
 - » What are they communicating to you?
 - » Drawing them can be a great way to observe and get to know their features while staying connected to their energy.
 - » See Stephen Buhner's book in the recommended reading list for more on this.
- **Taste them!**
 - » What flavour profile do they have?
 - » Do you feel their effects in any body system or part of your body?
 - » How do you feel emotionally/mentally after tasting them?
 - » Try different preparations to taste the difference (tea, tincture, etc.)
- **Use them** in your daily life.
 - » How do you feel when you take a herb short-term?
 - » Any difference when you take it long-term?

"Our ancestors experienced the plants (as kin, and discovered them) through their senses and their dreams, and above all, they listened." -Kat Maier

Taste as Medicine

Understanding your plants holistically starts with taste! Taste is the gateway to gaining greater insight into how the plant will impact the body. In herbal medicine, using taste as a means to identify herbs based on their flavour profile is called organoleptic skill, and is a good skill to begin to develop! **A quick word of caution - you always want to make sure there is no risk of toxicity before tasting a plant.**

Traditional healing models such as Ayurveda and Traditional Chinese Medicine have heavily focused on tastes in order to understand and describe the medicinal properties of a herb or food in the body. Each taste is associated with an action, organ affinity and effect on the tissues. This makes total sense. If you think about it, the reason a plant has a specific taste is based on its different phytochemicals and molecules, each interacting with each other to create a flavour profile (and an impact on the body!).



“Getting to know a plant using your senses (taste, smell, touch) is an intimate window into its magic. Pay attention to this, and the medicine of the plant will be revealed.” -Bree Nabholz

HOW MANY TASTES ARE THERE?

The answer to this question greatly depends on what medical model or system you're coming from! Luckily, there tends to be a lot of overlap, which gives us an overarching insight into how each of the flavours/tastes impacts the body uniquely.

Here is an example of the tastes from different medical models:

- 5 flavours of TCM - bitter, acrid, sweet, salty, sour
- 6 flavours of Ayurveda - bitter, sweet, salty, sour, astringent, pungent
- 5 tastes of Western medicine - sweet, salty, sour, bitter, umami
- Many flavours in herbal medicine - bitter, sweet, mineral salt, true salt, sour, astringent, pungent, spicy bland and acrid, to name a few!

For this class we'll be focusing on these 7 tastes:

- Sweet
- Salty
- Bitter
- Acrid
- Sour
- Astringent
- Pungent (Spicy)

TASTES AND THE ORGANS

In understanding the impacts each unique flavour has on the body, both Ayurveda and TCM came up with strikingly similar organ correlations. Meaning, what organ system does each flavour impact most? For example, bitters are correlated to the liver, pancreas and spleen. We now know that bitter contains specific phytochemicals (which we'll discuss shortly!) that encourage bile creation, and bile flow, modulate blood sugar through their action on the pancreas and can help break down nutrients. The traditional understanding of the effect this taste has on the digestive system is incredibly accurate! Below we can see some of the organ systems and their correlating tastes:

- **Salty:** Kidneys
- **Sweet:** Thyroid, bottom tip of lungs
- **Sour:** Lungs
- **Bitter:** Liver, pancreas & spleen
- **Pungent:** Stomach & heart
- **Astringent:** Colon (Large Intestine)



“Each taste used collectively or individually in appropriate doses brings about balance of all the bodily systems and yields happiness and good health to all living beings.” -Ayurvedic Philosophy

Sweet & Salty

Resource: Please refer to the 7 Herbal Tastes Energetics Chart for a detailed summary of the tastes, their impacts on the body and herbs for each.

Let's explore in greater depth how sweet and salty flavours impact our tissues.

SWEET

First off, this flavour relieves the dry/atrophy and heat/excitation tissue states. It's the subtly sweet flavour of roots and grains that creates a nourishing and building effect in the body to lubricate and moisten tissues. In TCM, these would be the herbs that are known as Yin tonics, used to build, moisten, and cool the system. Some of our sweet/yin-building herbs also help to build the blood and some examples of herbs that fall into this category would be:

- Burdock (*Arctium lappa*)
- Red clover (*Trifolium pratense*)
- Rehmannia (*Rehmannia glutinosa*)
- *Angelica sinensis*

Sweet has an upward energy due to its tonifying, building and energizing nature.

The way that sweet impacts the constitution types is as follows:

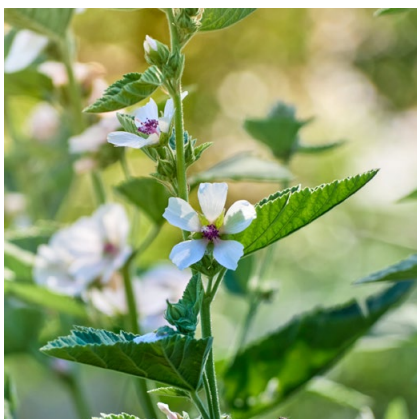
- **Doshas:** Balances Pitta and Vata, aggravates Kapha
- **Temperaments:** Balances Choleric & Melancholic the most (Sanguine in some situations to soothe irritated, inflamed tissue)

WHAT PHYTOCHEMICALS CREATE THE SWEET FLAVOR?

Polysaccharides (Complex Carbohydrates)

Mucilage, present in our mucilaginous herbs, is considered sweet. This quality comes from the phytochemical called mucopolysaccharides (also known as mucilage molecules). The molecules coat and soothe mucosa, and can replace mucous secretions that are deficient.

Mucopolysaccharides are slippery/slimy in texture, especially in water. This is why we want a water extraction, rather than tincture/alcohol extraction, particularly if we want the demulcent action for our remedy. For example, marshmallow root works best when it's cold extracted, which means you pour cold water over it and leave it overnight. When you come back in the morning, you'll be able to visibly see the water has thickened slightly due to the presence of mucilage.





Herbs that contain mucopolysaccharides include:

- Marshmallow root & leaf (*Althaea officinalis* RAD + FOL)
- Plantain (*Plantago major*, *P. lanceolata*.)
- Psyllium (*P. ovata*)
- Mullein (*Verbascum thapsus*)
- Comfrey leaf and root (*Symphytum officinalis* FOL + RAD)
- Coltsfoot leaf (*Tussilago farfara* FOL)
- Slippery elm (*Ulmus rubra*)

Another kind of phytochemical related to the sweet flavour is the mucopolysaccharides (Beta-glucans), present in mushrooms like shiitake mushroom (*Lentinus edodes*) and reishi (*Ganoderma lucidum*). Mycopolysaccharides tend to have an affinity for the immune system. Ever heard of a dual-extracted mushroom extract? This is the reason for it! The beta-glucans pull out better into the water, and the other phytochemicals present extract better in the alcohol. A dual extract will pull out a wider range of phytochemicals, rendering a stronger medicine.



Fiber is another form of polysaccharide, and an important fiber molecule that shows up in some of our medicinal roots is inulin. Inulin is a form of fiber that acts as a prebiotic for gut flora, contributing to a healthy microbiome. Inulin is highest during the fall when plants are sending all their energy to the roots to build up nutrient reserves for the winter. For this reason, roots are best harvested in the fall, as they'll be sweeter!

Some herbs that contain inulin are:

- Dandelion root (*Taraxacum officinalis*)
- Elecampane (*Inula helenium*)
- Burdock root (*Arctium lappa*)
- Chicory (*Cichorium scolymus*)

Non-Polysaccharide Derived Sweetness

Not all of our herbs are sweet because of polysaccharides. There are always exceptions to the rule! For example, some of our sweet tonifying and adaptogenic herbs contain saponins (which are glycosides with a water-soluble sugar molecule attached). Some of these herbs include:

- Ginseng (*Panax ginseng*)
- American Ginseng (*P. quinquefolius*)
- Eleuthero (*Eleutherococcus senticosus*)
- Wild sarsaparilla (*Aralia nudicaulis*)
- Astragalus (*Astragalus membranaceus*)
- Codonopsis (*Codonopsis spp.*)



Licorice is sweet because of its glycyrrhizin constituent (a triterpenoid saponin). Stevia is sweet because of stevioside, a type of terpene 100x sweeter than sucrose! And herbs rich in essential oils like fennel and anise are sweet due to the aromatic compounds (for both of these plants, the sweetness comes from trans-anethole).

HERBAL ACTIONS ASSOCIATED WITH SWEET

Below is a summary of the actions associated with the sweet flavour, and how it might impact specific tissues:

- **Blood Building/Yin Building** - Not all sweet herbs are blood builders, but blood builders tend to be sweet in their energy.
- **Nutritive/Prebiotic** - Carbohydrates are a source of fuel for the system and help build up nourishment in tissues; fiber acts as a prebiotic for probiotic bacteria in the gut (i.e. inulin).
- **Mucilaginous/Demulcent/Emollient** - Mucilage acts to coat and soothe inflamed and damaged tissues.
- **Tonic Adaptogens/Immune modulating** - Sweet gently nourishes and builds the system; some polysaccharides support immune modulation.

SALTY

The salty flavour has a cooling, moistening and softening effect with downward energy because it tends to direct energy towards the kidneys. Keep in mind, while some salty herbs can bring a moistening quality to tissues, others can be drying (see below).

The way that salt impacts the constitution types is as follows:

- **Doshas:** Balances Vata, aggravates Pitta and Kapha
- **Temperaments:** Most beneficial for Melancholic

WHAT PHYTOCHEMICALS CREATE THE SALTY FLAVOR?

Minerals

Yes, minerals are what give a herb that “salty” flavour. This is why some herbalists like David Winston differentiate between “true salt” and “mineral salt” tastes. The “mineral” taste is quite different than if you were to have a pinch of actual salt, as you may have noticed when drinking a strong mineral-rich tea, like a nettle infusion. On the note of tea, minerals extract best in water and may require a longer infusion time. Rosalee de la Foret does a strong infusion of nettle where she puts 1/4 cup of dried nettle leaves in one litre of boiling water, and leaves it overnight. In the morning, it’s bright green!

Vitamins and minerals in our salty herbs can include:

- Potassium
- Iron
- Calcium





- Vitamin K
- Magnesium
- Manganese
- Phosphorus
- Sodium
- Copper
- Silica

The minerals help to soften hard tissues because they draw water with them (remember how much water and minerals love each other?). Therefore, they can be hydrating to dry/atrophic tissues. However, due to their diuretic action, it's important to note that some salty herbs can have an overall drying effect, which may need to be accounted for during the formulation process.

HERBAL ACTIONS ASSOCIATED WITH SALTY

Below is a summary of the actions associated with the salty flavour, and how it might impact specific tissues:

- **Diuretic/Aquaretic/Electrolyte balancing** - Salty herbs promote urination, reduce edema and lower blood pressure; includes potassium-rich herbs that help maintain the proper electrolyte balance (unlike some pharmaceutical diuretics).
- **Nutritive/Mineral-rich** - Provide trace minerals; trace minerals act as cofactors and catalysts for many body functions including protein synthesis (liver detox, hormones, etc).

Some of our salty herbs include:

- Nettles (*Urtica dioica*)
- Chickweed (*Stellaria media*)
- Dandelion leaf (*Taraxacum officinalis* FOL)
- Seaweeds
- Oatstraw (*Avena sativa*)
- Alfalfa (*Medicago sativa*)
- Horsetail (*Equisetum arvense*)

CLINICAL NOTE: Mineral-rich herbs get their minerals by absorbing them from the soil, which means many of them are bio accumulators and will absorb heavy metals etc. Therefore, make sure you buy organic and/or are mindful of where you're harvesting these herbs.