



Quick Reference Harvest Manual



Harvesting Basics for Growers

- ASD Staff will email Growers specific harvest windows for each species at least one month prior to beginning harvest for that species.
- ASD Growers should schedule harvests with AHGC Staff 7-10 days prior to anticipated harvest.
- Clean harvest tools between species & harvest dates
- Harvest into GAP approved* clean/lined containers/vessels.
- Protect plants from post-harvest contamination during transport & delivery.
- Do NOT wash harvests prior to delivery.
- Return all necessary tracking forms with harvest delivery.
- At this time, spading forks & broad forks seem to be the most effective harvest tools.

Aerial Crops

- Animals should not be permitted in areas where aerial crops are being grown.
- Should be harvested & delivered to us by Noon at the latest.
 - For plants that require flowers for harvest, do so once the morning dew has burned off to prevent spoilage during transport.
- For plants that will have multiple harvests each season, cut only the top 2/3 to 3/4 of each plant, leaving the plant enough of itself for healthy regrowth.
- Discontinue any Neem applications at least one full week prior to harvest.
 - As always, be sure to document all inputs.
- Ariel herbs may be sprayed with potable water 2 days before expected harvest to get dirt and debris off foliage and make for easier processing. Make sure there is ample time to dry before harvest.

Root Crops

- Animals should not be allowed in areas where Root Crops are being grown for at least 60 days prior to harvest.
- When possible, cut tops back prior to transport & delivery.
- Knock off excess soil from roots before placing in GAP approved container.
- Do not wash roots before transport to processing facility.

GAP approved bins can be purchased from a variety of sources. Look for the "Good Agricultural Practices" seal of approval before purchasing your harvesting containers. Sheets are suggested for use with herbs that are too bulky or fragile for bins. These sheets must be very clean before harvest and be scent-free, so be careful to use a natural detergent. If a detergent scent is detected on the sheets upon delivery to the herb processor, the harvest may be rejected due to contamination.

The following herbs can be found in alphabetical order by Latin name:

Actaea racemosa

Black Cohosh

Agastache rugosa

tu huo xiang - Korean Mint

Anemarrhena

asphodeloides

zhi mu – Anemarrhena

Angelica dahurica

bai zhi

Artemisia annua

qing hao - Sweet Annie

Astragalus

membranaceus

huang qi – Milk Vetch

Codonopsis pilosula

dang shen - Poor Man's
Ginseng

Dipsacus asperoides

xu duan – Japanese Teasel

Eclipta prostrata

mo han lian/han lan cao

Glycyrrhiza uralensis

Chinese licorice

Hydrastis Canadensis

Goldenseal

Isatis indigotica

bei ban lan gen – Woad

Leonurus heterophyllus

yi mu cao - Chinese
Motherwort

Lilium tigrinum and

Lilium lancifolium

Bai he; Brown and Tiger Lily

Mentha haplocalyx

bo he - Field Mint

Ocimum sanctum

Tulsi, Tulasi – Holy Basil

Panax quinquefolius

American Ginseng

Platycodon grandiflorus

jie geng - Balloon Flower

Salvia miltiorrhiza

dan shen – Red Root Sage

Schizonepeta tenuifolia

jing jie – Japanese Catnip

Schisandra chinensis

Wu weu zi; Schisandra, or
“The 5 flavored fruit”

Scutellaria baicalensis

huáng-qin - Baikal Skullcap

Trichosanthes kirilowii

gua lou, tian-hua-fen

This reference was compiled by Taproot Botanical Alliance for the ASD Medicinal Herb Growers Group, 2017. More detailed information on herb farming in general and on these herbs specifically can be found in the books on the Recommended Reading list provided by Taproot.

Actaea racemosa

Black Cohosh

- Harvest 3 to 5 years after planting.
- Harvest in the fall, when roots are at their peak in weight and bioactive constituents.
 - Because aerial portions of the plant have usually died back before harvest, it is important to mark your plants, with a landscape flag, rock, or a GPS 'pin'.
- Dig mature roots with a spading fork.
- Knock off excess soil and place in GAP approved container.
 - Make sure to replace disturbed soil in the hole to prevent accidents.
- Keep harvested roots in a cool, dark place until processing.

Agastache Rugosa

tu huo xiang - Korean Mint

Wet weight: 1 lb per plant per season Wet to dry ratio: 6/1

- Harvest: June-August, Year 1 & each year thereafter.
- Harvest all aerial portions, including flowering tops, mid-morning after dew has burned off.
 - Leave enough foliage to regenerate for successive harvests.
- Bundle in clean sheets for transport to processor and keep in a dark, cool location.
- Do not wash before transport.

Allium tricoccum

Ramp, Wild Leek

Wet to dry ratio: 4:1

- Harvest: Early Spring, of the 3rd year when growth reaches about 6" above the soil.
 - Harvest times are before many other plants emerge for spring.
- It is best to harvest the aerial portions, leaving the bulb for future harvests.
- If the bulb is required for the harvest, use a dull knife or hand trowel and remove the entire plant from the soil.
- Ramps lose their tenderness as they mature and begin to turn yellow.
 - Do not harvest once ramps have reached this point.
- Do not store in an airtight container, as they will break down quickly.
- Allow some ramps to reach full maturity for seed collection and plant directly in same area where ramps naturally grow, if a stand exists.
 - Keep seeds moist and cool if they must be stored.

Anemarrhena asphodeloides

zhi mu - Anemarrhena

Wet weight: ½ lb per plant Wet to dry ratio: 3 to 1

- Harvest: Year 3, after fall dormancy.
 - Do not wait until ground is frozen. There is usually a harvest window late October/early November.
- Rhizomes grow close to the surface, so a spading fork and shovel should be sufficient.
 - Many rhizomes have small rootlets and leaf buds that can be separated and replanted for a faster return.
- Knock off excess soil from rhizomes and cut off remaining foliage.
- Place harvested rhizomes in a GAP approved container for transport to processing facility.

Angelica dahurica

bai zhi

Wet weight: 1 ¼ lb per plant Wet to dry ratio: 4 to 1

- Harvest: Must be harvested the first spring after planting, before flowering.
- Wait until first signs of growth before harvesting.
- Harvest entire root, knock off excess soil and place in GAP approved harvesting container.
- Keep cool until processing.

Artemisia annua

qing hao - Sweet Annie

Wet weight: 2 ½ lb per plant Wet to dry ratio: 6 to 1

- Harvest: year 1, in bud/flower.
- Harvest entire aerial portion late summer as the tiny flowers are about to open.
 - Sweet Annie tends to be a trap crop for aphids and thus attracts many beneficial ladybugs. Be sure not to harm ladybugs, but best to knock off as many aphids as possible before transport to facility. Do not spray with anything in this process!
- Harvest into clean sheets, keep in the shade and get to processing facility within 2 hours.
- If more time is needed prior to processing, the cut plant can be placed in a clean 5 gallon bucket of water, like a vase of flowers.
 - If this is necessary, keep in full shade.

Astragalus membranaceus

huang qi – Milk Vetch

Wet weight: 3/4lb per plant

Wet to dry ratio: 2 to 1

- Harvest: Year 3 after fall dormancy
- Astragalus might be one of the more challenging to harvest: The mature taproot can be 3-4 feet deep, but worth digging completely.
 - Shovels and hand trowels are recommended.
- Knock off excess soil and place harvested roots in GAP approved containers.
- Keep cool until processing.

Codonopsis pilosula

dang shen - Poor Man's Ginseng

Wet weight: ½ lb per plant

Wet to dry ratio: 4 to 1

- Harvest: Year 3, after fall dormancy
- Easy harvest, with shovel or potentially a mechanized potato digger.
- Roots are flexible and soil is easily knocked off.
- Place harvested roots in GAP approved container, keep cool until processing.

Dipsacus asperoides

xu duan – Japanese Teasel

Wet to dry ratio: 6 to 1

- Harvest: Year 3, after fall dormancy.
- The roots are generally close to the soil; harvest with a spading fork or shovel.
- Chances are, there are seedlings that have germinated around the mother plants that can be dug at the same time and transplanted to a newly prepared bed for future harvests.
- Knock soil off harvestable roots and place in GAP approved containers.
- Keep cool until processing.

Eclipta prostrata

mo han lian/han lan cao

Wet weight: ¼ lb per plant Wet to dry ratio: 7 to 1

- Harvest: Year 1; may get 2 harvests per season.
- Harvest as flowers come into bloom, but before they go to seed.
- Eclipta must be processed very soon after harvest.
 - It is quite succulent and could easily mold if not processed within 30 minutes.
 - For longer storage, carefully packaged with ice in a cooler before transport.
 - If this is necessary, make sure the ice/ice packs are not in direct contact with the harvested material. Use towels to separate the two.

Ganoderma lucidum

Ling chi - Reishi Mushroom

- Only harvest mushrooms that have reached maturity.
 - The white growing tip should be very thin or gone, with the overall color a vivid reddish brown and shiny.
- Cut with a sharp knife or clean pair of sharp pruners.
- Store in a clean paper bag.
- Dries best in direct sunlight, with the stems facing up.
 - Sunlight stimulates the bioavailability of Vitamin D2 and makes the fungus shelf stable.
- Allow to dry 3 days: 1 in the sun and 2 on a clean table, in an approved processing facility.

Glycyrrhiza uralensis

Chinese licorice

Wet weight depends of the tilth of the soil. Typical yield: ¾ lb/plant/year. Wet to Dry Ratio: 2:1

- Harvest: year 4. Harvest root runners that have escaped the established mother beds, as described on the Cultivation Guide.
- Use a sharp spade to cut the runner roots, allowing the mother plants to stay intact.
- Replant any runners with rootlets in a prepared bed for a faster successive harvest.
- Knock off excess soil and place in GAP approved containers.
- Keep dark and cool until processing.

Hydrastis Canadensis

Goldenseal

1,000 lbs. per acre, per year of well maintained forest stands Wet to dry ratio: 4 to 1

- Harvest roots after 3 years with a spading fork, in the fall -- after the fruit has matured.
- Knock off excess soil and place in a GAP approved container.
- Keep in a cool place until processing.
 - Often times roots can be divided and replanted for a faster return.
- Leaves can potentially be harvested each year, but wait until after the fruit has matured.
 - Make sure you have a market for the leaves before harvesting.
- Gather the seed in the fall and replant for successive plantings and harvests.

Isatis indigotica

bei ban lan gen – Chinese Woad

Wet to dry ratio: 8 to 1

- Harvest year 1 after fall dormancy, or year 2 before spring emergence.
- A shovel or spading fork will do, but a mechanized potato digger would be ideal for a larger plot. Easily comes out of the ground.
- Knock off loose soil and place in GAP approved container.
- Store in a cool place until processing

Lentinula edodes

Shiitake Mushroom

- Harvest with a knife, when shiitake cap is still convex.
- It is important to not injure the logs as the mushrooms are being harvested.
 - Any loss in the outer bark will decrease yields.
 - Be careful not to pull the stem out of the log when removing the mushroom.
- Store in a clean paper bag or a GAP approved shallow cardboard/wax box.
 - Unlike reishi, shiitakes are somewhat fragile. Do not stack more than 3 high in a container and make sure they do not get squished in transport to the processing facility.
- Shiitakes should be exposed to direct sunlight for a few hours before drying or consuming. This allows many vitamins to become bioavailable, making the mushroom significantly more nutritious.

Leonurus heterophyllus

yi mu cao - Chinese Motherwort

Wet to dry ratio: 7 to 1

- Harvest: Year 1, when going into flower.
- Harvest all aerial portions, including flowering tops mid-morning, after the morning dew has burned off.
- Leave enough foliage to regenerate for successive harvests.
- Bundle in clean sheets for transport to processor and keep in a dark, cool location.
- Do not wash before transport.

Lilium tigrinum and Lilium lancifolium

Bai he; Brown Lily and Tiger Lily

Wet Weight: ½ lbs. per plant. Fresh to Dry Ratio: 3 to 1

- Harvest year 3, when dormant.
- Bulbs can easily be removed from the earth with a spading fork or shovel.
- Knock off loose soil and look for little bulblets that can break off and be replanted in another bed. This will increase your stock and make for a faster harvest (2 years).
- Store in a GAP approved container.
- Keep cool until processing.

Mentha haplocalyx

bo he - Field Mint

Wet weight: 1/3 lb per sq ft

Wet to dry ratio: 5 to 1

- Can be harvested multiple times a season when the growth is about 6 inches long.
- Wait until morning dew has burned off, but harvest before the sun gets too hot.
- Leave enough leaf growth to allow for regeneration.
- If allowed to get weedy around the plants, harvesting can prove to be challenging.
 - Make sure no additional grass, foreign matter, etc is with the harvested material.
- Place harvested material in GAP approved container
- Keep cool, and get to processor within a few hours.
 - If processing time is not imminent, put in a walk-in cooler or place ice packs indirectly within the herbs until processing can take place.

Ocimum sanctum
Tulsi, Tulasi – Holy Basil

Wet weight: 1 lb per plant

Wet to dry ratio: 10 to 1

- Can be harvested multiple times during the season.
 - Allow tulsi to flower but not go to seed.
- Wait until morning dew has burned off, but harvest before the sun gets too hot.
- Leave enough leaf growth to allow for regeneration.
- Place harvested material in GAP approved container.
- Keep cool, and get to processor within a few hours.
 - If processing time is not imminent, put in a walk-in cooler or place ice packs indirectly within the herbs until processing can take place.

Panax quinquefolius
American Ginseng

Fresh weight varies from plant to plant.

Wet to dry ratio: 3.5 to 1

- Harvest: Year 5 - 7, after fall dormancy
- Harvest roots autumn, making sure not to damage any rootlets as they are removed from the soil. Use a spading fork and be as thorough/metropolitan as possible as the roots are excavated.
- Gently knock off excess soil and place in GAP approved containers.
- Keep in a cool, dark (and SECURE!) place until processing.

Platycodon grandiflorus
jie geng - Balloon Flower

Wet weight: ½ lb per plant

Wet to dry ratio: 3.5 to 1

- Harvest: Year 3, after fall dormancy.
- Harvest after the first few frosts, when the aerial portions of the plant have dried and the seed has all been collected.
 - Can be harvested until the ground is frozen.
- Much like a parsnip or carrot, the roots can break when being harvested, so make sure to get the spading fork underneath the 8” - 12” taproot and lift it out of the soil.
- Knock off loose soil and place in GAP approved container. Keep cool until processing.

Salvia miltiorrhiza
dan shen – Red Root Sage

Wet weight: ¼ to ½ lb per plant

Wet to dry ratio: 4 to 1

- Harvest: Year 2 or 3, after fall dormancy: mid fall as the foliage dries and becomes brittle.
- Make sure all mature seed has been collected before harvest.
- A spading fork or shovel will easily pop the plants out of the ground.
- Knock off excess soil from the thin, fibrous roots and cut off the remaining aerial portions for your compost or smudge bundles.
- Place in a GAP approved container and store in a cool place until processing.

Schizonepeta tenuifolia
jing jie – Japanese Catnip

Wet weight: ¼ lb per plant

Wet to dry ratio: 4 to 1

- Harvest: 1st year, in full flower
- Harvest all aerial portions, including flowering tops mid-morning, after the morning dew has burned off.
- Leave enough foliage to regenerate for successive harvests.
- Bundle in clean sheets or GAP approved container for transport to processor.
- Keep in a dark, cool location.
- Do not wash before transport.

Schisandra chinensis
Wu weu zi; Schisandra, or “The 5 flavored fruit”

- Harvest: usually after 6 years.
- Harvest in the fall, after the first frost when the berries are ripe.
 - Berries should be bright, purplish-red and have a strong aroma.
- Mature vines should yield many pounds each.
- Remove any extraneous matter before placing in GAP approved harvesting container.
- Keep in a dark, cool place until processing.
- May be sold fresh or dry.

Scutellaria baicalensis

huáng-qin - Baikal Skullcap

Wet weight: ½ lb per plant

Wet to dry ratio: 3 to 1

- Harvest: Year 3, after fall dormancy.
- Harvest after all mature seed has been collected.
- Use spading fork. Dig from the edge of the drip line of the bush and move inward.
 - The roots tend to spread like a mirror image of the above ground portion.
- All roots and rootlets are worth collecting. They should be bright yellow with no rot.
 - If crown rot has formed, be sure to remove and discard.
 - Do not allow rotten portions into harvesting vessels, as they may contain bacteria or fungus that could taint the whole harvest.
- Knock off excess soil from roots, cut off the woody remaining aerial portions, and place roots in a GAP approved container.
- Keep in a cool place until processing.

Trichosanthes kirilowii

gua lou, tian-hua-fen

Wet to dry ratio: 5 to 1 Wet to dry ratio of peel: 3 to 1

- Harvest: The whole, unripe fruit, ripe peel, ripe seed, and root are all considered medicinal and marketable.
- Harvest the fruit when softball-size and green. (late summer/early fall when leaves begin to die back)
- May yield fruit first season if ideally sited, but 2nd season is a safe projection.
- Harvest ripe peel by allowing fruits to fully ripen a deep orange.
- Harvest roots of undesired males after 3rd season.
- The ripe pulp is delicious and should be enjoyed in a pumpkin pie.
- Save the seeds*.

* In 2016, viable seeds sold for \$.30/seed. Each fruit produces between 80 and 100 seeds each, with 6-10 fruits on each plant.