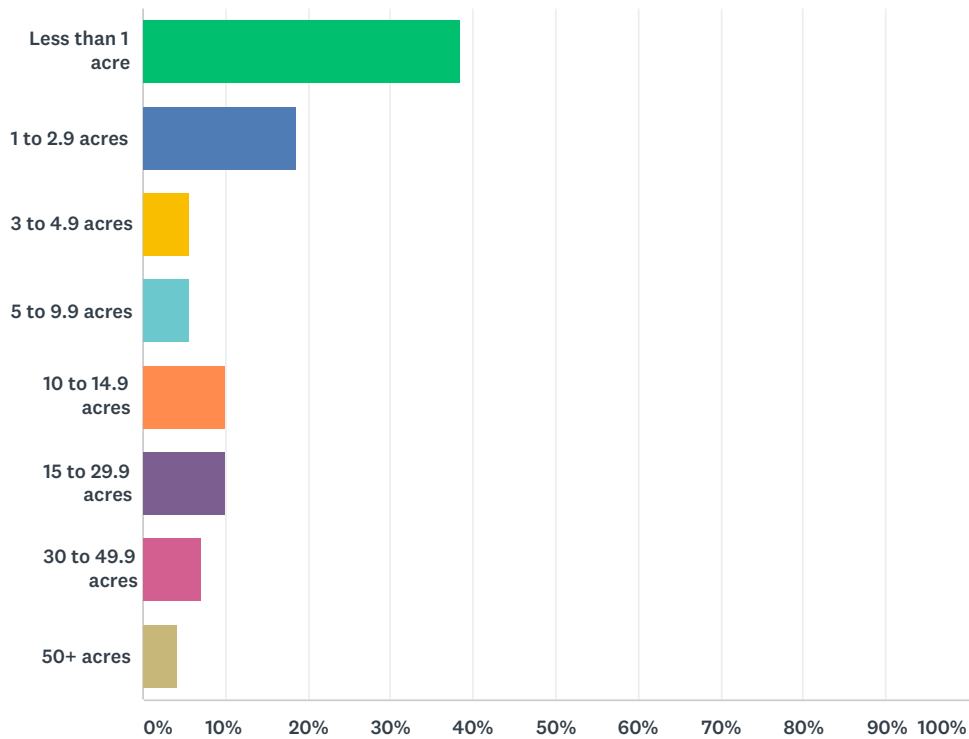


## Q1 How much land do you have in production during your growing season? (Select one.)

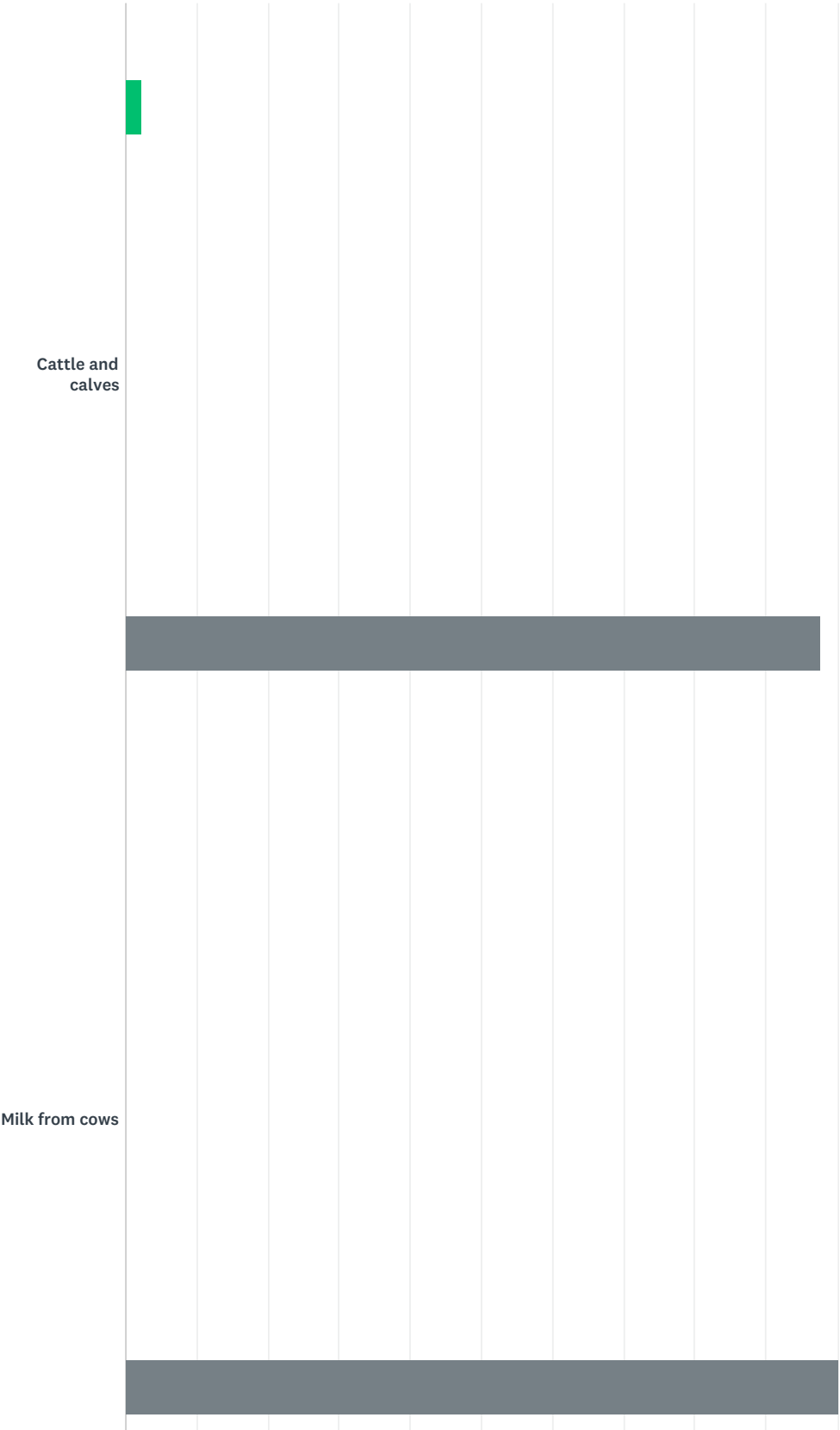
Answered: 70 Skipped: 2



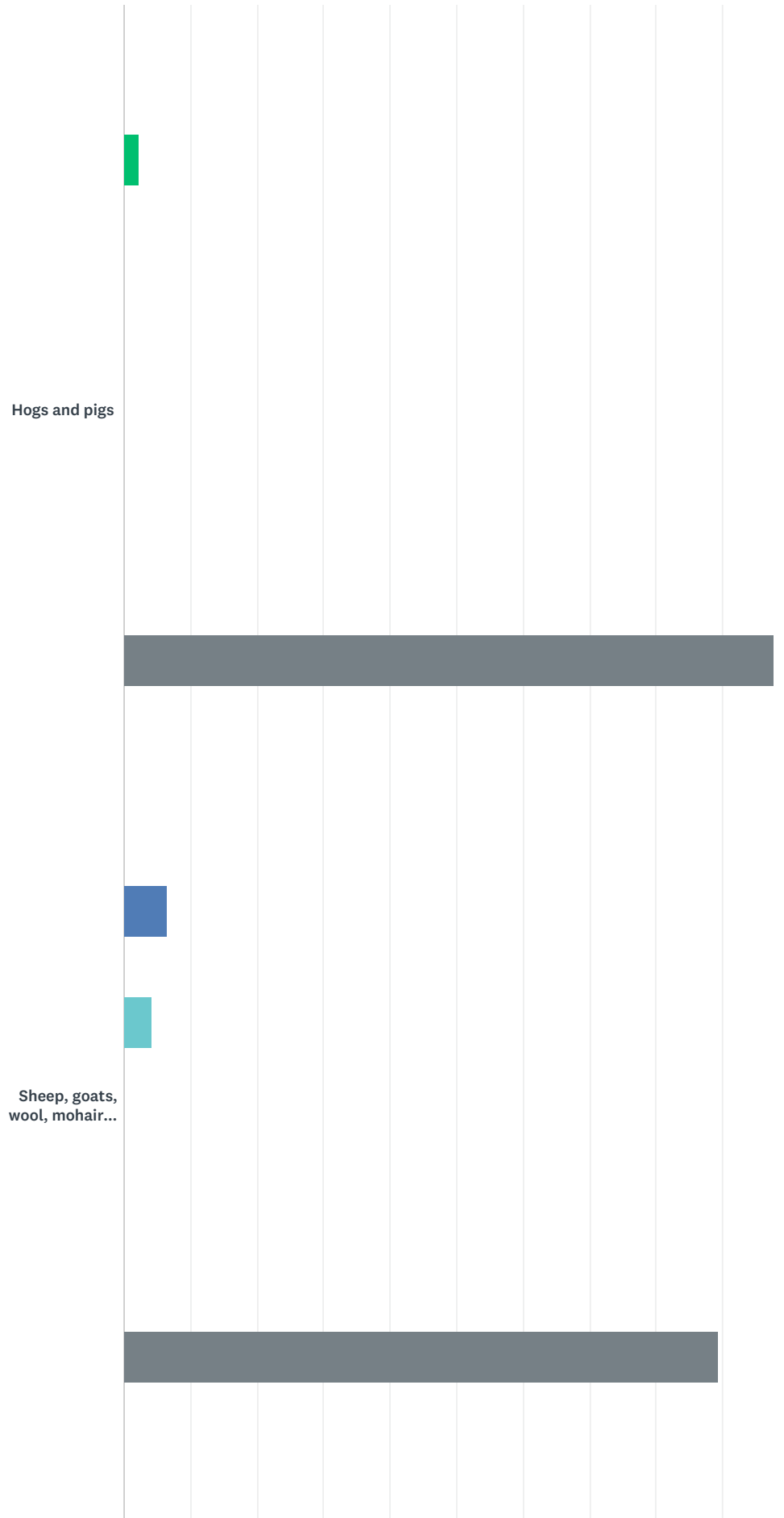
ANSWER CHOICES	RESPONSES	
Less than 1 acre	38.57%	27
1 to 2.9 acres	18.57%	13
3 to 4.9 acres	5.71%	4
5 to 9.9 acres	5.71%	4
10 to 14.9 acres	10.00%	7
15 to 29.9 acres	10.00%	7
30 to 49.9 acres	7.14%	5
50+ acres	4.29%	3
TOTAL		70

Q2 What do you produce and how many acres are devoted to that crop?  
(Animals and Animal Products)

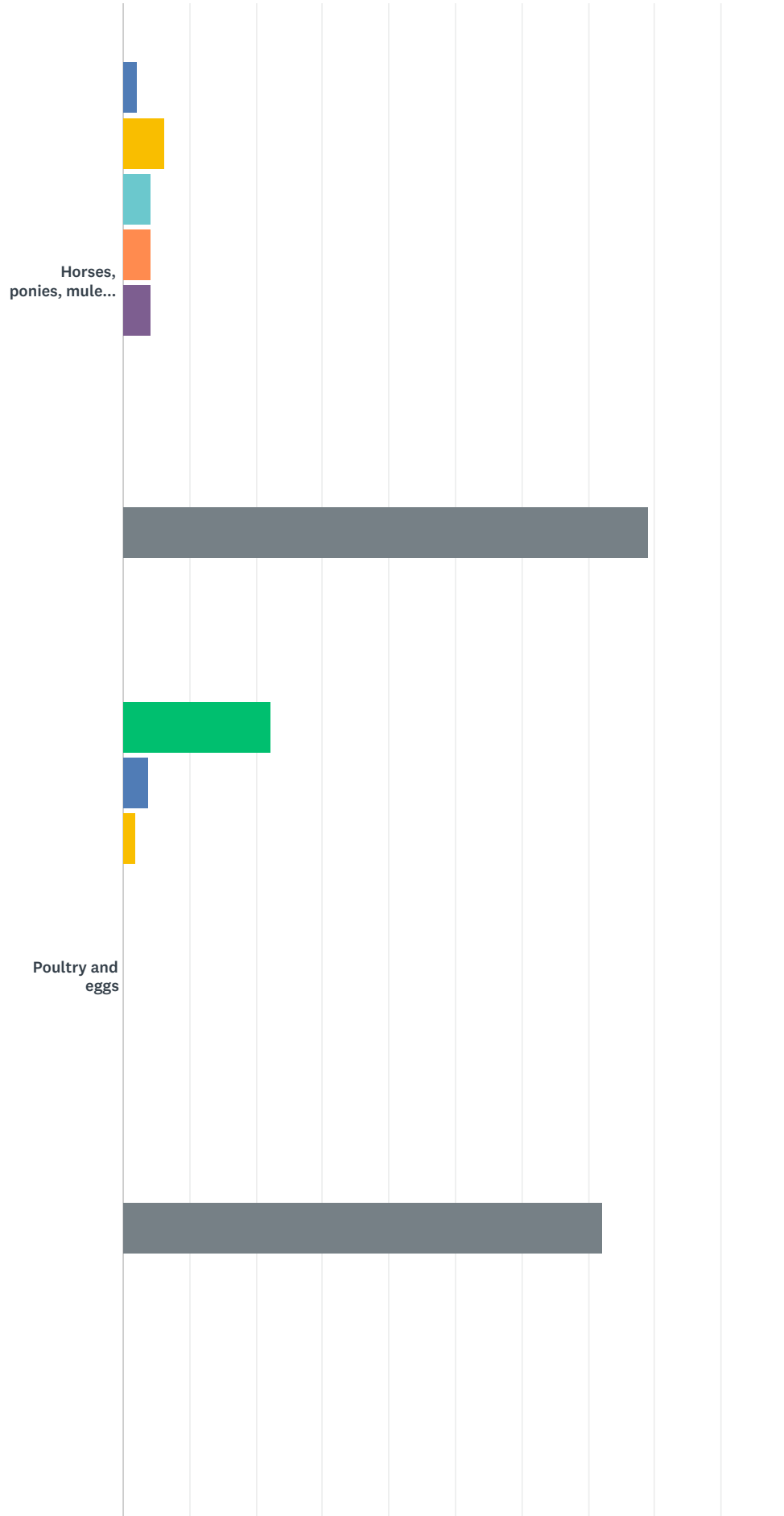
Answered: 64    Skipped: 8



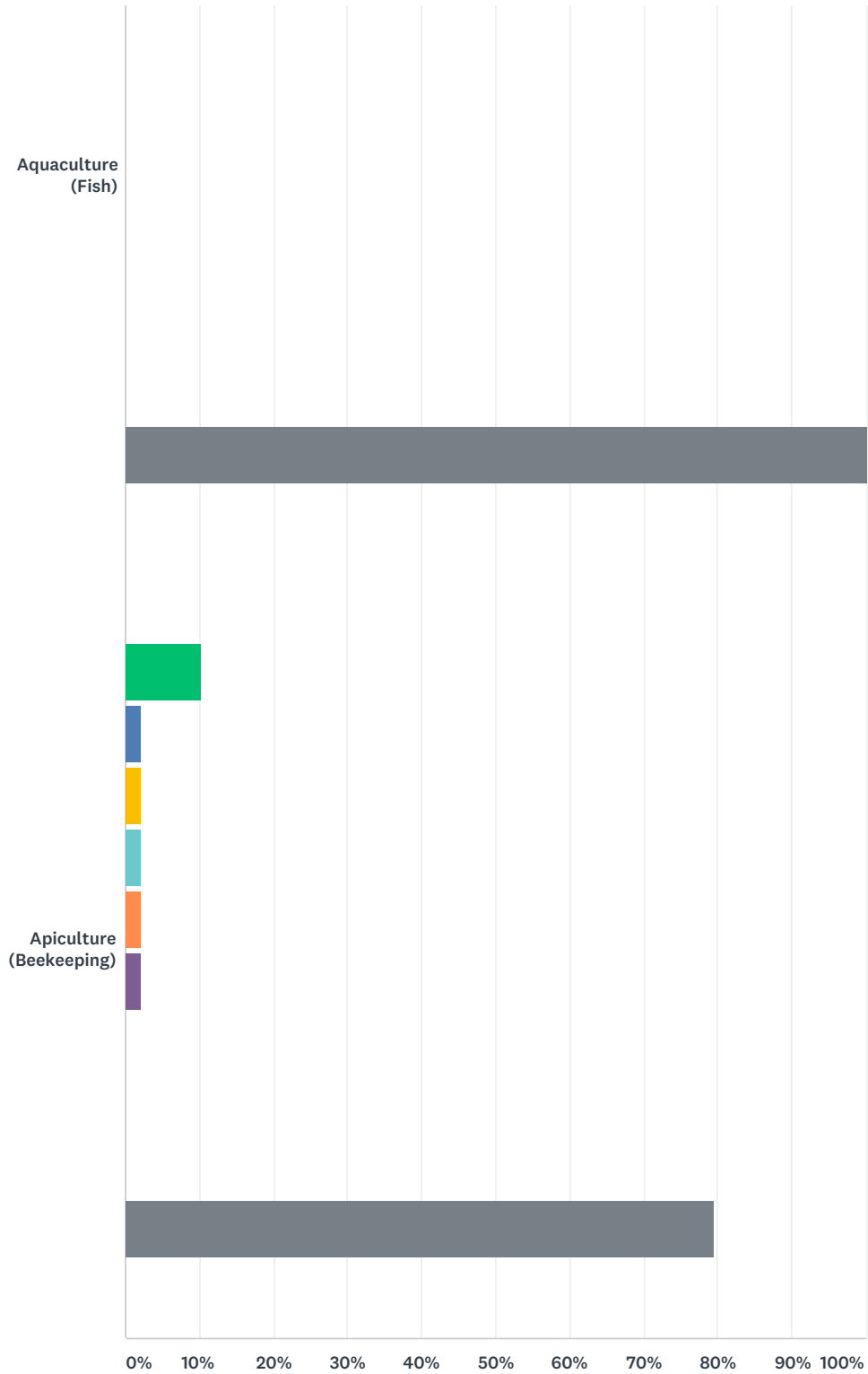
# Harvard Agricultural Survey



# Harvard Agricultural Survey



# Harvard Agricultural Survey



■ Less than 1 acre
 ■ 1 to 2.9 acres
 ■ 3 to 4.9 acres
 ■ 5 to 9.9 acres
 ■ 10 to 14.9 acres
 ■ 15 to 29.9 acres
 ■ 30 to 49.9 acres
 ■ 50+ acres
 ■ Unknown
 ■ Not applicable

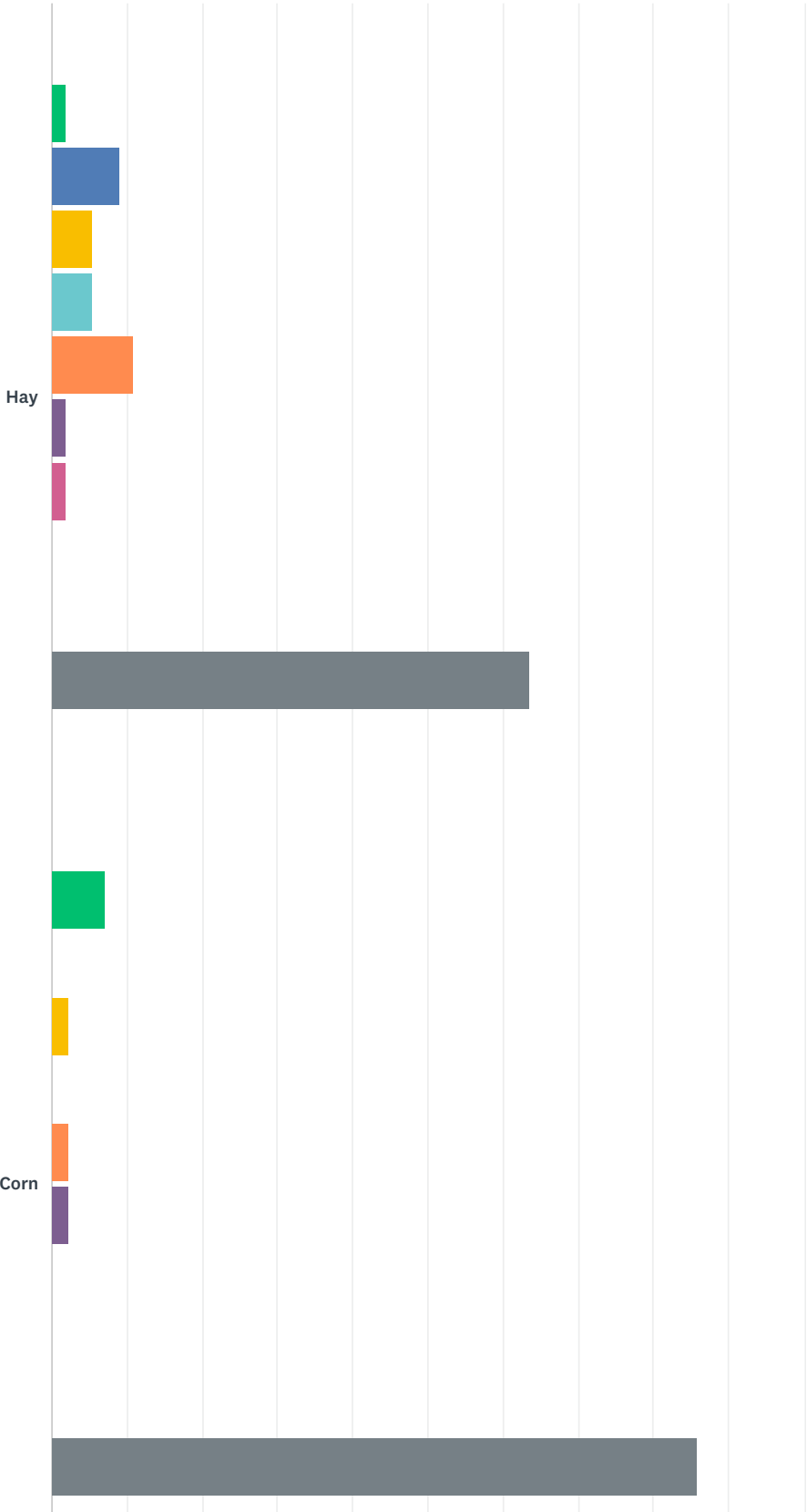
	LESS THAN 1 ACRE	1 TO 2.9 ACRES	3 TO 4.9 ACRES	5 TO 9.9 ACRES	10 TO 14.9 ACRES	15 TO 29.9 ACRES	30 TO 49.9 ACRES	50+ ACRES	UNKNOWN	NOT APPLICABLE	TOTAL
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## Harvard Agricultural Survey

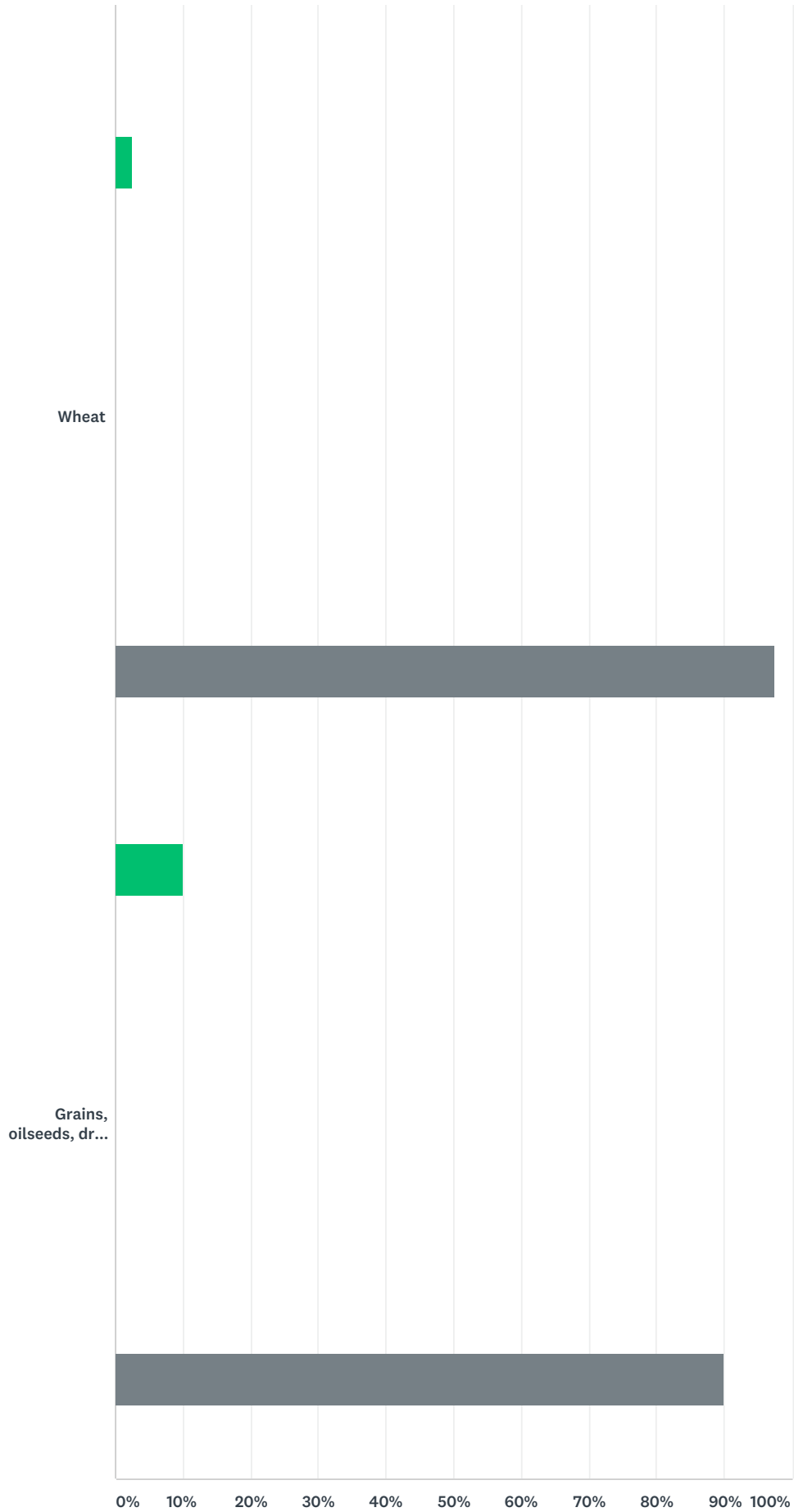
Cattle and calves	2.27% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	97.73% 43	4
Milk from cows	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 41	4
Hogs and pigs	2.38% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	97.62% 41	4
Sheep, goats, wool, mohair, and milk	0.00% 0	6.38% 3	0.00% 0	4.26% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	89.36% 42	4
Horses, ponies, mules, burros, and donkeys	0.00% 0	2.08% 1	6.25% 3	4.17% 2	4.17% 2	4.17% 2	0.00% 0	0.00% 0	0.00% 0	79.17% 38	4
Poultry and eggs	22.22% 12	3.70% 2	1.85% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	72.22% 39	5
Aquaculture (Fish)	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 42	4
Apiculture (Beekeeping)	10.20% 5	2.04% 1	2.04% 1	2.04% 1	2.04% 1	2.04% 1	0.00% 0	0.00% 0	0.00% 0	79.59% 39	4

Q3 What do you produce and how many acres are devoted to that crop?  
(Field Crops and Grains)

Answered: 57   Skipped: 15



# Harvard Agricultural Survey





# Harvard Agricultural Survey

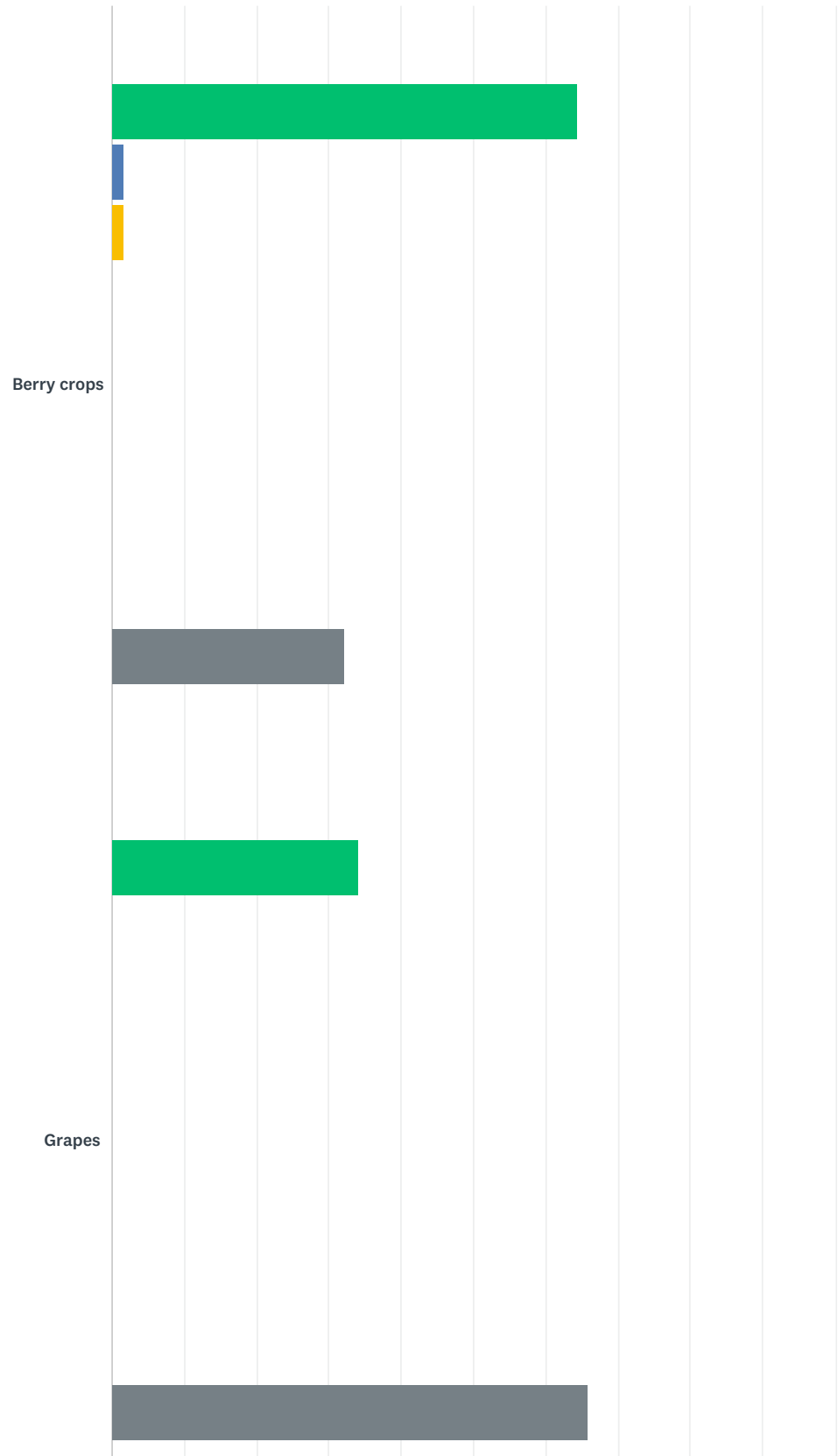


	LESS THAN 1 ACRE	1 TO 2.9 ACRES	3 TO 4.9 ACRES	5 TO 9.9 ACRES	10 TO 14.9 ACRES	15 TO 29.9 ACRES	30 TO 49.9 ACRES	50+ ACRES	UNKNOWN	NOT APPLICABLE	TOTAL
Hay	1.82% 1	9.09% 5	5.45% 3	5.45% 3	10.91% 6	1.82% 1	1.82% 1	0.00% 0	0.00% 0	63.64% 35	55
Corn	7.14% 3	0.00% 0	2.38% 1	0.00% 0	2.38% 1	2.38% 1	0.00% 0	0.00% 0	0.00% 0	85.71% 36	42
Wheat	2.50% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	97.50% 39	40
Grains, oilseeds, dry beans, and dry peas	10.00% 4	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	90.00% 36	40

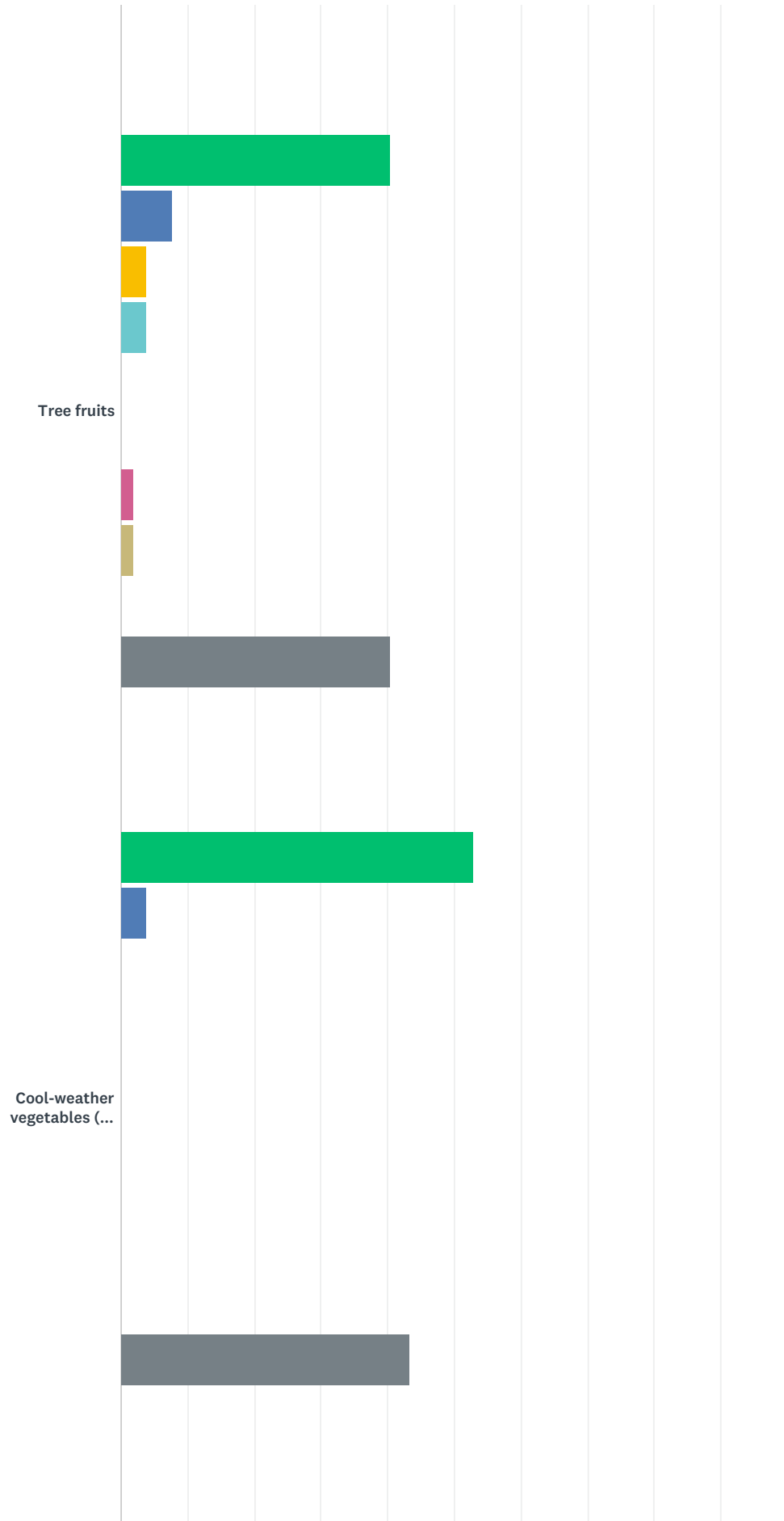
#	OTHER FIELD CROPS AND GRAINS (PLEASE SPECIFY)	DATE
1	pumpkins 1.5 acres	12/26/2018 9:14 PM
2	corn land leased to Pickard	12/20/2018 12:39 PM
3	Personnal Garden	12/11/2018 9:19 PM
4	Perennials, fresh produce, bedding plants, annuals, winter-hardy shrubs. Considering commercial hemp and possibly cannabis.	12/10/2018 3:34 PM
5	mostly vegetables, herbs, flowers for myself	12/5/2018 4:46 PM
6	corn. squash. apples	12/4/2018 11:25 AM
7	Basic veggie garden	12/1/2018 10:07 AM

Q4 What do you produce and how many acres are devoted to that crop?  
(Fruits, Vegetables, and Other Horticultural Products)

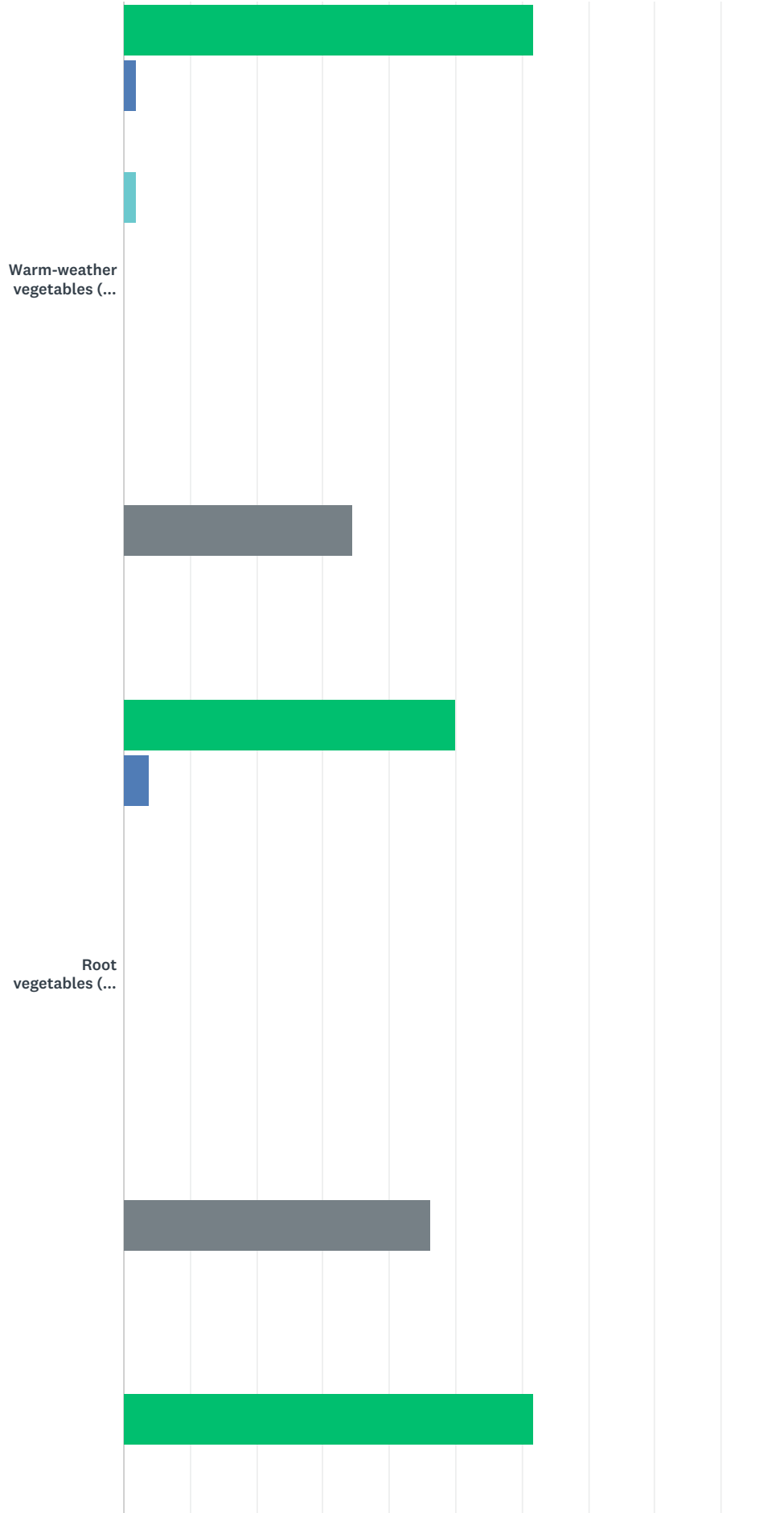
Answered: 61    Skipped: 11



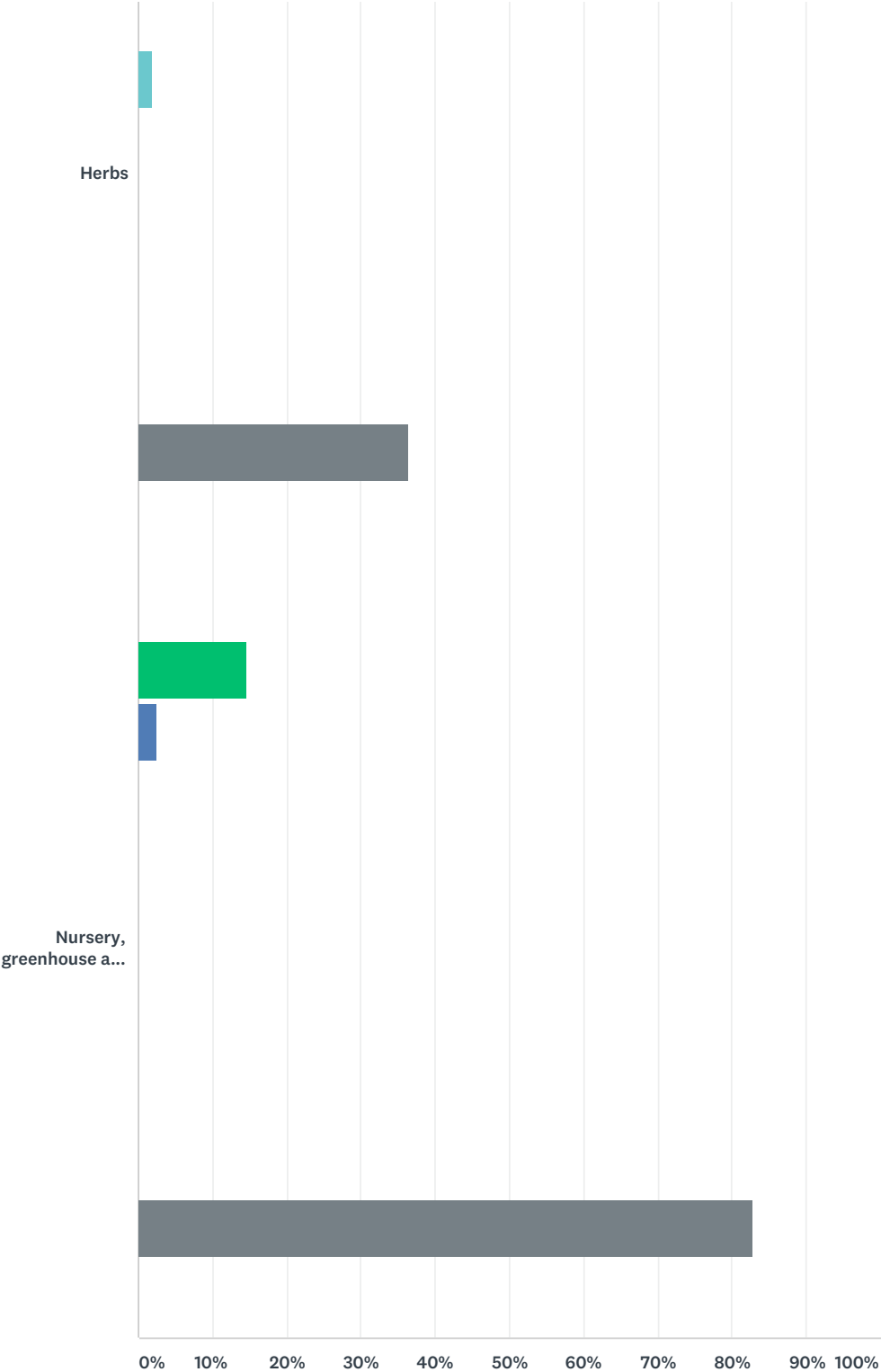
# Harvard Agricultural Survey



# Harvard Agricultural Survey



Harvard Agricultural Survey



	LESS THAN 1 ACRE	1 TO 2.9 ACRES	3 TO 4.9 ACRES	5 TO 9.9 ACRES	10 TO 14.9 ACRES	15 TO 29.9 ACRES	30 TO 49.9 ACRES	50+ ACRES	UNKNOWN	NOT APPLICABLE	TOTAL
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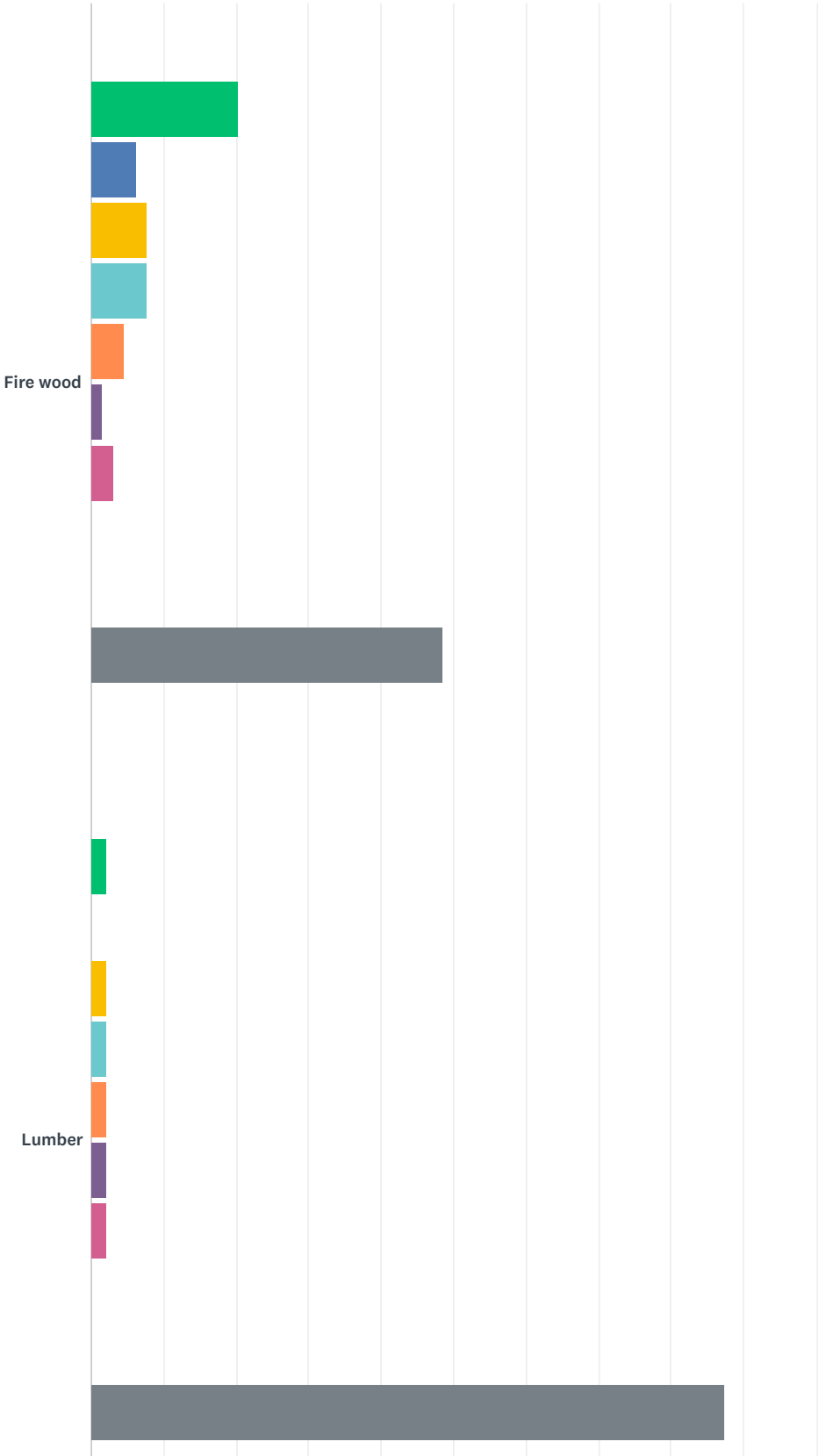
## Harvard Agricultural Survey

Berry crops	64.41% 38	1.69% 1	1.69% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	32.20% 19	59
Grapes	34.15% 14	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	65.85% 27	41
Tree fruits	40.38% 21	7.69% 4	3.85% 2	3.85% 2	0.00% 0	0.00% 0	1.92% 1	1.92% 1	0.00% 0	40.38% 21	52
Cool- weather vegetables (ex. lettuce, spinach, kale)	52.83% 28	3.77% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	43.40% 23	53
Warm- weather vegetables (ex. tomatoes, peppers) and melons	61.82% 34	1.82% 1	0.00% 0	1.82% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	34.55% 19	55
Root vegetables (ex. potatoes, sweet potatoes, carrots, parsnips)	50.00% 26	3.85% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	46.15% 24	52
Herbs	61.82% 34	0.00% 0	0.00% 0	1.82% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	36.36% 20	55
Nursery, greenhouse and floriculture	14.63% 6	2.44% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	82.93% 34	41

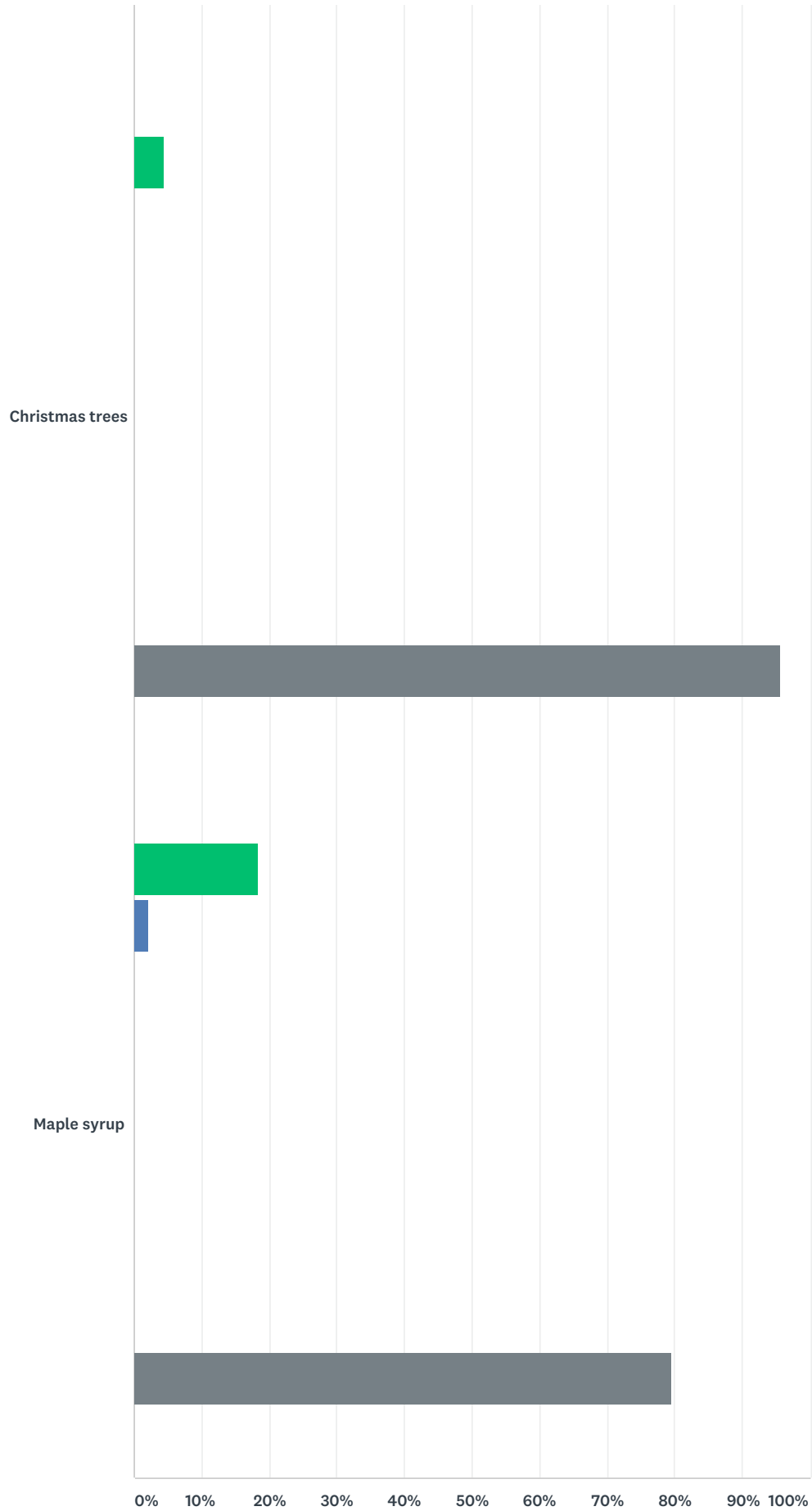
#	OTHER FRUITS, VEGETABLES OR HORTICULTURAL PRODUCTS (PLEASE SPECIFY)	DATE
1	Assume you want to know about large scale production and not family garden.	12/30/2018 11:20 AM
2	Trees	12/12/2018 9:53 PM
3	Squash	12/12/2018 12:39 PM
4	rhubarb	12/5/2018 4:46 PM

Q5 What do you produce and how many acres are devoted to that crop?  
(Forest and Related Products)

Answered: 66    Skipped: 6



# Harvard Agricultural Survey





## Harvard Agricultural Survey

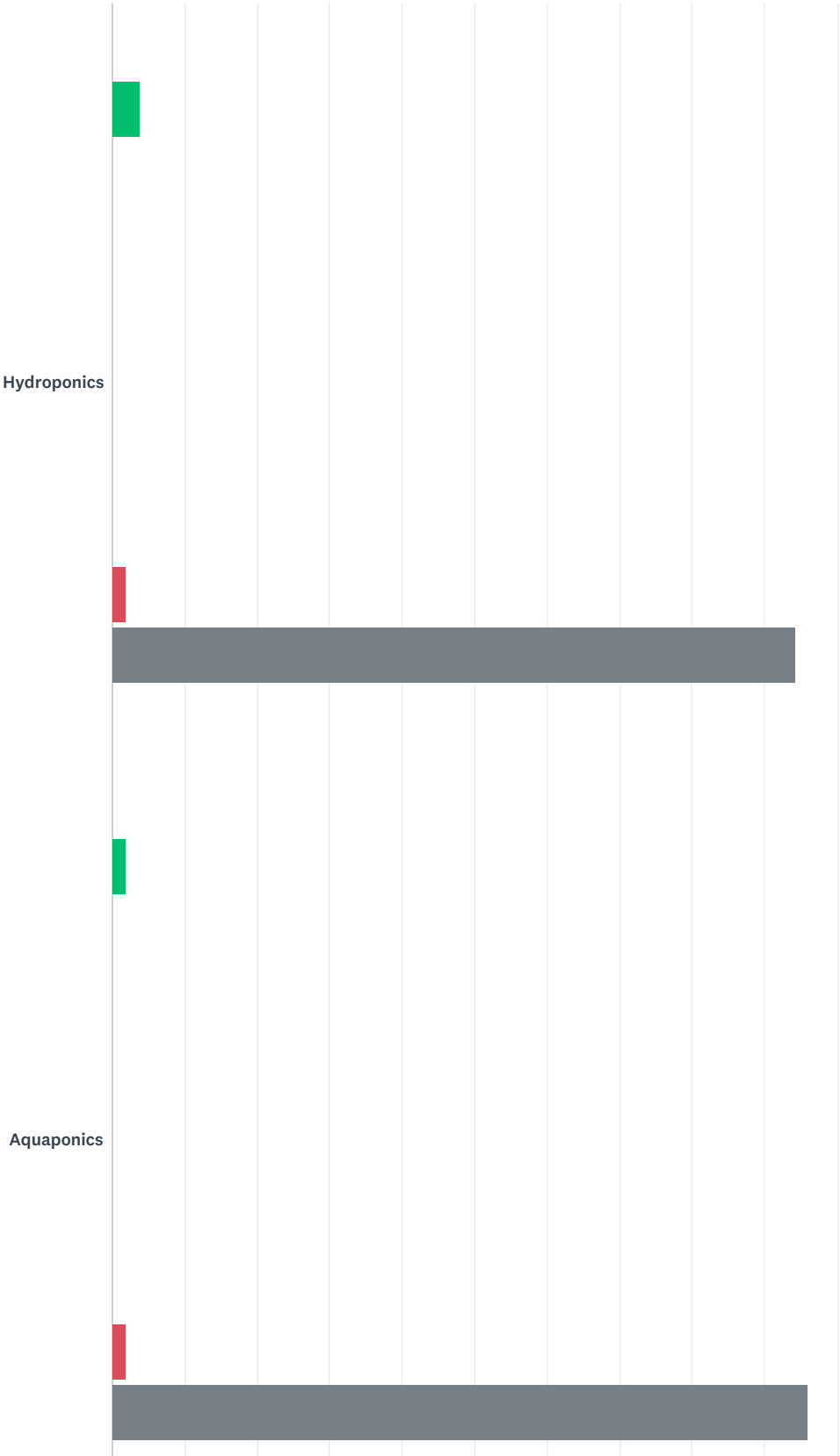


	LESS THAN 1 ACRE	1 TO 2.9 ACRES	3 TO 4.9 ACRES	5 TO 9.9 ACRES	10 TO 14.9 ACRES	15 TO 29.9 ACRES	30 TO 49.9 ACRES	50+ ACRES	UNKNOWN	NOT APPLICABLE	TOTAL
Fire wood	20.31% 13	6.25% 4	7.81% 5	7.81% 5	4.69% 3	1.56% 1	3.13% 2	0.00% 0	0.00% 0	48.44% 31	64
Lumber	2.08% 1	0.00% 0	2.08% 1	2.08% 1	2.08% 1	2.08% 1	2.08% 1	0.00% 0	0.00% 0	87.50% 42	48
Christmas trees	4.35% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	95.65% 44	46
Maple syrup	18.37% 9	2.04% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	79.59% 39	49

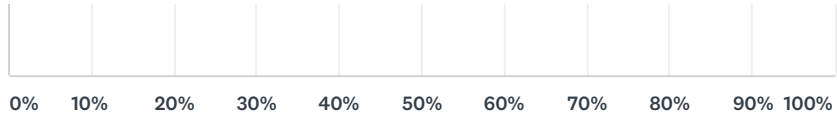
#	OTHER HORTICULTURAL PRODUCTS (PLEASE SPECIFY)	DATE
1	Hot pepper jam and fruit jams	12/30/2018 5:22 PM
2	home use only	12/30/2018 11:20 AM
3	trees	12/12/2018 9:53 PM
4	Specialty horticultural such as Clivia.	12/10/2018 3:34 PM
5	Have access to other acreage to cut firewood	12/4/2018 4:51 PM

Q6 What do you produce and how many acres are devoted to that crop?  
(Techniques)

Answered: 53    Skipped: 19



## Harvard Agricultural Survey

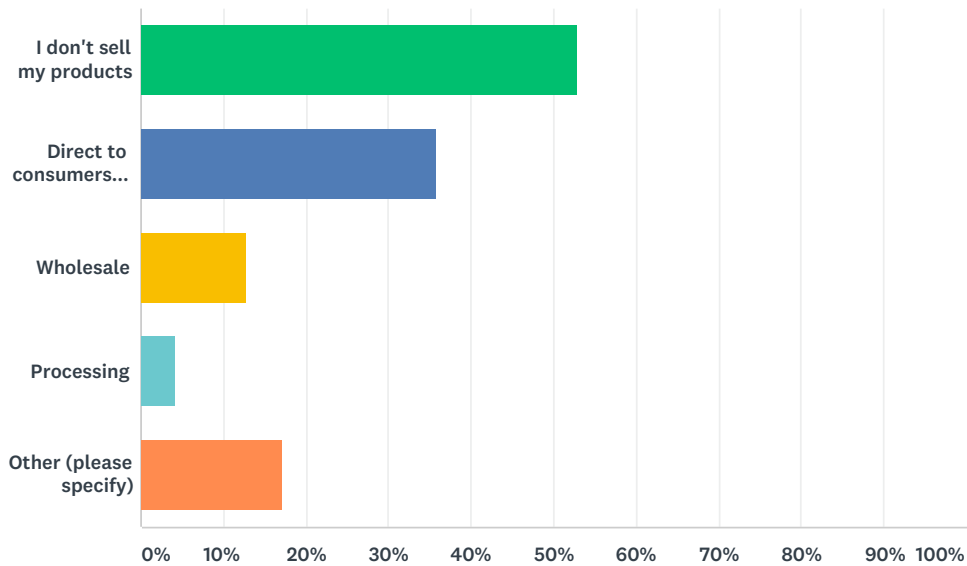


	LESS THAN 1 ACRE	1 TO 2.9 ACRES	3 TO 4.9 ACRES	5 TO 9.9 ACRES	10 TO 14.9 ACRES	15 TO 29.9 ACRES	30 TO 49.9 ACRES	50+ ACRES	UNKNOWN	NOT APPLICABLE	TOTAL
Hydroponics	3.77% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	1.89% 1	94.34% 50	53
Aquaponics	1.96% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	1.96% 1	96.08% 49	51

#	OTHER TECHNIQUES (PLEASE SPECIFY)	DATE
1	We are actively considering hydroponics and aeroponic systems.	12/10/2018 3:34 PM

## Q7 If you sell your products, who do you sell them to? (Check all that apply.)

Answered: 70 Skipped: 2

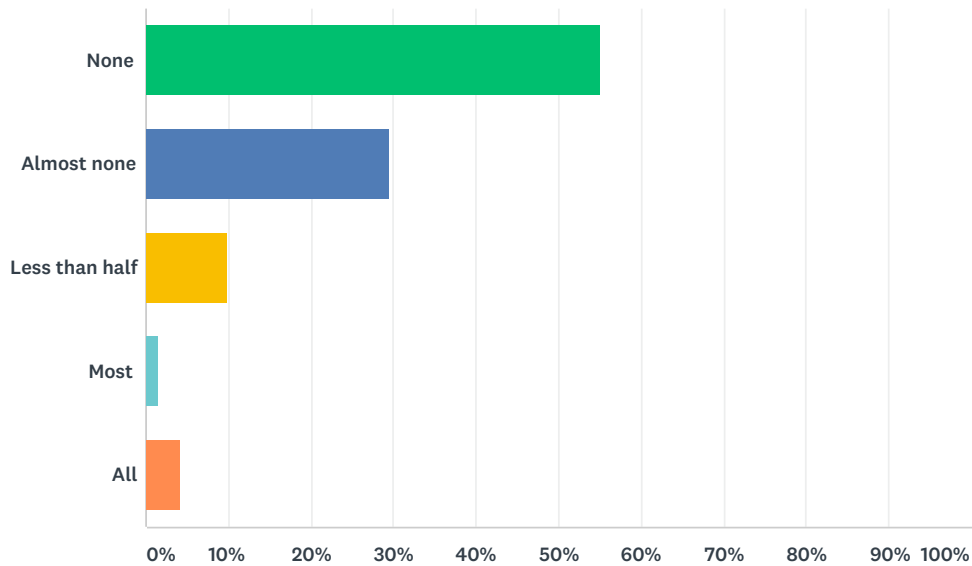


ANSWER CHOICES	RESPONSES	
I don't sell my products	52.86%	37
Direct to consumers (e.g., farmers' market, you-pick, farm stand, CSA program)	35.71%	25
Wholesale	12.86%	9
Processing	4.29%	3
Other (please specify)	17.14%	12
Total Respondents: 70		

#	OTHER (PLEASE SPECIFY)	DATE
1	Have plans to sell next season	12/30/2018 5:22 PM
2	My horses eat the hay	12/20/2018 4:53 PM
3	Neighboring Farms	12/13/2018 12:12 PM
4	lumber mill	12/12/2018 4:36 PM
5	we only sell eggs	12/11/2018 9:19 PM
6	Forest land: haven't needed to sell in a while.	12/11/2018 3:50 PM
7	We trade our hay to the farmer for cutting it.	12/10/2018 2:40 PM
8	Donate products to non profits to sell as fund raisers	12/4/2018 4:51 PM
9	Horses are sold to client and other outside customers. Hay is consumed by stock	12/4/2018 1:36 PM
10	Direct to consumers, through word-of-mouth, pick-up is at our home	12/1/2018 1:22 PM
11	I do not grow anything for sale	11/30/2018 4:14 PM
12	hay is baled by a local farmer	11/29/2018 5:04 PM

## Q8 Please estimate the amount of your total household income supported by your farm or orchard (Select one.)

Answered: 71 Skipped: 1

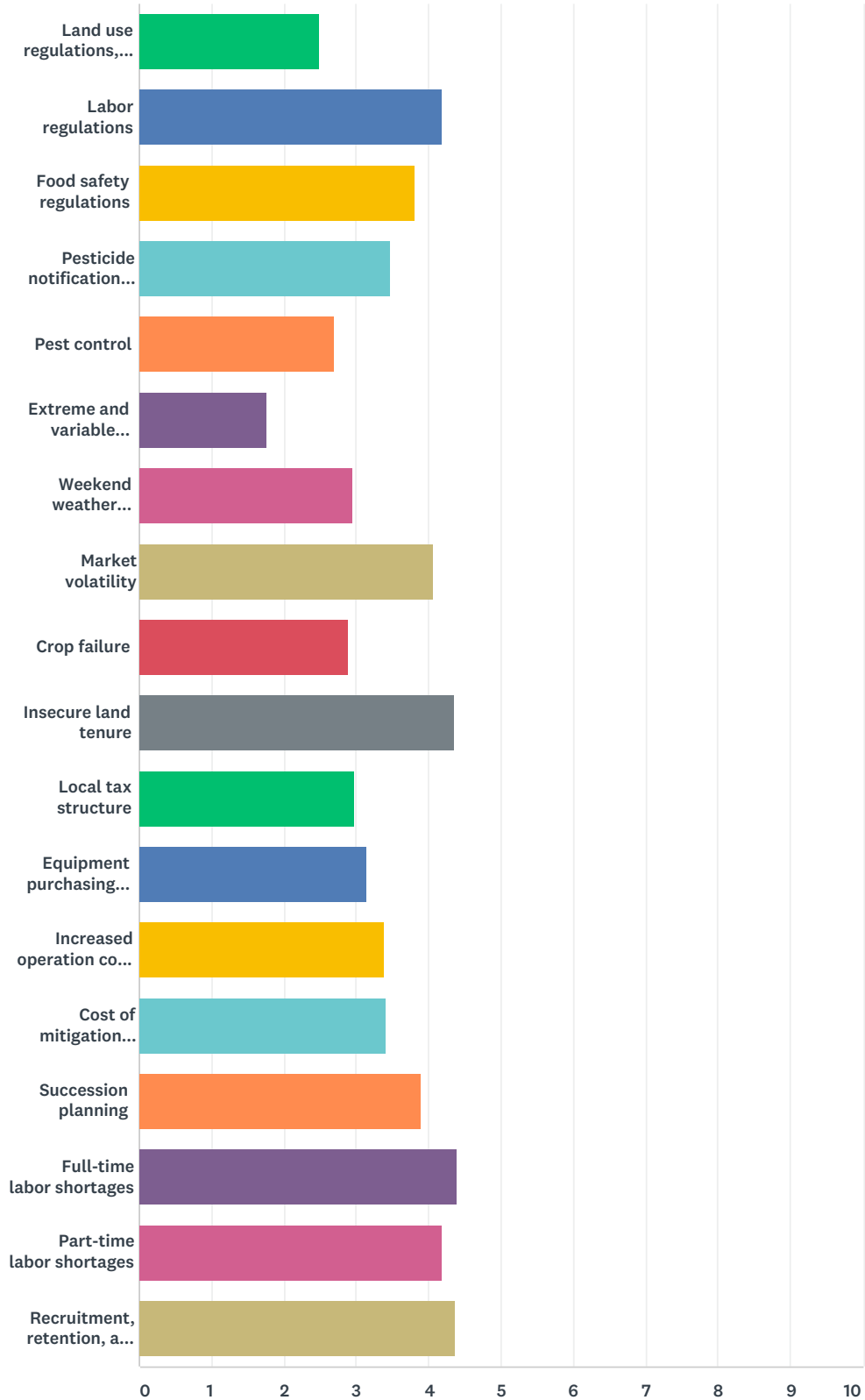


ANSWER CHOICES	RESPONSES	
None	54.93%	39
Almost none	29.58%	21
Less than half	9.86%	7
Most	1.41%	1
All	4.23%	3
TOTAL		71

Q9 Which of the following have the largest impacts on your success?  
(Use the numbers 1 to 5 to rank each impact in terms of importance, with  
1 being most important, and 5 being not important.)

Answered: 61   Skipped: 11

## Harvard Agricultural Survey



	1 - MOST IMPORTANT	2 - IMPORTANT	3 - NEUTRAL	4 - LESS IMPORTANT	5 - NOT IMPORTANT	TOTAL	WEIGHTED AVERAGE
Land use regulations, such as zoning	39.29% 22	21.43% 12	14.29% 8	1.79% 1	23.21% 13	56	2.48
Labor regulations	3.70% 2	11.11% 6	14.81% 8	3.70% 2	66.67% 36	54	4.19

## Harvard Agricultural Survey

Food safety regulations	11.54% 6	11.54% 6	15.38% 8	7.69% 4	53.85% 28	52	3.81
Pesticide notification laws	16.36% 9	14.55% 8	16.36% 9	10.91% 6	41.82% 23	55	3.47
Pest control	22.22% 12	31.48% 17	20.37% 11	7.41% 4	18.52% 10	54	2.69
Extreme and variable weather	51.72% 30	34.48% 20	6.90% 4	0.00% 0	6.90% 4	58	1.76
Weekend weather conditions	16.98% 9	32.08% 17	18.87% 10	3.77% 2	28.30% 15	53	2.94
Market volatility	3.64% 2	12.73% 7	18.18% 10	5.45% 3	60.00% 33	55	4.05
Crop failure	24.53% 13	26.42% 14	11.32% 6	11.32% 6	26.42% 14	53	2.89
Insecure land tenure	1.92% 1	9.62% 5	11.54% 6	5.77% 3	71.15% 37	52	4.35
Local tax structure	25.00% 14	26.79% 15	8.93% 5	3.57% 2	35.71% 20	56	2.98
Equipment purchasing and/or maintenance	11.11% 6	33.33% 18	18.52% 10	5.56% 3	31.48% 17	54	3.13
Increased operation costs (e.g., fuel, electricity, hourly wage, insurance)	12.73% 7	18.18% 10	21.82% 12	12.73% 7	34.55% 19	55	3.38
Cost of mitigation (e.g., irrigation, row covers/hoop houses, increased use of pesticides and/or fertilizers)	7.27% 4	25.45% 14	20.00% 11	14.55% 8	32.73% 18	55	3.40
Succession planning	5.56% 3	12.96% 7	20.37% 11	9.26% 5	51.85% 28	54	3.89
Full-time labor shortages	1.89% 1	5.66% 3	15.09% 8	5.66% 3	71.70% 38	53	4.40
Part-time labor shortages	3.70% 2	7.41% 4	18.52% 10	7.41% 4	62.96% 34	54	4.19
Recruitment, retention, and training of seasonal employees	0.00% 0	5.66% 3	20.75% 11	3.77% 2	69.81% 37	53	4.38

#	OTHER (PLEASE SPECIFY)	DATE
1	Increased deer pressure, including because commercial orchards qualify for fencing grants and I don't. Also can see impact of road salting on edge of orchard	12/30/2018 11:24 AM
2	indiscriminate pesticide use	12/11/2018 3:51 PM
3	Availability of water.	12/6/2018 3:52 PM
4	I do not have a commercial operation	11/30/2018 4:14 PM



## Q10 What could the Town of Harvard do to support your viability?

Answered: 32 Skipped: 40

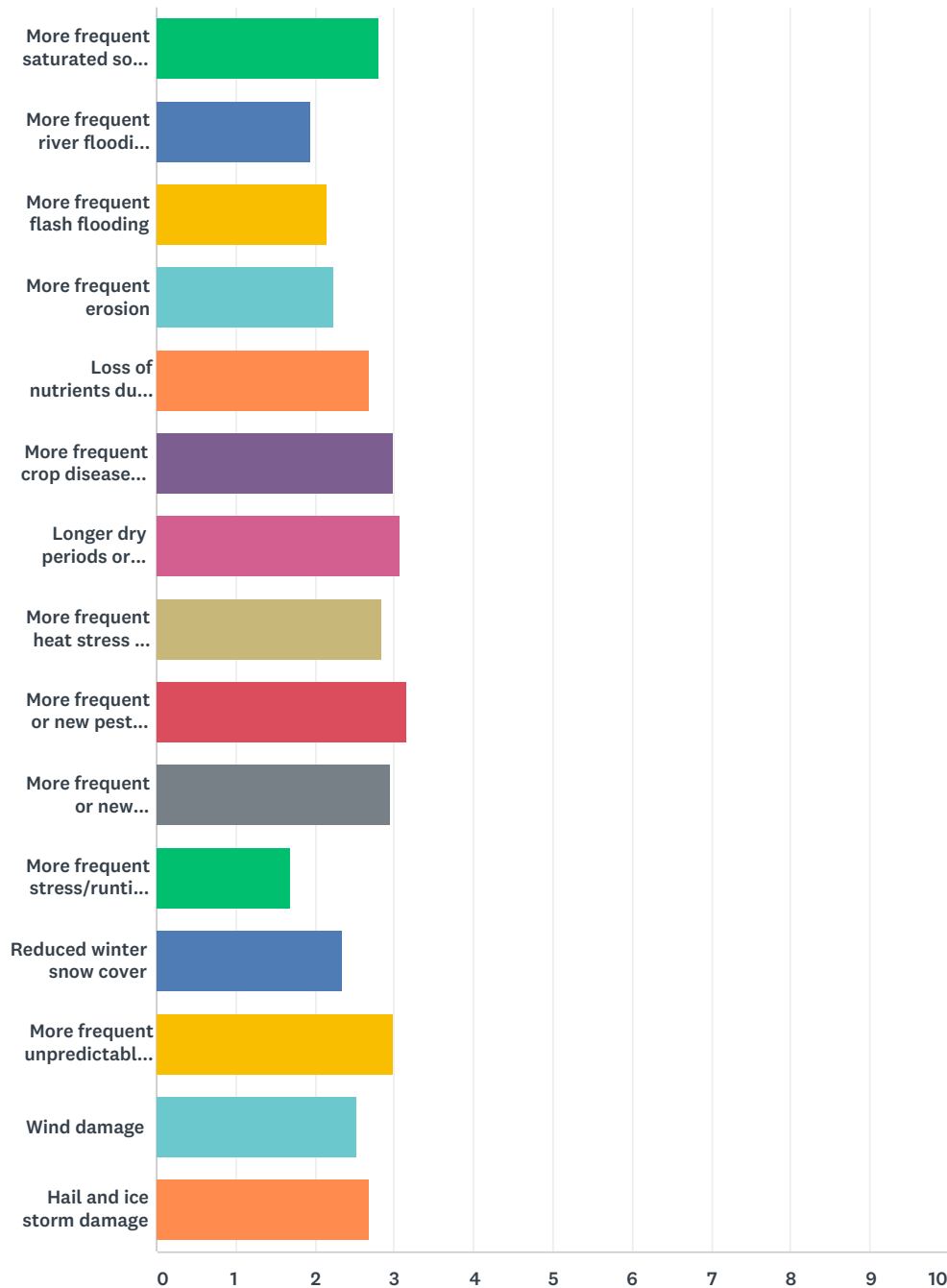
#	RESPONSES	DATE
1	Stop salting roads and Help stop Devens-Barnum Road area in particular and other abutting areas especially the major Train Cargo/Truck Distribution area and the Output of Waste, Gases, Noise, Pollution	12/30/2018 7:22 PM
2	Tax breaks for farms less than five acres in size.	12/30/2018 7:10 PM
3	Clarify regulatons related to the use of home kitchens vs commercial kitchens for the sale of products like hit oepper/fruit jam. Is this regulated by state or local jurisdiction. Rules are not easy to find or decipher.	12/30/2018 5:26 PM
4	Work to preserve water for households and agriculture over lawns. Minimize salt use on roads whenever possible.	12/30/2018 11:24 AM
5	Property taxes in Harvard are a big expense for us as an agricultural business. Not sure if there are ways the town could create a different tax structure that would lesson this burden. While we do have land listed in chapter 61A, we also have a farm store, storage buildings, seasonal labor camp and several residences that management reside in year round. The current (and predicted future) tax rate is not something that will sustain an agricultural business. It is something we have great concerns about when thinking about the town of Harvard and our viability.	12/26/2018 10:18 PM
6	Ban neonicotinoids	12/23/2018 9:20 AM
7	allow farm use buildings & not make them commercial use	12/20/2018 12:42 PM
8	Not build a new school	12/17/2018 2:15 PM
9	The 61A tax relief is nice, those support farmers well. It is tough to be a farm in a town that has gotten more and more developed, urban, and progressive. Example - laws regulating things like the particular size/dimensions of a driveway. Makes sense in an urban setting, not on a farm. Driveways aren't permanent on land that is farmed, they get moved to go around farming activities.	12/13/2018 12:43 PM
10	keep on the steady course that they are currently on.	12/12/2018 9:59 PM
11	Nothing	12/12/2018 12:41 PM
12	reduce property taxes	12/11/2018 9:20 PM
13	Keep my forestland as Chapter 6.	12/11/2018 3:53 PM
14	limit or ban pesticides harmful for polinators	12/11/2018 3:51 PM
15	Help people who have less than five acres with tax incentives	12/11/2018 9:09 AM
16	continue carbon footprint reduction	12/10/2018 11:25 PM
17	Tax breaks, year round signage, tractor crossing signs, advertising local farms, make conservation land available farmers, free water testing of ponds and wetlands (water we use for irrigation).	12/10/2018 8:33 PM
18	We, as a small farm, must be included in the town's agritourism overlay district. This is mission-critical for our farm's viability. We also would like to receive strenghted town elder support for both commercial hemp and cannabis.	12/10/2018 3:37 PM
19	Implement town-wide water use guidelines, specifically banning lawn irrigation when draught conditions occur, setting vehicle idling limits (in front of The General Store, or at Prospect Hill pull-over).	12/6/2018 3:52 PM
20	Less stringent regulations on land use.	12/6/2018 1:00 PM
21	Help finance a shallow well in the Community Garden on Littleton Rd.	12/5/2018 4:49 PM
22	Give permission to firewood folks to harvest selected trees on conservation properties	12/4/2018 4:54 PM
23	continue to understand that horses are, or can be, a viable agricultural product. In addition it keeps lands in agricultural usage which could change to other products ( ie..food products ) over time but without this current usage that hold the land open then the land might fall into development which would forever remove those options	12/4/2018 1:40 PM

## Harvard Agricultural Survey

24	Do not require Farm Stands to be subject to § 125-39, Site standards. Allow small agricultural operations to have roadside stands not subject to standard setbacks.	12/3/2018 8:54 PM
25	lower our taxes	12/2/2018 9:38 AM
26	-Have tree warden consult for proper management of woodland/farming balance. -offer water testing recommendations because of the weird water in Harvard--what is "normal" here -offer tips for gardening and lawn management without pesticides or limited pesticide use. set goals so town residents can aim for those targets	12/1/2018 10:03 PM
27	Maintain what we have in laws and regs that make it easy to do this without unreasonable restriction or limits.	12/1/2018 10:10 AM
28	lower my taxes	11/30/2018 5:44 PM
29	Assure zoning is compatible with continued - and even expanded - agricultural uses.	11/30/2018 4:14 PM
30	Mitigate snowmobile use on conservation land as this type of pollution (noise and air) contributes to the destabilization of the natural environment supporting the whole ecosystem that makes farming possible in Harvard.	11/29/2018 9:35 PM
31	Decrease unwarranted land use regulation	11/29/2018 9:30 PM
32	Cull the deer. Encourage foxes to kill the voles.	11/29/2018 8:08 PM

Q11 The following is a list of some weather challenges that farms and orchards in the Northeast have experienced. When you think about the impact they have had on your own farm or orchard, how concerned are you about these challenges? (Use the numbers 1 to 4 to rank each challenge in terms of concern, with 1 being no concern, and 4 being highly concerned.)

Answered: 59 Skipped: 13



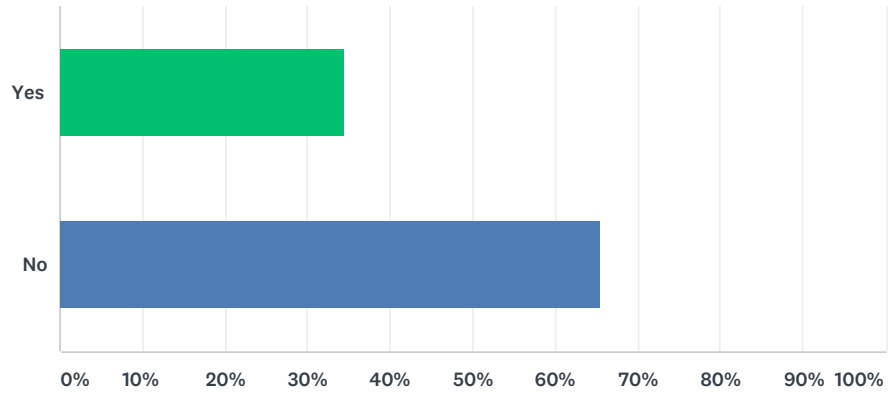
	1 - NO CONCERN	2 - LITTLE CONCERN	3 - SOME CONCERN	4 - HIGHLY CONCERNED	TOTAL	WEIGHTED AVERAGE
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## Harvard Agricultural Survey

More frequent saturated soils and ponded water	13.56% 8	13.56% 8	50.85% 30	22.03% 13	59	2.81
More frequent river flooding events	49.12% 28	15.79% 9	26.32% 15	8.77% 5	57	1.95
More frequent flash flooding	37.50% 21	23.21% 13	25.00% 14	14.29% 8	56	2.16
More frequent erosion	28.57% 16	32.14% 18	26.79% 15	12.50% 7	56	2.23
Loss of nutrients due to heavy and abundant precipitation	17.86% 10	16.07% 9	46.43% 26	19.64% 11	56	2.68
More frequent crop diseases related to weather	14.04% 8	7.02% 4	43.86% 25	35.09% 20	57	3.00
Longer dry periods or drought	12.28% 7	8.77% 5	38.60% 22	40.35% 23	57	3.07
More frequent heat stress on my crops	16.36% 9	12.73% 7	41.82% 23	29.09% 16	55	2.84
More frequent or new pest pressures related to weather (e.g., insects, fungus, disease)	16.95% 10	3.39% 2	27.12% 16	52.54% 31	59	3.15
More frequent or new weed/invasives pressure related to weather	15.79% 9	10.53% 6	35.09% 20	38.60% 22	57	2.96
More frequent stress/runtime on cold storage/refrigeration due to increased temperatures	55.56% 30	25.93% 14	12.96% 7	5.56% 3	54	1.69
Reduced winter snow cover	26.32% 15	22.81% 13	40.35% 23	10.53% 6	57	2.35
More frequent unpredictable seasonal temperatures (early bud break, early or late frosts)	12.28% 7	12.28% 7	38.60% 22	36.84% 21	57	3.00
Wind damage	21.05% 12	24.56% 14	35.09% 20	19.30% 11	57	2.53
Hail and ice storm damage	22.03% 13	16.95% 10	32.20% 19	28.81% 17	59	2.68

**Q12 Have you made any changes on your farm or orchard because of an experience with, or concern about, any of these weather challenges?  
(Select one.)**

Answered: 58 Skipped: 14



ANSWER CHOICES	RESPONSES	
Yes	34.48%	20
No	65.52%	38
TOTAL		58

## Q13 If yes, what changes have you made?

Answered: 21 Skipped: 51

#	RESPONSES	DATE
1	Drainage	1/1/2019 9:18 PM
2	None made to date	1/1/2019 2:40 PM
3	Increased electrical supply for animals during winter months for water. Purchasing more hay to lay down over mud to allow animals dry areas to stand and lay.	12/30/2018 7:16 PM
4	To maintain fields, increased rotation and resting of fields	12/30/2018 8:33 AM
5	We put in a well at the home farm this year with the help of a grant through NRCS.	12/26/2018 10:18 PM
6	Hay requires dry weather once cut until baled. No way to change that.	12/20/2018 5:01 PM
7	trying to obtain more disease resistant varieties of trees	12/20/2018 12:49 PM
8	Placement of crops to avoid spots where wind is bad.	12/13/2018 12:46 PM
9	More serious pruning. Rainwater storage (cisterns)	12/11/2018 9:23 PM
10	added more hives to make up for lost volume due to erroneous effort in eliminating plants that we introduced to support pollinators	12/11/2018 3:59 PM
11	increase in fungicide application to fruit trees	12/10/2018 11:29 PM
12	Put energy into other on farm activities to bring in a profit	12/10/2018 8:35 PM
13	Water drainage systems and the investigatory work to assess a new deep well and new aquaponics and aeroponic systems.	12/10/2018 3:43 PM
14	I'm very mindful of water use.	12/6/2018 3:55 PM
15	Using more compostables in my garden plot and raising beds to be above water that collects from heavy rains.	12/5/2018 4:54 PM
16	Improved drainage overall, increased mulching for water retention during dry times to decrease need for watering.	12/3/2018 10:58 AM
17	changed where we garden and added water filtration to outside water lines. More often test soil quality	12/1/2018 10:07 PM
18	Revised planting schedule. Variety selection.	11/30/2018 9:12 PM
19	Had to plant new plum trees bc of increased pest invasion killed trees.	11/30/2018 8:18 AM
20	No longer growing brassicas given need to frequently treat plants due to increased presence of cabbage moths	11/29/2018 9:42 PM
21	Tree harvests have been delayed for months at a time due to weather issues (ground not freezing as it used to)	11/29/2018 9:36 PM

## Q14 Are there any changes you are planning to make?

Answered: 25 Skipped: 47

#	RESPONSES	DATE
1	Tree maintenance is expensive. Need a forestry plan. Hard work fighting the bittersweet, grapevine and poison ivy. Trying to selectively cull and removing be invasives.	1/2/2019 4:17 PM
2	Drainage	1/1/2019 9:18 PM
3	Not at this time	1/1/2019 2:40 PM
4	Attempting to clear more land at an increased elevation to allow better water drainage during rainy months.	12/30/2018 7:16 PM
5	not as of now...	12/30/2018 6:32 PM
6	No	12/30/2018 11:27 AM
7	We are planning to scale down our apple production in 2019 due to the lack of financial return we have seen over the past couple years. We do plan to plant more vegetable crops, and have certain plots put into rotation.	12/26/2018 10:18 PM
8	no	12/20/2018 5:01 PM
9	down-size wholesale production due to falling price returns	12/20/2018 12:49 PM
10	No	12/17/2018 2:19 PM
11	no	12/12/2018 10:11 PM
12	No	12/12/2018 12:44 PM
13	None now	12/11/2018 9:23 PM
14	if we continue to eradicate pollen producing plants, we will be forced to quit	12/11/2018 3:59 PM
15	Currently the orchard is planted with a variety of tradition peach trees. The white peaches were attacked by bugs and disease this year. I am currently researching to find more disease resistant species and will plant 6 - 10 trees in the spring	12/11/2018 9:17 AM
16	spray even more	12/10/2018 11:29 PM
17	Installation of a greenhouse with aeroponic or aquaponic system along with a new deep well being dug.	12/10/2018 3:43 PM
18	None yet	12/6/2018 1:01 PM
19	More raised beds	12/5/2018 4:54 PM
20	Treat bees with medications I do not like to use. I have been organic for several years but hive losses not sustainable without treatments. One three pound nuc with queen coats \$125 plus.	12/4/2018 5:00 PM
21	More cover crop use during the growing season. Grow more disease resistant varieties.	12/3/2018 9:05 PM
22	No	12/2/2018 9:40 AM
23	We have considered eliminating more pine trees on property because they do not deal well with stress. All the elm trees died. So, we are looking at different kinds of trees to replace. This changes where we might place livestock on the property and where we garden	12/1/2018 10:07 PM
24	Drip irrigation	11/30/2018 9:12 PM
25	We're waiting for availability of low impact logging equipment in New England. Areas in the south have already adapted high flotation/low impact harvesters, feller-butchers, etc, but not locally.	11/29/2018 9:36 PM

## Q15 What changes would you like to make but can't?

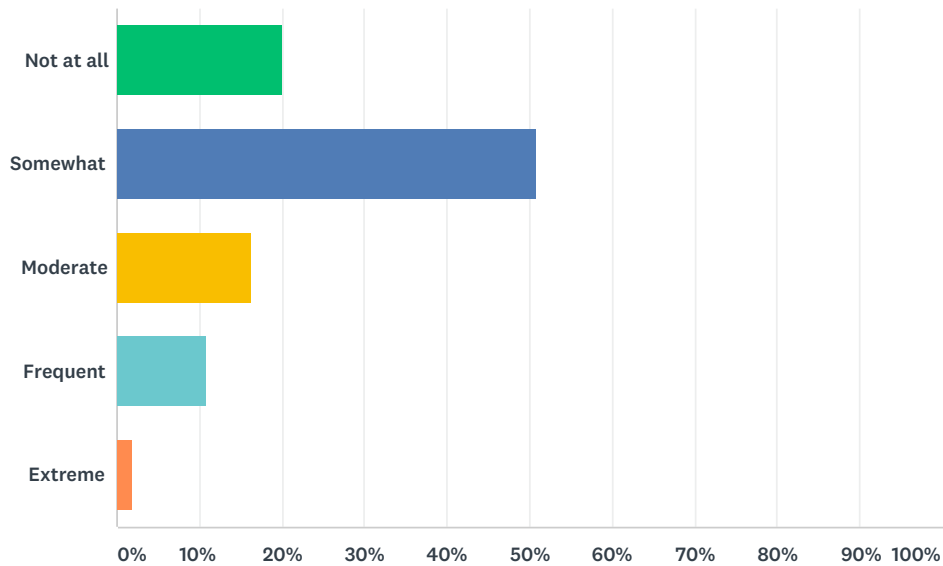
Answered: 19 Skipped: 53

#	RESPONSES	DATE
1	Likely will be restricted in what we will accomplish due to cost / we are not running a business and have not put land into forestry - we pay a high land cost even though land is not subdividable.	1/2/2019 4:17 PM
2	None at this time	1/1/2019 2:40 PM
3	Build a large barn to house animals with running water and electricity.	12/30/2018 7:16 PM
4	1) reduce CO2 levels to 280 ppm (currently > 400 ppm) 2) remove all invasive fauna/flora (not counting humans!)	12/30/2018 6:32 PM
5	Irrigation	12/30/2018 11:27 AM
6	We need to do some farm maintenance projects, and update some mechanical equipment to more energy efficient models to help lesson our energy expenses.	12/26/2018 10:18 PM
7	weather	12/20/2018 5:01 PM
8	get a profitable return on a per acre basis	12/20/2018 12:49 PM
9	No	12/17/2018 2:19 PM
10	none	12/12/2018 10:11 PM
11	NA	12/12/2018 12:44 PM
12	SOlar panel installation	12/11/2018 9:23 PM
13	allow loosestrife, black locust,and knotweed etc. to exist in controlled areas or beekeeping will be lost.	12/11/2018 3:59 PM
14	Move forward to take advantage of the new agritourism overlay district.	12/10/2018 3:43 PM
15	nothing comes to mind	12/6/2018 1:01 PM
16	Easier access to water	12/5/2018 4:54 PM
17	additional help	12/2/2018 9:40 AM
18	none	12/1/2018 10:07 PM
19	Cost of logging has gone up and ability to sell low quality wood for biomass fuel has gone down due to regulations barring or limiting biomass energy plants.	11/29/2018 9:36 PM



## Q16 Extreme weather events in recent years have affected my long-term farm/agricultural/forestry management goals. (Select one)

Answered: 55 Skipped: 17



ANSWER CHOICES	RESPONSES
Not at all	20.00% 11
Somewhat	50.91% 28
Moderate	16.36% 9
Frequent	10.91% 6
Extreme	1.82% 1
TOTAL	55

#	COMMENT:	DATE
1	The ice storm caused a ton of damage to the trees and clean up is expensive. Last year wind and storms took down mature trees. Keeping up with forest maintenance is difficult.	1/2/2019 4:17 PM
2	No experience as we have been living in Harvard for only 1 year.	1/1/2019 2:40 PM
3	Increased rain caused us to not be able to split as much firewood as we needed. And our felled trees were covered in fungus and are not burning well due to the wet fall season this year.	12/30/2018 7:16 PM
4	Crop loss due to late April freeze. Crop loss due to Aug 4 hail storm. Presence of fire blight. Note -- abandoned orchards can harbor fire blight which can infect commercial and home orchards	12/30/2018 11:27 AM
5	Every season we have to adapt on the fly when it comes to weather.	12/26/2018 10:18 PM
6	more tree blow down than before. Firewood from blown over or down trees than from harvested trees is a much higher percentage of my total crop.	12/12/2018 10:11 PM
7	Apple trees (Herman Macs) don't hold apples in You Pick seasons. Had to be cut down.	12/12/2018 12:44 PM
8	More frequent ice/wind storms & less stable root systems have caused loss of large oaks, maples & pines.	12/11/2018 3:57 PM
9	just a hobby, not goal oriented	12/10/2018 11:29 PM
10	The drought alone 2 summers ago cost us over \$5500 with no state, or other, relief.	12/10/2018 3:43 PM

## Harvard Agricultural Survey

11	It has changed the water availability for our turn outs and the pasture turnouts grow less grass therefore requiring more supplied feed	12/4/2018 1:43 PM
12	As I am not financially dependent on my crop, I can experiment with new techniques and risk losing a harvest	11/29/2018 9:42 PM

## Q17 Is there anything else you'd like to share related to the content of this survey?

Answered: 18 Skipped: 54

#	RESPONSES	DATE
1	I believe pond on property is used by Fire Dept for filling tanker. Neighbors have been drawing water from pond without prior permission. I may install gate to limit access in future	1/1/2019 2:42 PM
2	Decline in bee (native and honey) populations. Perhaps a school project to build native bee houses? Have you discussed safety of pick your own orchards from tick-borne disease? (maybe because most spray the populations are controlled -- education for visitors?) Outreach/education to town re protecting water supply (dangers of spraying, of flushing meds, of not caring for septic systems)	12/30/2018 11:30 AM
3	It is a lovely sentiment to be looking into the effects of weather on farms/agriculture in town. I don't see the town being able to help agricultural businesses when it comes to weather related impacts, but this survey could be a good ice breaker for some bigger conversations.	12/26/2018 10:18 PM
4	no	12/20/2018 5:02 PM
5	No	12/17/2018 2:19 PM
6	no	12/12/2018 10:11 PM
7	We have seen great changes in our forest over the last 18 years. The hemlocks are mostly dead. A lot of trees have come down and continue to in bad weather. The soil is eroding and since we live on the pond, we fear more will end up in the pond and harming it. The loss of trees lets in more of the heat from the sun in the summer thus increasing energy use for air conditioning. We do have solar panels to help offset that need the best it can. Mostly, it is sad to see how much of the forest we are losing. The few apple trees we do have were diseased the last few years and we are not sure if they will come back and if climate change is the reason.	12/12/2018 8:47 PM
8	No	12/12/2018 12:44 PM
9	Weather is causing more damage & increases in insect infestations.	12/11/2018 3:59 PM
10	The Right-To-Farm policy is really not oriented to helping farms. It is used to protect the town. We need a major effort to help farms with the agri-tourism overlay district opportunity as well as embracing the cannabis cultivation and hemp cultivation market opportunities. Lastly, historic or heritage farms should also be supported from a cultural perspective which adds additional clout for agritourism effort.	12/10/2018 3:47 PM
11	We need water use guidelines codified in Harvard!	12/6/2018 3:56 PM
12	Over population of deer coupled with orchard fencing is driving deer to invade vegetable gardens. They are eating green bean plants and tomato plants. They are also carriers of ticks which is quite serious for outside workers.	12/6/2018 1:03 PM
13	Happy you are doing this for our community! Resilience is important.	12/5/2018 4:55 PM
14	Thanks for the opportunity to respond. There are several bee keepers in Harvard you should be aware of.	12/4/2018 5:01 PM
15	no	12/4/2018 1:43 PM
16	Agriculture has always been a necessity in modern society, but it will be even more vital due to the effects of climate change. It's great to see that the town of Harvard is concerned what these effects are having and will continue to have on farmers and other agricultural operations in the future. I look forward to further steps the town plans to take to not only preserve, but to encourage and increase agricultural stewardship.	12/3/2018 10:01 PM
17	These are good questions but it's important to take into consideration the broader landscape and what's adjacent to farms, downstream and downwind,	11/29/2018 9:45 PM
18	I would have liked to see more questions related to how this particular town deals with agriculture and farming, not just climate related. Making it easier for farmers and forest owners to operate in an increasingly regulated environment t would be welcomed.	11/29/2018 9:38 PM

## Q18 How did you hear about this survey?

Answered: 15 Skipped: 57

#	RESPONSES	DATE
1	Nextdoor	1/1/2019 9:19 PM
2	Mailing	1/1/2019 2:42 PM
3	Nextdoor	12/30/2018 7:16 PM
4	NextDoor Harvard	12/30/2018 6:33 PM
5	Next Door website	12/30/2018 5:29 PM
6	MVP sub-committee, chapter letter	12/26/2018 10:18 PM
7	direct mail	12/24/2018 9:09 PM
8	Mailing	12/23/2018 9:22 AM
9	Harvard MVP steering committee	12/20/2018 5:02 PM
10	Harvard Press	12/17/2018 2:19 PM
11	Letter in the mail.	12/13/2018 12:47 PM
12	letter in the mail	12/12/2018 10:11 PM
13	We have an agricultural designation for recreation so we don't use it for farming. It is for this reason we received the survey	12/12/2018 8:47 PM
14	Mail from Harvard MVP Steering Committee	12/12/2018 4:39 PM
15	Email	12/12/2018 12:44 PM

**Q19 If you would like to receive an electronic copy of the report that emerges from this program, please enter your email address below. We will not share, disclose, or use your email address in any other way.**

Answered: 22   Skipped: 50

#	RESPONSES	DATE
1	Shelbycatalina@gmail.com	1/2/2019 4:17 PM
2	tom77met@gmail.com	1/1/2019 2:42 PM
3	jessicacabral.e@gmail.com	12/30/2018 7:16 PM
4	brian_mcclain@vrtx.com	12/30/2018 6:33 PM
5	chris@westwardorchards.com	12/26/2018 10:18 PM
6	rfs@whitneylanefarms.com	12/18/2018 4:29 PM
7	Yes	12/17/2018 2:19 PM
8	bealeco@verizon.net	12/12/2018 10:11 PM
9	esachsleicher@gmail.com	12/12/2018 8:47 PM
10	No	12/12/2018 12:44 PM
11	mmintz@gmail.com	12/12/2018 8:06 AM
12	bbgram78@gmail.com	12/11/2018 3:59 PM
13	kate@kk1335.com	12/11/2018 1:54 PM
14	studio@lindahoffman.com	12/10/2018 8:35 PM
15	pdw001@charter.net	12/10/2018 3:47 PM
16	glenn.mitchell@umb.edu	12/10/2018 1:42 PM
17	mlcardenas@charter.net	12/6/2018 3:56 PM
18	Steve.Nigzus@gmail.com	12/6/2018 1:03 PM
19	pwfrederick@gmail.com	12/5/2018 4:55 PM
20	aceiii4689@aol.com	12/4/2018 1:43 PM
21	zacharyzenk@gmail.com	12/3/2018 10:01 PM
22	Tomgormley358@gmail.com	12/1/2018 10:14 AM