

Virginia Tech's RootReport



RootReport is a project of the Department of Forest Resources and Environmental Conservation at Virginia Tech. We study the medicinal plant trade as part of our mission to provide research and extension services for non-timber forest products. From 2013-2016 we sent out a confidential, voluntary questionnaire to ginseng dealers about the other products they may have purchased. Our goal was to be able to estimate the annual output of some of the more commonly traded medicinal forest products and better understand their value and where they come from. As we prepare for our next survey to begin in this summer, we wanted to thank the buyers who participated, and share our results from the previous round.

The Products

Our questionnaire focuses on native medicinal plants other than ginseng harvested in the same forests. Of the registered ginseng dealers who responded to our survey, 33 percent reported buying other species. Forty-six percent of buyers who reported actually buying ginseng purchased other species. We asked for harvest data for 14 species. Figure 1 shows the percentage of buyers who purchased each one. Goldenseal, bloodroot, and black cohosh were the most commonly purchased. While most buyers bought 1-3 off-root species, 12 percent voluntarily reported purchasing a total of 47 species of plants and fungi not on the survey. Three percent reported purchasing non-medicinal species such as log moss, ramps or morels, but most dealt exclusively in medicinal products. With the exception of a small percentage of goldenseal, the products purchased by registered ginseng dealers were wild-harvested.

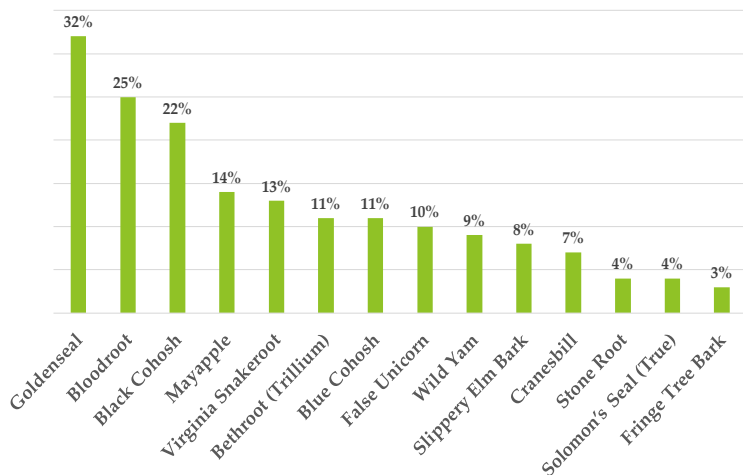


Figure 1. Percent of surveyed dealers purchasing.

Species Surveyed	Annual Trade in Dry Pounds 2014-2015	% of Total Trade Weight
Black Cohosh	264,455	61%
Goldenseal	106,105	24%
Bloodroot	21,991	5%
Wild Yam	16,675	4%
Mayapple	13,616	3%
False Unicorn	6,143	1%
Blue Cohosh	3,701	1%
Trillium (Bethroot)	1,338	<1%
Cranesbill	581	<1%
VA Snakeroot	201	<1%

Figure 2. Estimated total annual output for surveyed species in 2014 and 2015

Product Volume

Figure 2 shows our estimate for the total annual harvest in 2014 and 2015 in dry pounds. The top products by volume were black cohosh and goldenseal, which together accounted for 85 percent of the surveyed material. Slippery elm was also significant, but we believe we did not capture enough data for a total estimate because of some bark buyers not buying ginseng. We only had one year of data for three of the other species, so did not make an estimate for those this round. The majority of buyers reported purchasing small amounts of material (less than 100 pounds), but the majority of material was accounted for by a relatively small number of large buyers (thousands of pounds).

Product Value

We asked respondents for the average prices paid to harvesters in 2015 (Figure 3). The estimated total value paid to harvesters for the species we surveyed was 4.1 million USD\$. We estimate this represents between 10 and 20 percent of the value of the ginseng harvest for harvesters. In terms of total trade value black cohosh and goldenseal again represented over 80 percent of the total value. False Unicorn was third in value at an estimated \$443,156 paid to harvesters, due to its high price.

Species Surveyed	Average Price Paid to Harvesters in 2015	% of Total Paid for All Surveyed Species	Total Paid in USD\$
Goldenseal	\$22.38	58%	\$2,374,630
Black Cohosh	\$3.62	23%	\$957,327
False Unicorn	\$72.14	11%	\$443,156
Bloodroot	\$10.39	6%	\$228,486
Mayapple	\$3.14	1%	\$42,754
Wild Yam	\$2.44	1%	\$40,687
Virginia Snakeroot	\$84.65	<1%	\$17,014
Blue Cohosh	\$2.62	<1%	\$9,697
Bethroot (Trillium)	\$3.11	<1%	\$4,161
Cranesbill	\$2.73	<1%	\$1,586
Total			\$4,119,498

Figure 3. Average reported prices paid to harvesters in 2015, total trade value, and percent of total trade value by surveyed species.

Harvest Distribution

Our study is one of the first to look at the region-wide harvest distribution for these species. To keep product sourcing confidential we asked for origin by multi-county areas representing roughly the same amount of forest and similar terrain. Most of the plant material reported was sourced from central Appalachia, especially southern West Virginia, eastern Kentucky and southwest Virginia. Figure 4 shows the reported harvest distribution for goldenseal. Figure 5 shows the distribution for black cohosh, which like most of the other offroots, was more concentrated in Appalachia. False unicorn and prickly ash bark were more commonly harvested in the south, possibly due to being more abundant in the southern part of their ranges.

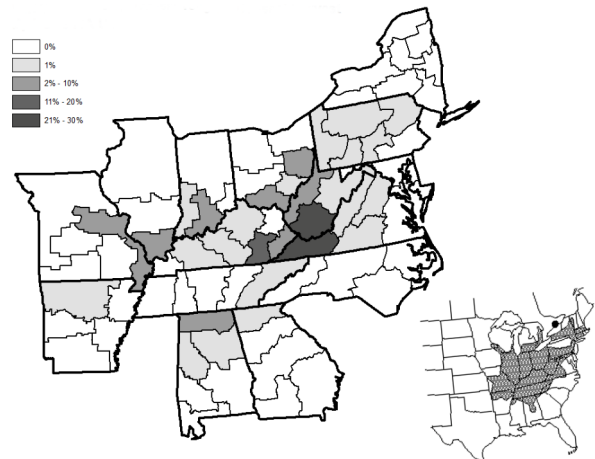


Figure 4. Reported goldenseal harvest in 2015, with range map in inset (courtesy of eFlora). Published in Kruger et al. (2020) *Forests* (11) 435

We want to again thank everyone for participating, and hope you will send in a survey this year. We are expanding to include all the states with wild ginseng harvests, including IA, MN, VT, and WI so we welcome the buyers from those states. You can learn more about RootReport and other resources for botanicals and other nontimber forest products at our website: www.rootreport.frec.vt.edu.

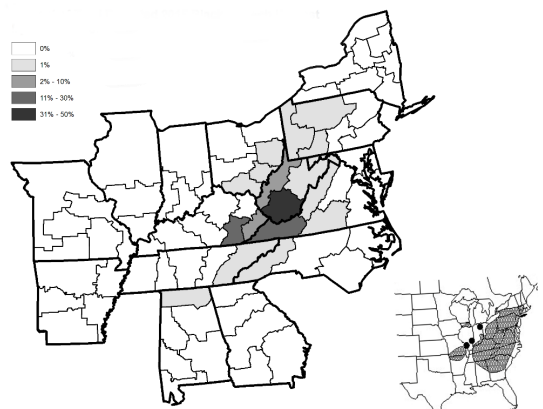


Figure 5. Reported black cohosh harvest in 2015, with range map in inset (courtesy of eFlora). Published in Kruger et al. (2020) *Forests* (11) 435



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False Unicorn (*Chamaelirium luteum*) Photo by Catherine Bukowski, 2013

