

# Bud Separation and Cleaning

CAROL & CHUCK STIFF



BALD BUTTE  
LAVENDER  
FARM



BBLF is 6 miles south of Pullman in southeastern Washington. Our 3-acre farm is three years old, and is located in Zone 6b on silt loam loess soil.

## Our Lavender Products

- Dried bundles and bouquets
- Dried culinary buds (bud refers to calyx)
- Dried craft buds for value-added products
- Live lavender plants

# Bud Separation and Cleaning

## Simple inexpensive methods for small/startup farms and home owners

- Hand de-budding
- Cleaning: colander, sieve & hand
- Cleaning: colander, sieve shaker & hand

## Methods for larger/established farms

Our goal is to produce “clean” dried buds for culinary and crafts while minimizing our production costs. At this time we use simple inexpensive methods for de-budding bundles and cleaning buds.

We grow English and Lavandin lavender species. Currently, we have 10 English and 5 Lavandin cultivars, with 400 and 200 plants, respectively.

Species	Age Distribution (%/age)		
	1	2	3+
English	35	40	25
Lavandin	50	45	5

# Hand De-Budding



Hanging dried bundles



De-bud by rolling  
between hands

Two year old Edelweiss (Lavandin) was harvested for craft buds. The following steps reduced potential debris, moisture, and mold prior to cleaning buds.

1. Cut stems were brought to the barn where all leaves were removed, stems were sorted by length, stems were grouped into 1.5-2.0" diameter (125-150 stems) bundles, and then bundles were hung to dry for 1-2 weeks.
2. Buds were removed by rolling the dried bundles between our hands to minimize stem debris. We ruled out alternative methods such as stripping individual stems, shaking/beating bundles, and rolling bundles in a pillow case. Nitrile gloves were used to prevent adding moisture to the dried buds.

# Hand De-Budding



De-budded dried bundles



Un-cleaned dried buds

The de-budded bundles had minimal stem breakage which created less stem debris in the recovered un-cleaned buds.

Prior to cleaning the un-cleaned buds were hand-picked to remove larger broken stem segments.

# Un-Cleaned Buds

## CONTENT

- Buds
- Flowers
- Stems
- Bracts
- Leaves
- Dust



Based on internet searches, the lavender literature, and conversations with other lavender growers the typical lavender bud is approximately 5-6 mm long and 1.5-2.0 mm in width. The un-cleaned buds include both smaller and larger debris. Our strategy was to first remove the larger and then the smaller debris.



## Cleaning: Colander & Hand



Shaking with  
5-mesh colander



Larger debris removed

In the first step, we removed the larger debris from the un-cleaned buds using a kitchen colander. The colander has 4 mm openings, which is equivalent to a 5 mesh sieve.

The colander was vertically shaken for 5+ minutes leaving the larger debris in the colander, with the buds and smaller debris passing through the colander into the stainless steel bowl.

We then hand-picked larger debris which passed through the colander into the bowl.

# Debris from Colander & Hand Cleaning

## LARGE DEBRIS ( $\geq 4$ mm)

- Stem pieces
- Immature buds on stems
- Bracts on stems
- Buds with flowers



The larger debris remaining in the colander were discarded, and the buds and smaller debris which passed through the colander were sent to the second step to remove the smaller debris.

## Cleaning: Sieve & Hand



Shaking with  
20-mesh sieve



Winnowing using box fan

In the second step, the buds and smaller debris were put into a kitchen sieve. The sieve has 0.8-0.9 mm openings, which is approximately a 20 mesh sieve.

Shaking the sieve removed the smaller debris which passed through the sieve into the stainless steel bowl. The clean buds remained in the sieve. This process was repeated 2-3 times until we were satisfied with the bud cleanliness.

We tried winnowing using a box fan. However, the process was messy and not effective. There was not enough difference in the weight of the buds and smaller debris to separate buds from the debris.



# Mechanical Vibrating Sieve Shaker

- Stainless steel
- 110 V / 50 W
- DIM: 15" x 12"
- 1150 BPM
- Mesh: 5/12/16/20
- Sieve pan 12" x 3"
- Shaker \$125 - \$400
- Sieve pan \$15 - \$30



The process of hand sieving to remove smaller debris was time consuming and tedious with no objective criteria for stopping the cleaning process. We did a Google search and talked with other growers regarding alternatives, and discovered the mechanical vibrating sieve shaker. The sieve pans (12"x3") hold buds from 10-15 lavender bundles.

On Amazon the no brand sieve shaker costs around \$400. However, on E-Bay the shaker costs \$125+ and they also sell various size sieve pans. We purchased the sieve shaker along with 12 mesh (1.6 mm), 16 mesh (1.25 mm), and 20 mesh (0.9 mm) sieve pans. The 5 mesh (4 mm) sieve pans were out of stock.

# Cleaning: Shaker & Hand



Loading the shaker sieve



Securing 20-mesh  
sieve to shaker

Repeating the second step, we used the mechanical sieve shaker instead of using the kitchen sieve to remove smaller debris. We put the buds and small debris into the shaker's 20 mesh sieve pan, and secured the shaker cover to the sieve pan.

# Cleaning: Shaker & Hand



Shaker removes  
debris  $\leq 0.9$  mm



Clean buds!

The 1-speed 1,150 BPM sieve shaker has a on/off toggle switch. The small debris ( $\leq 0.9$  mm) passed through the shaker's 20 mesh sieve pan into the stainless steel bowl. The "clean" buds remained in the shaker's sieve pan.

How "clean" were the buds using the sieve shaker?

Through testing we learned that the debris output was minimal after shaking for 20 minutes. At that time the debris output was about what you would get with one turn of a pepper grinder. The "clean" buds were then checked one last time for debris. Any visible debris was removed by hand.

The more important question is: What is the lavender industry standard for cleanliness?

# Storing Clean Buds in Glass Jar

The same cleaning methods are used for all buds: craft & culinary grades.



We currently utilize the colander, sieve shaker, and hand-picking method to clean both our culinary and craft buds.

The “clean” buds are stored in sealed glass containers and labeled with the cultivar name.

The sealed glass containers are then stored in a cool location which has no direct light.

According to other lavender growers the shelf life of the “clean” buds can be up to 2 years.



# Besel Lavender Processor

Bud stripper and cleaner  
made by Ricardo Besel  
in Coeur d'Alene, Idaho



When do you need to up-grade to mechanized de-budding and cleaning? That is a question you will be faced with sooner or later. Remember as your lavender matures it will produce more bundles/plant per year. **YOU WILL KNOW WHEN IT'S TIME!**

Species	Plant Age (bundles/plant)		
	2	3	4+
English	1	2	4-6
Lavandin	2	4	6-10

Alternative #1: The Besel Lavender Processor strips and cleans buds, and is popular on lavender farms throughout the Pacific Northwest.



# B&B Family Lavender Farm

Locally-built bud stripper, and 1950's Crippen seed sorter modified to clean and sort



Alternative #2: Bonnie & Bruce McCloskey, and Kristy & Zion Hilliker run the B&B Family Lavender Farm in Sequim, WA. They de-bud their lavender bundles using a custom locally-built bud stripper. The jitterbud, a modified 1950's Crippen seed sorter, cleans and sorts their buds.

# Crockett Road Lavender Farm

AT Ferrell Clipper  
1B & 2B seed  
sorters modified  
for bud cleaning



Prairie Lavender  
Farm bud stripper  
and cleaner



Alternative #3: Tom Binder, Crockett Road Lavender Farm in Milton-Freewater, OR, uses the Prairie Lavender Farm bud stripper and cleaner combo for all craft and culinary buds. His culinary buds receive their final cleaning using the AT Ferrell Clipper 1B. Crockett Road Lavender Farm customers say his culinary buds are the “cleanest” buds they have purchased.