National Market Analysis for Southwestern Herbs

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INTRODUCTION

Herbs have a long tradition in New Mexico as both medicinal and food crops. The contributions of Native Americans, Hispanics, and Anglos to the biological diversity and use of herbs within the state have resulted in a strong herbal tradition. Many of the herbs used in Mexican and Mediterranean cuisine can be cultivated in New Mexico and are in demand. Because of traditions, climate, and resources, areas in New Mexico are well suited to produce herbs for existing markets.

The retail value of herbs sold as teas, dietary supplements, and traditional medicines doubled from 1981 to 1991, reaching $1.3 billion. Annual herb and spice consumption in the U.S. exceeded $10 billion and plant-derived drugs were valued at $2 billion in retail sales in the early 1990s (McCaleb, 1992). However, most herbs are imported from foreign countries (Miller, 1985).

Wild harvesting of herbs such as *anemone tuberosa* (pulsatilla) has depleted natural stocks, while harvesting other herbs such as *mentha arvensis* (poleo minto) could lead to serious depletion in New Mexico. Herb cultivation could take pressure off these and other wild resources and provide income and employment opportunities for limited-resource farmers in the state.

The success of marketing efforts by the New Mexico chile industry serves as an example to other potential high-value crops. There is a need to organize, develop, and market high-value herbs as well. Herb production in New Mexico makes sense because of the high value of herbs, the potential for intensive herb production on small acreage, and the adaptability of herbs to the state's climate and scarce water resources. Existing agricultural land can be converted to herb production without major capital expense.

Interest in herb production in New Mexico has accelerated as a result of efforts by several organizations in the state. Herbs, etc., located in Santa Fe, actively seeks certified organic growers in New Mexico to grow particular herbs for their expanding herb business. Seeds of Change, located in Gila, NM, have grown and marketed non-hybridized seeds of many useful herbs and other crops. The Southwest Learning Foundation (SLF) in Silver City supports herb growers through annual seminars, a newsletter, and other educational activities.

The SLF obtained funds from the New Mexico Department of Agriculture, under the New Mexico Specialty Crops Act, to conduct this national market survey of companies that would buy herbs and herbal products from New Mexico. This survey was a joint project between the SLF and NMSU's Department of Agricultural Economics and Agricultural Business, and is a first step in a larger agronomic and economic research effort focusing on marketing herbs and valued-added herbal products. This survey was an initial effort to understand the market for commercial herbs and herbal products.

OBJECTIVES

The objectives of this survey were to:

1. Identify Southwestern herbs most in demand among herb product buyers.
2. Provide preliminary measures of quantities purchased and prices paid.
3. Identify herbal product categories most frequently bought and sold by herb buyers.
4. Classify and describe herb buyers surveyed with respect to business size, category of business, and herbs and herb product preferences.
5. Produce a refined mailing list of herb buyers.

The results of work to accomplish objectives 1–4 are reported here.

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PROCEDURES

A questionnaire was mailed to herb businesses whose addresses were purchased from New Hope Communications in Boulder, CO. The purchased-name list was supplemented with names obtained from the International Herb Growers and Marketers Association, *Herb Market Review*, and Miller's *The Potential of Herbs as a Cash Crop*. The questionnaire (Appendix A) was sent to 655 business. Each business received a letter of introduction, the questionnaire, and a preprinted postage-paid return envelope. After one month, a reminder card was sent to all businesses that had not yet responded.

To estimate herbs and herbal products most in demand, the SLC developed a list of herbs that could be grown easily in New Mexico. The list was included in the questionnaire. Descriptions of the herbs on the list are in Appendix B.

On the first page of the questionnaire, respondents were asked if they purchased herbs from domestic suppliers, and if so, to indicate the type of supplier. Businesses were also asked to indicate the products they purchase and market from a list of herbal product categories. Additional blanks were provided to identify unique herb and herb product categories.

Respondents were asked to rank a list of factors that influence their purchase decision. They were also asked if they were generally interested in buying herbs from additional domestic suppliers and if they would like more information on Southwestern herbs. Herb companies were asked to classify their size and type of business.

On the second page of the questionnaire, respondents were asked to indicate the herbs they currently purchase, to estimate annual quantities purchased and prices paid per unit, and to indicate their interest in locating more domestic suppliers for each herb listed.

Frequency and cross tabulations were obtained using SAS©. Business size categories were compared to herbs and herb products purchased, and business functions and categories. Business functions were compared to products purchased and marketed.

RESULTS AND DISCUSSION

The questionnaire was conducted in the fall of 1993. Over a two-month period, 98 questionnaires were returned. The overall response rate was 15%.

Respondents indicated they obtain herbs from U.S. suppliers (93.3%), although many could also be importing. The most common type of supplier used by respondents was specialty herb wholesalers, followed by growers and brokers. Only 2.2% of all respondents bought herbs from restaurant suppliers. Other types of suppliers indicated were herb distributors, herb cooperatives, local wild crafters/growers, natural food wholesalers, pharmacies, herbal consultants, and general wholesalers.

A large majority of respondents indicated they would be interested in buying herbs from additional domestic suppliers (82.5%). In addition, most respondents indicated they would like more information about Southwestern herbs (84.4%).

HERB BUYERS

Many respondents indicated their business performed multiple functions (table 1). Almost 80 of the respondents indicated they are involved in retail (almost 80%). The next most common business functions were wholesaler (20%), grower (15%), and cooperative (12%). The least common business functions indicated by respondents (less than 10%) were food manufacturing, import, non-food manufacturing, brokerage, export, and other, consisting of pharmacies, consulting, herb product manufacturing, mail order, specialty nurseries, distribution, and supermarket chains.

Table 1. Survey respondent profile.

Business function	% of Respondents*	# of Respondents
Retailer	78.57	77
Wholesaler	20.41	20
Grower	15.31	15
Food manufacturer	8.16	8
Importer	7.14	7
Non-food manufacturer	6.12	6
Broker	4.08	4
Exporter	5.1	5
Other	22.45	22
- Cooperative	12.24	12
- Pharmacy	2.04	2
- Consultant/advisor	2.04	2
- Herb product manufacturer	2.04	2
- Mail order	1.02	1
- Specialty garden nursery	1.02	1
- Distributor	1.02	1
- Supermarket chain	1.02	1

*Percentages do not add to 100 because respondents could select multiple business functions.

Respondents were grouped by size (gross annual sales) and business function (table 2). For example, 25.27% of all respondents indicated they perform retail functions and had annual sales less than $100,000. The majority of retailers were medium-sized businesses, but large and small retailers were also represented. Growers were mostly small businesses and a few were large businesses. There were no medium-sized growers in the

Table 2. Survey respondents by business function and size.

	---------Annual total gross sales---------			
	Below $100,000	$100,001 to $1,000,000	$1,000,001+	% of total respondents
	-----Percentage of all respondents*-----			
Broker	0	0	2.2	2.2
Grower	9.89	0	5.49	15.38
Food manufacturer	4.4	1.1	1.1	6.6
Retailer	25.27	35.16	17.6	78.03
Importer	1.1	0	5.49	6.59
Non-food manufacturer	3.3	0	1.1	4.4
Wholesaler	6.59	4.4	7.69	18.68
Exporter	0	0	3.3	3.3
Other	7.69	7.69	5.49	20.87

*Percentages do not sum to 100 because respondents could indicate more than one business function.

Table 3. Business category by business size.

	Below $100,000	$100,001— 1,000,000	$1,000,0001+	Total
	------Percentage of all respondents------			
WREIB (N=8)	1.1	4.4	3.3	8.8
R (N=50)	13.19	26.37	15.38	54.94
M(F/NF)WRE (N=3)	1.1	1.1	1.1	3.3
GWMRIE (N=14)	9.89	0	5.49	15.38
CR (N=13)	6.59	5.49	2.2	14.29
Total (N=91)	31.87	37.36	27.47	96.71

WREIB: Wholesalers, who are also retailers, exporters, importers, and brokers, but not manufacturers or growers.

R: Retailers only.

M(F/NF)WRE: Manufacturers (food and non-food), who are also wholesalers, retailers, exporters, but not growers.

GWMRIE: Growers, who are also wholesalers, manufacturers, retailers, importers, and exporters.

CR: Cooperatives

sample (when medium-sized is defined as having gross annual sales between $100,000 and $1 million). Wholesalers consisted mostly of small and large businesses.

Respondents were also grouped into categories of combined functions. For example, all respondents who indicated they were involved in growing (and any other function) were placed in a category (GWMRIE), as were all respondents who are in retail (R) and nothing else. All manufacturers who were not growers (M(F/NF)WRE) were grouped, as were all wholesalers who were neither manufacturers or growers (WREIB). Cooperatives (CR) were also grouped (formerly part of "other").

The new combined business categories were grouped by business size (table 3). All respondents who indicated they were growers also perform other functions, as the percentage in each size category in tables 2 and 3 are identical. Retailers still dominated the sample, even when businesses solely engaged in retail were segregated.

The factors considered the most influential in the purchase of herbs were quality, price, and ease of availability, in that order (table 4). When respondents placed check marks (instead of numerical ranks) for various factors on the questionnaire, the factors were assigned equal ranks (#1 if no higher rank was given to any other factor). Quality was ranked #1 by more respondents (78%) than any other factor. Supplier service was ranked higher than quantity by more respondents. Product brand was not ranked very high by many respondents and almost half of them left it unranked. A few suppliers indicated that organic certification was the most important factor, and 10% of respondents ranked organic certification as one of the top three factors, even though organic certification was not provided on the questionnaire.

Table 4. Factors influencing selection of herb suppliers.

Factor	1 Most	2	3	4	5	6	7 Least	No response
	---------------------Importance ranking----------------------							
	----------Percentage of respondents who ranked each factor----------							
Quality	78	10	2.2	1.1	1.1	0	0	7.8
Price	22	36.7	17.8	8.9	1.1	2.2	0	11.1
Ease of availability	21	8.9	28.9	15.6	5.6	3.3	0	16.6
Supplier service	13	10	14.4	30	8.9	1.1	0	22.3
Quantity	7.8	3.3	7.8	8.9	18.9	17.8	3	32.2
Product brand	2.2	5.6	2.2	0	16.7	20	4	48.9
Other:	12	3.3	2.2	0	3.3	1.1	1	76.8
-Organic certified	6.6	3.3	1.1	0	0	2.2	0	86.8
-Dependable	0	0	1.1	0	1.1	1.1	0	96.7
-Imported herbs	1.1	0	0	0	0	0	0	98.9
-From small business	0	0	0	0	1.1	0	0	98.9
-Variety	0	0	0	0	1.1	0	0	98.9

HERBAL PRODUCTS AND HERBS

Respondent interest in purchasing herbal products was examined by business size (table 5). Fresh culinary herbs, the least processed form, were the least frequently purchased herb product category for all respondents. Teas and dried culinary herbs were the items most frequently purchased by all respondents, and favored by more than 90% of medium- and large-sized businesses. Respondents of all sizes indicated they purchase beauty products and bath bags, oils, and perfumes in roughly similar proportions, indicating small niche markets and larger mass markets exist for these value-added herb products. Teas, medicinal care products, and tinctures were less likely to be purchased by small businesses than by medium- or large-sized businesses.

Table 5. Herbal product purchases by business size.

Herb Products	-----Business size (gross sales in $)----- Less than $100,000 (n=30)	$100,001 to 1,000,000 (n=35)	$1,000,001+ (n=26)	Don't buy these products
	--------% of each size category--------			% of all respondents (n=91)
Teas	67	97	92	14
Beauty products	67	71	77	29
Medicinal care products	60	86	81	24
Tinctures	47	80	73	33
Bath bags, oils, perfumes	67	71	69	31
Fresh culinary	37	43	58	55
Dried culinary	73	91	92	14

Herbal products purchased (table 6) and marketed (table 7) were organized according to combined business categories. These two tables present the percentage in each business category that purchase or market particular products. For example, 33% of growers (GWMRIE) indicated they purchased fresh culinary herbs (table 6), while 60% indicated they marketed fresh culinary herbs (table 7). The rest presumably grew their fresh herbs in order to market them. A higher percentage of cooperatives purchased and marketed teas, medicinal care products, tinctures, beauty, and bath products than any other business category.

Half of the respondents indicated they purchase sage, oregano, thyme, echinacea, spearmint, raspberry leaves, nettles, alfalfa, catnip, anise seed, and valerian. No particular herb was favored significantly by any one size category (table 8). An interesting result is that the largest of companies reported purchasing some of the more obscure herbs (i.e. mullein, yucca root); they are not solely the province of small businesses.

Wholesalers (WREIB) indicated purchasing a large variety of herbs including the more obscure yerba mansa (44%), red root (44%), yerba santa (55%), yucca root (55%), and valerian root (66%) (table 9). Retailers (R) did not indicate much experience purchasing fleabane (2%), mesquite (2%), ocotillo (0%), osha (4%), globemallow (2%).

Some respondents failed to indicate units of the quantities purchased and prices paid, so their responses were omitted from the quantities and prices reported here (tables 10-11). Larger mean annual quantities of echinacea were purchased than for all other herbs (3,439 lb) (table 10), and its per-pound maximum and average prices were among the highest ($34.92 and $22.67, respectively) (table 11). Relatively high average quantities purchased of yucca root (504 lb), nettles (373 lb), mullein (358 lb), raspberry leaves (476 lb), and chaparral (293 lb) were reported (table 10).

High standard deviations in prices for some of the herbs could be due to variations in marketing channels. In addition, although the questionnaire requested prices for herbs, which are most usually marketed in dried form, some respondents could have indicated prices of herbs in other stages of processing.

For 24 of the 31 herbs listed, at least 25% of respondents indicated they seek suppliers (table 12). More than 50% of respondents indicated the need for suppliers for eight of the herbs. Some respondents do not purchase certain herbs, but indicated they would if suppliers could be located. For example, only 4% indicated they buy mesquite leaves (table 8), but 16% indicated interest in locating suppliers (table 12).

SUMMARY AND CONCLUSIONS

A questionnaire was mailed to 655 buyers of herbs and herbal products to identify Southwestern herbs of most commercial interest, in what forms, and to whom. Fifteen percent of the companies questionnaired had enough interest to respond to the questionnaire; of the respondents, 82.5% indicated they were interested in buying herbs from domestic suppliers, and 84.4% indicated specific interest in Southwestern herbs.

The majority of 98 questionnaire respondents indicated they were involved in retail and purchased all herb product types, but in particular favored dried culinary herbs, medicinal care products, teas, bath products, and tinctures. Twelve percent of the respondents were cooperatives, 15% were involved in growing herbs. Almost a third of the respondents had annual gross sales less than $100,000; more than one-fourth had annual gross sales exceeding $1 million. Large and small respondents indicated strong interest in all herbal product categories, although fresh culinary herbs were of the least interest by business size and by business category.

Table 6. Herbal products purchased by business category.

	WREIB (N=9)	R (N=53)	M(F/NF)WRE (N=5)	GWMRIE (N=15)	CR (N=13)
	--------Percentage of each category that purchases--------				
Teas	67	90	60	60	100
Beauty	55	77	20	53	85
Medicinal care	78	87	20	33	92
Tinctures	67	72	20	33	92
Bathbags, oils, perfumes	44	72	60	53	92
Fresh culinary	22	47	20	33	69
Dried culinary	78	92	80	67	92

WREIB: Wholesalers, who are also retailers, exporters, importers, and brokers, but not manufacturers or growers.

R: Retailers only.

M(F/NF)WRE: Manufacturers (food and non-food), who are also wholesalers, retailers, exporters, but not growers.

GWMRIE: Growers, who are also wholesalers, manufacturers, retailers, importers, and exporters.

CR: Cooperatives

Table 7. Herb products marketed by business category.

	WREIB (N=9)	R (N=53)	M(F/NF)WRE (N=5)	GWMRIE (N=15)	CR (N=13)
	---------Percentage of each category that markets---------				
Teas	78	83	60	80	92
Beauty	56	75	20	53	77
Medicinal care	67	83	40	60	92
Tinctures	67	72	40	53	85
Bathbags, oils, perfumes	56	68	60	67	92
Fresh culinary	22	55	20	60	77
Dried culinary	67	75	60	87	77
Food products	0	13	20	20	8

WREIB: Wholesalers, who are also retailers, exporters, importers, and brokers, but not manufacturers or growers.

R: Retailers only.

M(F/NF)WRE: Manufacturers (food and non-food), who are also wholesalers, retailers, exporters, but not growers.

GWMRIE: Growers, who are also wholesalers, manufacturers, retailers, importers, and exporters.

CR: Cooperatives

Table 8. Herb purchases by business size.

Herb	----Annual total gross company sales---- Below $100,000 (n=30)	$101,000 to 1,000,000 (n=35)	$1,000,001+ (n=26)	Don't buy
	------------- % of each category -------------			% of all respondents (n=91)
Sage	63	66	73	33
Oregano	60	66	73	34
Thyme	57	66	77	34
Echinacea	57	60	77	36
Spearmint	60	63	65	37
Raspberry leaves	50	63	69	40
Nettles	43	63	73	41
Alfalfa	57	46	73	43
Catnip	40	63	73	42
Anise seed	40	60	62	46
Valerian	50	51	54	48
Capsicum	40	51	54	52
Gingko	40	51	50	53
Mullein	27	60	58	52
Calendula	27	43	54	59
Lemon balm	33	40	46	60
Wild cherry	20	40	42	66
Chaparral	30	31	23	71
Strawberry leaves	17	34	35	71
Vervain	13	31	38	73
Yucca root	23	23	38	73
Yerba santa	7	31	42	74
Chaste tree	20	31	19	76
Osha	17	34	23	75
Red root	3	23	15	86
Yerba mansa	3	17	12	89
Poppy	0	14	23	88
Globemallow	3	11	8	92
Fleabane	3	9	8	93
Ocotillo	3	9	4	95
Mesquite	7	6	0	96

Table 9. Herbs purchased by business category.

Herb	WREIB* (N=9)	R (N=53)	M(F/NF)WRE (N=5)	GWMRIE (N=15)	CR (N=13)
	------------Percentage of each category who purchase----------				
Alfalfa	33	64	40	60	46
Anise seed	77	60	60	26	54
Calendula	66	42	60	46	38
Capsicum	55	51	20	46	53
Catnip	66	60	40	46	54
Chaparral	44	28	20	40	15
Chaste tree	44	21	20	33	23
Echinacea	77	64	40	60	60
Fleabane	22	2	0	13	8
Gingko	55	49	40	46	46
Globemallow	33	2	0	13	8
Lemon balm	66	34	60	40	38
Mesquite	20	2	0	6	0
Mullein	66	55	20	20	38
Nettles	77	62	0	40	60
Ocotillo	33	0	40	13	0
Oregano	88	66	80	53	62
Osha	55	4	20	20	23
Poppy	33	9	0	13	8
Raspberry leaves	88	62	40	40	60
Red root	44	15	20	6	0
Sage	88	70	60	46	60
Spearmint	77	64	40	46	60
Strawberry leaves	55	26	20	26	23
Thyme	88	70	60	46	60
Vervain	44	25	20	33	23
Valerian root	66	55	20	46	46
Wild cherry	66	38	40	26	15
Yerba mansa	44	8	20	6	15
Yerba santa	55	28	20	20	15
Yucca root	55	25	20	26	15

WREIB: Wholesalers, who are also retailers, exporters, importers, and brokers, but not manufacturers or growers.

R: Retailers only.

M(F/NF)WRE: Manufacturers (food and non-food), who are also wholesalers, retailers, exporters, but not growers.

GWMRIE: Growers, who are also wholesalers, manufacturers, retailers, importers, and exporters.

CR: Cooperatives

Table 10. Annual quantities of herbs purchased by survey respondents who indicated units.

Herb	N	Mean	Std. dev.	Minimum	Maximum
		-------------------------Pounds------------------------			
Alfalfa	8	815	2297	1	6500
Anise seed	21	33	108	1	500
Calendula	15	28	54	1	200
Capsicum	12	431	1439	2	5000
Catnip	23	236	731	1	3000
Chaparral	7	293	753	1	2000
Chaste tree	6	170	407	1	1000
Echinacea	19	3439	12694	1	55000
Epanzote	1	20		20	20
Gingko	11	185	602	1	2000
Golden seal	1	3		3	3
Globemallow	1	10		10	10
Lemon balm	10	7	9	1	25
Mullein	15	358	1367	1	5300
Nettles	19	373	1210	1	5000
Ocotillo	1	2		2	2
Oregano	22	73	210	2	1000
Osha	6	38	49	1	100
Poppy	1	100	100	100	100
Raspberry leaves	21	476	1920	1	8800
Red root	3	2	2	1	5
Sage	23	55	206	1	1000
Spearmint	21	62	216	1	1000
Strawberry leaves	8	33	88	1	250
Tyme	22	61	211	1	1000
Vervain	7	75	188	1	500
Valerian root	15	144	514	1	2000
Wild cherry	11	4	3	1	10
Yerba mansa	3	9	10	2	20
Yerba santa	7	77	187	1	500
Yucca root	4	504	998	4	2000

Table 11. Prices of herbs purchased by respondents who indicated units.

Herb	N	Mean	Std. dev.	Minimum	Maximum
		--------------------------($/lb)	--------------------------		
Alfalfa	7	4.15	0.69	3.60	5.50
Anise seed	10	4.49	4.93	1.50	18.40
Calendula	6	7.93	7.60	2.00	20.00
Capsicum	5	3.08	1.06	1.25	3.95
Catnip	11	6.95	4.85	1.25	19.60
Chaparral	4	4.90	3.75	1.00	10.00
Chaste tree	3	6.57	5.01	1.00	10.70
Echinacea	9	22.67	11.27	3.43	34.92
Gingko	5	15.26	13.76	1.25	38.00
Golden seal	1	61.50		61.50	61.50
Globmallow	1	5.00		5.00	5.00
Lemon balm	4	8.71	4.29	4.85	14.75
Mullein	7	5.62	2.15	1.84	8.00
Nettles	9	5.52	4.12	1.25	13.25
Ocotillo	1	20.00		20.00	20.00
Oregano	10	6.59	6.88	2.00	25.00
Osha	2	14.50	0.71	14.00	15.00
Poppy	1	2.70		2.70	2.70
Raspberry leaves	12	6.25	3.32	2.00	11.00
Red root	1	11.30		11.30	11.30
Sage	11	6.11	2.61	2.00	10.00
Spearmint	11	4.25	2.52	1.50	9.50
Strawberry leaves	4	4.66	2.27	1.75	7.25
Thyme	11	6.10	6.08	2.20	20.00
Vervain	5	5.26	2.27	1.75	7.50
Valerian root	6	7.73	4.56	2.50	14.50
Wild cherry	4	4.08	0.85	2.80	4.52
Yerba mansa	2	10.00	5.66	6.00	14.00
Yerba santa	3	5.33	3.06	2.00	8.00
Yucca root	3	6.35	4.06	2.00	10.05

Table 12. Respondents who indicated interest in additional suppliers.

Herb	---Freq.---	---%---
Sage	56	57.14
Oregano	55	56.12
Thyme	52	53.06
Echinacea	54	55.1
Spearmint	49	50.0
Raspberry leaves	51	52.04
Nettles	48	48.98
Alfalfa	51	52.04
Catnip	52	53.06
Anise seed	46	46.94
Valerian	45	45.92
Capsicum	34	34.69
Gingko	44	44.9
Mullein	41	41.84
Calendula	41	41.84
Lemon balm	37	37.76
Wild cherry	34	34.69
Chaparral	36	36.73
Strawberry leaves	29	29.59
Vervain	32	32.65
Yucca root	29	29.59
Yerba santa	38	39.34
Chaste tree	25	25.51
Osha	36	36.73
Red root	20	20.41
Yerba mansa	19	19.39
Poppy	16	16.33
Globemallow	19	19.39
Fleabane	16	16.33
Ocotillo	13	13.27
Mesquite	16	16.33

Recommended marketing strategies flowing from this research include concentrating on high quality and service while maintaining price competitiveness. It seems the ability to obtain large quantities is not as high a priority for herb buyers as quality, service, price, and availability. "Branding" may not be advisable, as it is costly and was considered relatively unimportant by respondents. Perhaps this is also an indication of the relative youthfulness of the herb market.

Herbs with the potential to generate the most revenue based on the largest number of buyers and the highest average prices reported were echinacea, raspberry leaves, valerian, yucca root, and nettles. The next best herbs to market, due to the large number of buyers and relatively high prices per unit, were alfalfa, catnip, gingko, and mullein. Although large numbers of respondents indicated they buy the culinary herbs on the list—oregano, thyme, spearmint, and capsicum—markets for these may be more competitive as they are more well developed.

Only 4–14% of respondents indicated they buy red root, yerba mansa, poppy, globemallow, fleabane, and mesquite leaves; yet 16–20% of respondents indicated they are seeking additional suppliers for these herbs. Thus, market opportunities may exist for some of the more obscure herbs with suppliers that are difficult to locate. Large companies as well as small companies indicated they buy some of the less-well-known herbs.

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APPENDIX A

QUESTIONNAIRE

Southwestern Herb Survey

1. Do you or your company currently buy herbs from U. S. suppliers?

   ☐ Yes

   If yes, what type of supplier?
   - ☐ Specialty herb wholesaler
   - ☐ Grower
   - ☐ Restaurant supplier
   - ☐ Broker
   - ☐ Other (please specify type ___________________

   ☐ No

2. Which of the following products do you currently purchase?
   - ☐ teas
   - ☐ beauty products
   - ☐ medicinal care products
   - ☐ tinctures
   - ☐ bath bags, oils, perfumes
   - ☐ other_________________
   - ☐ fresh culinary herbs
   - ☐ dried culinary herbs

3. Which of the following products do you currently market?
   - ☐ teas
   - ☐ beauty products
   - ☐ medicinal care products
   - ☐ tinctures
   - ☐ bath bags, oils, perfumes
   - ☐ food products containing herbs
   - ☐ fresh culinary herbs
   - ☐ dried culinary herbs
   - ☐ other____________

4. What factors influence your usual purchase of herbs and herbal products? Put a number in each box--starting with 1 as the most important.
   - ☐ quality
   - ☐ product brand
   - ☐ other_________________
   - ☐ price
   - ☐ quantity
   - ☐ ease ofavailability
   - ☐ supplier service

5. Would you be interested in buying herbs from additional domestic suppliers?
   - ☐ Yes
   - ☐ No

6. Would you like more information about Southwestern herbs and our commitment to their uses?
   - ☐ Yes
   - ☐ No

7. What are your annual gross sales?
   - ☐ below $50,000
   - ☐ $500,001 - $1,000,000
   - ☐ $50,001 - $100,000
   - ☐ $1,000,001 - $10,000,000
   - ☐ $100,001-$500,000
   - ☐ $10,000,001 and above

8. How would you classify your company? Check all that apply.
   - ☐ broker
   - ☐ grower
   - ☐ food manufacturer
   - ☐ retail
   - ☐ importer
   - ☐ non-food manufacturer
   - ☐ wholesaler
   - ☐ exporter
   - ☐ other______________

Southwestern Herb Survey

9. Please examine the following list of herbs. Check the herbs your organization purchases. Then, indicate annual quantities currently purchased and the unit price paid. Please indicate units. (i.e. lbs, oz, g, kg etc.). Then, circle Y if you would use a supplier in addition to, or in place of, your current supplier. Circle N if you do not feel you will need an additional herb supplier.

	Herb	Annual Quantity	Unit Price Paid	More Suppliers	
☐	alfalfa	________________	______________	Y	N
☐	anise seed	________________	______________	Y	N
☐	canadian fleabane	________________	______________	Y	N
☐	calendula flowers	________________	______________	Y	N
☐	chaparral	________________	______________	Y	N
☐	capsicum	________________	______________	Y	N
☐	california poppy	________________	______________	Y	N
☐	catnip	________________	______________	Y	N
☐	chaste tree berries	________________	______________	Y	N
☐	echinacea	________________	______________	Y	N
☐	lemon balm	________________	______________	Y	N
☐	gingko	________________	______________	Y	N
☐	nettles	________________	______________	Y	N
☐	mesquite leaves	________________	______________	Y	N
☐	osha	________________	______________	Y	N
☐	mullein flowers	________________	______________	Y	N
☐	red root	________________	______________	Y	N
☐	strawberry leaves	________________	______________	Y	N
☐	raspberry leaves	________________	______________	Y	N
☐	spearmint	________________	______________	Y	N
☐	wild cherry bark	________________	______________	Y	N
☐	ocotillo bark	________________	______________	Y	N
☐	sage	________________	______________	Y	N
☐	thyme	________________	______________	Y	N
☐	oregano	________________	______________	Y	N
☐	scarlet globemallow	________________	______________	Y	N
☐	yerba mansa	________________	______________	Y	N
☐	yerba santa	________________	______________	Y	N
☐	yucca root	________________	______________	Y	N
☐	valerian root	________________	______________	Y	N
☐	vervain	________________	______________	Y	N
☐	other ____________	________________	______________	Y	N

Comments: ____

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APPENDIX B

HERB DESCRIPTIONS

HERB DESCRIPTIONS*

Alfalfa. The leaf of this common field crop has minerals and folic acid useful for conditions of debility and depletion. Alfalfa is found in formulas to increase overall health.

Anise seed. Used primarily as a carminative, anise seed assists digestion and relieves upset stomach. It is also used widely as a flavoring agent in baked products.

Calendula flowers. Most commonly used in skin cosmetic products, calendula flowers work to soften the skin and rejuvenate damaged tissue from overexposure to sunlight. Calendula is also found in hair care products, and grows well in sunny climates.

California poppy. The aboveground plant has a history of use in hair tonics for general health, and it also has qualities of a nervine.

Canadian fleabane. An infusion of this plant is used for treatment of diarrhea, profuse sweating, and irritable bowel syndrome.

Capsicum. The variety known as cayenne pepper is used to increase blood circulation to the body's periphery and strengthen the heart.

Catnip. A European transplant, catnip is used for cat products as well as a mild stomach sedative for children in cases of colic. A member of the mint family, catnip is also grown with a lemon flavor and anise flavor for teas.

Chaparral. One of the most widely use herbs for topical and internal disorders, chaparral is antifungal, antibacterial, and tonic to the liver and kidneys. It also protects the skin from infection and sunburn.

Chaste tree berries. Found commonly in Chinese medicine and grown in Europe as well, *vitex agnus castis*, or chaste tree, has a profound effect on estrogen levels in women and helps in regulating hormonal changes. It has also been used for treating breast cysts due to congestion.

Echinacea. Used as an antiviral for centuries by Plains Indians of North America, echinacea root is perhaps the medicinal herb in highest demand in the market today. Used in cold and flu formulas, echinacea has been tested in Germany for its effects as an antibacterial/antiviral herb. The leaves and flowers are also used in cosmetics.

Gingko. Extensive press coverage in recent years has reported that gingko leaves have had a positive effect on Alzheimer's patients by increasing blood circulation, particularly to the brain and head. Although grown in California, organically grown gingko in New Mexico could have promise as a medicinal and a shade tree.

Lemon balm. Used in many herbal teas, organic lemon balm has a calming effect on the nerves and is used as an aromatic to relieve nasal congestion. Lemon balm is also found in herbal cosmetics.

Mesquite leaves. Primary use is for eye infections applied in an isotonic water base (salt and water) during the acute phase of the infection.

Mullein flowers. Mullein grows in the wild on disturbed soil, but has the promise of high yields on cultivated soil. The flowers are used in ear inflammation formulas, to decrease the discomfort from infection. The leaves are also very useful for lung disorders such as asthma.

Nettles. Leaves are used in nutritional tonics because of the high percentage of chlorophyll contained within them. They are also used in hair care products to strengthen hair and counteract dandruff.

Ocotillo bark. This herb has been used to stimulate lymph drainage in the pelvic area and to help make female menstrual cycles regular.

Oregano. Oregano is a culinary herb, but used medicinally for sore throats and colds.

Osha. Perhaps the most widely used medicinal herb in the Southwest, osha is used for lung and throat infections, nasal congestion, and stomach ulcers. The root is part of the traditional medicine chest in New Mexico.

Raspberry leaves. The leaves of the raspberry plant are used for urinary tract disorders, as well as smoothing uterine contractions during childbirth.

Red root. Although not a well-known medicinal herb, red root stimulates the general immune system by activating the lymph system.

Sage. Sage is primarily a culinary herb in Italian and Mexican cuisine, although it has also been used to help open skin pores and induce sweating in cold conditions.

Scarlet globemallow. Primarily used in hair care products such as shampoo, scarlet globemallow helps to promote hair health and growth by revitalizing the scalp. The leaves are also soothing to the digestive tract and the urinary tract.

Spearmint. This herb assists digestion and can calm the nervous system. It is a common flavoring agent in many foods.

Strawberry leaves. Strawberry leaves are used as a tonic for the urinary tract and for the female reproductive system.

Thyme. Thyme is primarily a culinary herb, but also contains thymol, which stimulates the immune system and the body's healing processes.

Valerian. Most commonly used as a nervine for insomnia and sleep disorders, valerian roots, leaves, and flowers are used in tinctures, teas, and capsules.

Vervain. A common European medicinal, vervain is a tonic to the liver and is useful for calming the nervous system to assist in sleep.

Wild cherry bark. Wild cherry bark is used primarily in sore throat remedies and lung infection formulas, particularly when the condition is of the dry type.

Yerba mansa. Legendary healer of both internal and external skin disorders, yerba mansa can be used interchangeably with golden seal, a popular and endangered plant.

Yerba santa. A highly resinous plant, yerba santa grows well in disturbed soil throughout the Southwest, and has a long history of use by native cultures as an expectorant in lung congestion. It also has antibacterial effects on urinary tract infections of a mild nature.

Yucca. A native of the southwestern U.S., yucca root has an extensive history of use in shampoos and soaps, and for internal applications for arthritis. It grows abundantly on open rangeland in southern New Mexico.

*Herb descriptions are from the following:

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