



United States Department of Agriculture
National Agricultural Statistics Service

Pacific Region – Hawaii
Commercial Agricultural Production
Expansion



The Pacific Region Includes the States of CA, HI and NV
In Cooperation with the Hawaii Departments of Agriculture

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HAWAII COMMERCIAL AGRICULTURAL EXPANSION SURVEY HIGHLIGHTS

The Hawaii Commercial Agricultural Expansion Survey was conducted on operations that historically have at least \$50,000 in estimated gross value of production. The goal of this survey was to assess Hawaii agricultural producers' interest in expanding their commercial production and identify barriers to expansion. Results show that 66.9 percent of operations are interested in expansion within the next 6-9 months.

The most important factor in decision to expand production was to increase profit, reported by 79.2 percent of operations, followed by engaging in food self-sufficiency and creating local employment opportunities, reported by 43.5 percent of operations. The most expected result from expansion was additional employment opportunities, reported by 63.9 percent of operations, followed by increased direct business activities with suppliers and buyers, reported by 59.3 percent of operations. The greatest barrier or challenge to expansion as reported by operations was high cost of production, at 57.5 percent, followed by not enough access to labor, at 41.4 percent. The most needed technology to increase productivity was more advanced farm equipment, at 64.9 percent, followed by modern greenhouses/controlled environment agriculture, at 33.7 percent.

The reported average margin of profit over the past 3 years was between 0 to 4.99% on 27.6 percent of operations, followed by a negative profit margin on 19.1 percent of operations. Local markets were reported as the prevalent market for operations of commercial agricultural production at 88.9 percent, followed by U.S mainland at 39.3 percent, and International markets at 11.3 percent.

Based on the scenario of operations receiving \$100,000 grants, the following are the expected impacts. The most likely increase in total gross value of sales at end of 12-month period was 0 to 4.99% on 26.3 percent of operations, followed by over 25% on 21.8 percent of operations. The most likely increase in additional employees added to payroll was 1 to 4 on 70.6 percent of operations, followed by none on 20.2 percent of operations. The most likely amount of time required for expansion to begin was less than 1 month on 32.2 percent of operations, followed by 1 to 2 months on 23.4 percent of operations.

Table 1. County Summary (>= \$50,000 Estimated Gross Value of Production) : 2020

| Item | State | Hawaii | Honolulu | Kauai | Maui |
|---|---------------|---------------|---------------|---------------|---------------|
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Farms..... | 1,062 | 651 | 188 | 88 | 135 |
| Farm Type by largest gross value of sales ¹ | | | | | |
| Aquaculture..... | 37 | 18 | 16 | (D) | (D) |
| Cattle and calves..... | 253 | 188 | 11 | 32 | 22 |
| Coffee and tea..... | 115 | 106 | - | 4 | 5 |
| Floriculture and nursery..... | 208 | 102 | 60 | 7 | 39 |
| Fruits and nuts..... | 255 | 156 | 37 | 20 | 42 |
| Hogs ² | (D) | (D) | (D) | (D) | (D) |
| Landscaping..... | 25 | 11 | 11 | 3 | - |
| Poultry ² | (D) | (D) | (D) | (D) | (D) |
| Sheep and goats ² | (D) | (D) | (D) | (D) | (D) |
| Vegetables and melons..... | 107 | 45 | 36 | 8 | 18 |
| Other..... | 62 | 25 | 17 | (D) | (D) |
| Factors in operation's decision to expand commercial agricultural production: | | | | | |
| Achieve vertical integration in commercial production..... | 158 | 76 | 36 | 15 | 31 |
| Engage in food self-sufficiency and create local employment opportunities..... | 462 | 245 | 88 | 51 | 78 |
| Increase market share..... | 338 | 207 | 65 | 25 | 41 |
| Increase profit..... | 841 | 521 | 143 | 72 | 105 |
| Increase competitiveness with imported commodities..... | 258 | 142 | 54 | 21 | 41 |
| Reduce cost of production and transportation..... | 354 | 225 | 53 | 34 | 42 |
| Other..... | 224 | 140 | 38 | 11 | 35 |
| Operation's expected results from expanding commercial agricultural production: | | | | | |
| Additional employment opportunities..... | 679 | 410 | 128 | 54 | 87 |
| Additional tax revenues for county and state governments..... | 594 | 361 | 102 | 51 | 80 |
| Create potential business opportunities for related/allied industries such as services, processing, shipping, etc. | 164 | 97 | 17 | 13 | 37 |
| Higher wages for current employees..... | 414 | 247 | 80 | 36 | 51 |
| Increased consumption and business activities in regional economy and beyond..... | 475 | 272 | 79 | 47 | 77 |
| Increased direct business activities with suppliers and buyers..... | 630 | 390 | 105 | 56 | 79 |
| Other..... | 169 | 89 | 39 | 12 | 29 |
| Barriers or challenges to expanding commercial agricultural production: | | | | | |
| Access to ag infrastructure..... | 236 | 148 | 35 | 15 | 38 |
| Climate change..... | 225 | 125 | 44 | 18 | 38 |
| Cost of shipping/transportation..... | 417 | 265 | 55 | 37 | 60 |
| Government regulations..... | 303 | 180 | 56 | 27 | 40 |
| High cost of production..... | 611 | 356 | 127 | 48 | 80 |
| Local tax burden..... | 170 | 103 | 36 | 13 | 18 |
| Marketing..... | 248 | 170 | 37 | 25 | 16 |
| Not enough access to adequate water..... | 233 | 126 | 34 | 16 | 57 |
| Not enough access to capital..... | 389 | 232 | 70 | 33 | 54 |
| Not enough access to labor..... | 440 | 234 | 111 | 35 | 60 |
| Not enough access to land..... | 289 | 186 | 52 | 27 | 24 |
| Not enough cash flow..... | 389 | 224 | 82 | 31 | 52 |
| Plant/animal diseases..... | 330 | 197 | 56 | 33 | 44 |
| Relatively low profit margin..... | 377 | 224 | 65 | 32 | 56 |
| Uncertainties due to COVID-19..... | 379 | 237 | 77 | 28 | 37 |
| Other..... | 184 | 118 | 28 | 10 | 28 |

See footnote(s) at end of table.

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Table 1. County Summary (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | State | Hawaii | Honolulu | Kauai | Maui |
|---|---------------|---------------|---------------|---------------|---------------|
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Technologies needed to increase productivity in commercial agricultural production: | | | | | |
| Block chain..... | 34 | 20 | 7 | (D) | (D) |
| Farm automation and robotics..... | 227 | 146 | 46 | 16 | 19 |
| Livestock technology..... | 187 | 129 | 17 | 27 | 14 |
| Modern greenhouses/controlled environment agriculture..... | 358 | 183 | 91 | 31 | 53 |
| More advanced farm equipment..... | 689 | 415 | 127 | 61 | 86 |
| Precision agriculture and artificial intelligence..... | 134 | 68 | 29 | 18 | 19 |
| Other..... | 149 | 97 | 17 | 6 | 29 |
| Average margin of profit over the past 3 years: | | | | | |
| Negative..... | 203 | 111 | 41 | 18 | 33 |
| 0 to 4.99%..... | 293 | 182 | 38 | 30 | 43 |
| 5 to 9.99%..... | 170 | 120 | 27 | 9 | 14 |
| 10 to 14.99%..... | 139 | 86 | 29 | 11 | 13 |
| 15 to 19.99%..... | 91 | 55 | 23 | 7 | 6 |
| 20 to 24.99%..... | 71 | 38 | 15 | 8 | 10 |
| Over 25%..... | 95 | 59 | 15 | 5 | 16 |
| Operation's current markets for majority of commercial agricultural production: | | | | | |
| Local..... | 944 | 555 | 177 | 86 | 126 |
| U.S. mainland..... | 417 | 316 | 34 | 28 | 39 |
| International markets..... | 120 | 96 | 14 | 6 | 4 |
| Land tenure status and duration of commercial agricultural operations: | | | | | |
| Short-term lease (< than 5 years) | 193 | 104 | 52 | 14 | 23 |
| Medium-term lease (5 to 19 years) | 150 | 89 | 24 | 20 | 17 |
| Long-term lease (20 or more years) | 332 | 222 | 56 | 29 | 25 |
| Own (freehold) | 577 | 361 | 82 | 35 | 99 |
| Land lessors by type: | | | | | |
| Federal government..... | 11 | (D) | (D) | (D) | (D) |
| State government..... | 254 | 179 | 51 | 13 | 11 |
| County government..... | 24 | 10 | (D) | 8 | (D) |
| Private entity (for-profit)..... | 363 | 207 | 74 | 43 | 39 |
| Private entity (non-profit)..... | 88 | 57 | 12 | (D) | (D) |
| Marketing outlets (wholesale and retail) of agricultural products sold: | | | | | |
| Brokers.....percent | 19.4 | 27.2 | 5.8 | 33.5 | 1.8 |
| CSAs.....percent | 0.3 | 0.1 | (Y) | 1.8 | 0.8 |
| Farmers markets.....percent | 1.7 | 2.1 | 0.7 | 1.5 | 3.1 |
| Food hubs.....percent | 0.2 | 0.3 | 0.1 | 0.1 | 0.6 |
| Meat packers.....percent | 1.4 | 2.4 | - | 0.4 | 1.9 |
| On-line/e-commerce.....percent | 8.4 | 8.5 | 8.4 | 8.5 | 7.4 |
| On-farm.....percent | 11.7 | 11.8 | 11.3 | 7.9 | 17.1 |
| Produce wholesalers.....percent | 17.7 | 14.2 | 25.6 | 9.3 | 22.6 |
| Restaurants/caterers.....percent | 2.0 | 1.3 | 2.7 | 2.5 | 3.3 |
| Roadside stands.....percent | 0.7 | 0.1 | 0.7 | 0.2 | 4.9 |
| Schools/hospitals/correction facilities.....percent | 0.2 | 0.2 | 0.1 | 0.1 | 0.3 |
| Supermarkets/groceries/supercenters.....percent | 17.6 | 7.3 | 34.3 | 18.0 | 19.8 |
| Other.....percent | 18.7 | 24.5 | 10.3 | 16.2 | 16.4 |

See footnote(s) at end of table.

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Table 1. County Summary (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | State | Hawaii | Honolulu | Kauai | Maui |
|--|---------------|---------------|---------------|---------------|---------------|
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Expected impact from \$100,000 grant scenario | | | | | |
| Increase in total gross value of sales at end of 12-month period: | | | | | |
| 0 to 4.99%..... | 279 | 157 | 62 | 22 | 38 |
| 5 to 9.99%..... | 164 | 102 | 28 | 16 | 18 |
| 10 to 14.99%..... | 169 | 105 | 30 | 18 | 16 |
| 15 to 19.99%..... | 111 | 59 | 22 | 13 | 17 |
| 20 to 24.99%..... | 107 | 72 | 16 | 6 | 13 |
| over 25%..... | 232 | 156 | 30 | 13 | 33 |
| Additional employees added to payroll: | | | | | |
| None..... | 214 | 155 | 28 | 13 | 18 |
| 1 to 4..... | 750 | 436 | 139 | 69 | 106 |
| 5 to 9..... | 81 | 51 | 17 | 6 | 7 |
| 10 or more..... | 17 | 9 | 4 | - | 4 |
| Time period required for expansion to begin: | | | | | |
| less than 1 month..... | 342 | 250 | 42 | 19 | 31 |
| 1 to 2 months..... | 249 | 131 | 51 | 23 | 44 |
| 2 to 3 months..... | 143 | 76 | 25 | 20 | 22 |
| 3 to 6 months..... | 196 | 121 | 37 | 21 | 17 |
| more than 6 months..... | 132 | 73 | 33 | 5 | 21 |
| Operations interested in expanding agricultural production within next 6-9 months..... | 710 | 432 | 115 | 73 | 90 |

- Represents zero.

(D) Withheld to avoid disclosing data for individual operations.

(Y) Less than level of precision shown.

¹ May not add to totals due to rounding and disclosure concerns.

² Included in 'Other'.

Table 2. Farm Size (>= \$50,000 Estimated Gross Value of Production) : 2020

| Item | --Acres-- | | | | |
|---|-----------|--------------|----------|-----------|-------------|
| | Total | Less than 10 | 10 to 49 | 50 to 249 | 250 or more |
| | Number | Number | Number | Number | Number |
| Farms..... | 1,062 | 318 | 378 | 145 | 221 |
| Farm Type by largest gross value of sales ¹ | | | | | |
| Aquaculture..... | 37 | 22 | 6 | 9 | - |
| Cattle and calves..... | 253 | 3 | 10 | 55 | 185 |
| Coffee and tea..... | 115 | 17 | 72 | 19 | 7 |
| Floriculture and nursery..... | 208 | 126 | 69 | 7 | 6 |
| Fruits and nuts..... | 255 | 78 | 146 | 21 | 10 |
| Hogs ² | (D) | (D) | (D) | (D) | (D) |
| Landscaping..... | 25 | 18 | 7 | - | - |
| Poultry ² | (D) | (D) | (D) | (D) | (D) |
| Sheep and goats ² | (D) | (D) | (D) | (D) | (D) |
| Vegetables and melons..... | 107 | 35 | 48 | (D) | (D) |
| Other..... | 62 | 18 | 20 | (D) | (D) |
| Factors in operation's decision to expand commercial agricultural production: | | | | | |
| Achieve vertical integration in commercial production..... | 158 | 37 | 60 | 22 | 39 |
| Engage in food self-sufficiency and create local employment opportunities..... | 462 | 117 | 172 | 73 | 100 |
| Increase market share..... | 338 | 83 | 119 | 46 | 90 |
| Increase profit..... | 841 | 222 | 309 | 118 | 192 |
| Increase competitiveness with imported commodities..... | 258 | 57 | 96 | 36 | 69 |
| Reduce cost of production and transportation..... | 354 | 88 | 121 | 54 | 91 |
| Other..... | 224 | 89 | 74 | 24 | 37 |
| Operation's expected results from expanding commercial agricultural production: | | | | | |
| Additional employment opportunities..... | 679 | 191 | 263 | 85 | 140 |
| Additional tax revenues for county and state governments..... | 594 | 159 | 220 | 97 | 118 |
| Create potential business opportunities for related/allied industries such as services, processing, shipping, etc. | 164 | 43 | 72 | 19 | 30 |
| Higher wages for current employees..... | 414 | 107 | 172 | 48 | 87 |
| Increased consumption and business activities in regional economy and beyond..... | 475 | 129 | 172 | 78 | 96 |
| Increased direct business activities with suppliers and buyers..... | 630 | 168 | 226 | 92 | 144 |
| Other..... | 169 | 66 | 68 | 15 | 20 |
| Barriers or challenges to expanding commercial agricultural production: | | | | | |
| Access to ag infrastructure..... | 236 | 52 | 73 | 41 | 70 |
| Climate change..... | 225 | 56 | 72 | 29 | 68 |
| Cost of shipping/transportation..... | 417 | 116 | 131 | 51 | 119 |
| Government regulations..... | 303 | 81 | 99 | 51 | 72 |
| High cost of production..... | 611 | 186 | 233 | 89 | 103 |
| Local tax burden..... | 170 | 42 | 61 | 16 | 51 |
| Marketing..... | 248 | 53 | 95 | 32 | 68 |
| Not enough access to adequate water..... | 233 | 60 | 68 | 22 | 83 |
| Not enough access to capital..... | 389 | 102 | 156 | 46 | 85 |
| Not enough access to labor..... | 440 | 140 | 182 | 53 | 65 |
| Not enough access to land..... | 289 | 62 | 59 | 52 | 116 |
| Not enough cash flow..... | 389 | 108 | 139 | 50 | 92 |
| Plant/animal diseases..... | 330 | 87 | 133 | 48 | 62 |
| Relatively low profit margin..... | 377 | 92 | 126 | 52 | 107 |
| Uncertainties due to COVID-19..... | 379 | 117 | 156 | 42 | 64 |
| Other..... | 184 | 55 | 60 | 31 | 38 |

See footnote(s) at end of table.

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Table 2. Farm Size (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Acres-- | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| | Total | Less than 10 | 10 to 49 | 50 to 249 | 250 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Technologies needed to increase productivity in commercial agricultural production: | | | | | |
| Block chain..... | 34 | 5 | 9 | 10 | 10 |
| Farm automation and robotics..... | 227 | 67 | 103 | 23 | 34 |
| Livestock technology..... | 187 | 8 | 24 | 50 | 105 |
| Modern greenhouses/controlled environment agriculture..... | 358 | 152 | 150 | 24 | 32 |
| More advanced farm equipment..... | 689 | 183 | 280 | 84 | 142 |
| Precision agriculture and artificial intelligence..... | 134 | 26 | 44 | 13 | 51 |
| Other..... | 149 | 55 | 49 | 20 | 25 |
| Average margin of profit over the past 3 years: | | | | | |
| Negative..... | 203 | 68 | 69 | 32 | 34 |
| 0 to 4.99%..... | 293 | 76 | 108 | 49 | 60 |
| 5 to 9.99%..... | 170 | 45 | 59 | 21 | 45 |
| 10 to 14.99%..... | 139 | 51 | 49 | 15 | 24 |
| 15 to 19.99%..... | 91 | 22 | 27 | 14 | 28 |
| 20 to 24.99%..... | 71 | 24 | 27 | 6 | 14 |
| Over 25%..... | 95 | 32 | 39 | 8 | 16 |
| Operation's current markets for majority of commercial agricultural production: | | | | | |
| Local..... | 944 | 294 | 352 | 120 | 178 |
| U.S. mainland..... | 417 | 84 | 122 | 76 | 135 |
| International markets..... | 120 | 32 | 47 | 26 | 15 |
| Land tenure status and duration of commercial agricultural operations: | | | | | |
| Short-term lease (< than 5 years) | 193 | 36 | 35 | 52 | 70 |
| Medium-term lease (5 to 19 years) | 150 | 28 | 50 | 25 | 47 |
| Long-term lease (20 or more years) | 332 | 48 | 133 | 57 | 94 |
| Own (freehold) | 577 | 224 | 197 | 67 | 89 |
| Land lessors by type: | | | | | |
| Federal government..... | 11 | (D) | (D) | (D) | 6 |
| State government..... | 254 | 34 | 78 | 39 | 103 |
| County government..... | 24 | (D) | 15 | 5 | (D) |
| Private entity (for-profit)..... | 363 | 55 | 109 | 85 | 114 |
| Private entity (non-profit)..... | 88 | 25 | 22 | 17 | 24 |
| Marketing outlets (wholesale and retail) of agricultural products sold: | | | | | |
| Brokers.....percent | 19.4 | 1.9 | 8.9 | 22.3 | 36.6 |
| CSAs.....percent | 0.3 | 0.4 | 0.7 | 0.3 | - |
| Farmers markets.....percent | 1.7 | 1.5 | 2.5 | 0.9 | 1.8 |
| Food hubs.....percent | 0.2 | 0.4 | 0.4 | 0.2 | 0.1 |
| Meat packers.....percent | 1.4 | 0.1 | (Y) | 0.1 | 4.6 |
| On-line/e-commerce.....percent | 8.4 | 12.6 | 4.0 | 15.2 | 4.0 |
| On-farm.....percent | 11.7 | 13.8 | 13.3 | 16.3 | 5.3 |
| Produce wholesalers.....percent | 17.7 | 5.6 | 22.8 | 34.1 | 7.6 |
| Restaurants/caterers.....percent | 2.0 | 1.1 | 2.7 | 0.9 | 2.9 |
| Roadside stands.....percent | 0.7 | 0.2 | 0.6 | 1.7 | 0.4 |
| Schools/hospitals/correction facilities.....percent | 0.2 | 0.1 | 0.3 | 0.1 | 0.1 |
| Supermarkets/groceries/supercenters.....percent | 17.6 | 20.1 | 18.0 | 7.0 | 24.1 |
| Other.....percent | 18.7 | 42.2 | 25.8 | 0.9 | 12.5 |

See footnote(s) at end of table.

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Table 2. Farm Size (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Acres-- | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| | Total | Less than 10 | 10 to 49 | 50 to 249 | 250 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Expected impact from \$100,000 grant scenario | | | | | |
| Increase in total gross value of sales at end of 12-month period: | | | | | |
| 0 to 4.99%..... | 279 | 87 | 81 | 35 | 76 |
| 5 to 9.99%..... | 164 | 34 | 72 | 31 | 27 |
| 10 to 14.99%..... | 169 | 43 | 74 | 22 | 30 |
| 15 to 19.99%..... | 111 | 29 | 47 | 14 | 21 |
| 20 to 24.99%..... | 107 | 44 | 31 | 16 | 16 |
| over 25%..... | 232 | 81 | 73 | 27 | 51 |
| Additional employees added to payroll: | | | | | |
| None..... | 214 | 58 | 58 | 30 | 68 |
| 1 to 4..... | 750 | 233 | 269 | 101 | 147 |
| 5 or more..... | 98 | 27 | 51 | 14 | 6 |
| Time period required for expansion to begin: | | | | | |
| less than 1 month..... | 342 | 107 | 104 | 54 | 77 |
| 1 to 2 months..... | 249 | 66 | 96 | 42 | 45 |
| 2 to 3 months..... | 143 | 44 | 56 | 19 | 24 |
| 3 to 6 months..... | 196 | 66 | 79 | 21 | 30 |
| more than 6 months..... | 132 | 35 | 43 | 9 | 45 |
| Operations interested in expanding agricultural production within next 6-9 months..... | 710 | 173 | 274 | 107 | 156 |

- Represents zero.

(D) Withheld to avoid disclosing data for individual operations.

(Y) Less than level of precision shown.

¹ May not add to totals due to rounding and disclosure concerns.

² Included in 'Other'.

Table 3. Farms by Value of Sales (>= \$50,000 Estimated Gross Value of Production) : 2020

| Item | --Dollars-- | | | | |
|---|---------------|---------------|------------------|--------------------|-----------------|
| | Total | 0 to 49,999 | 50,000 to 99,999 | 100,000 to 499,999 | 500,000 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Farms..... | 1,062 | 474 | 174 | 260 | 154 |
| Farm Type by largest gross value of sales | | | | | |
| Aquaculture..... | 37 | 4 | 5 | 11 | 17 |
| Cattle and calves..... | 253 | 144 | 46 | 43 | 20 |
| Coffee and tea..... | 115 | 44 | 20 | 33 | 18 |
| Floriculture and nursery..... | 208 | 53 | 37 | 78 | 40 |
| Fruits and nuts..... | 255 | 169 | 35 | 33 | 18 |
| Hogs ¹ | (D) | (D) | (D) | (D) | (D) |
| Landscaping..... | 25 | 7 | - | 11 | 7 |
| Poultry ¹ | (D) | (D) | (D) | (D) | (D) |
| Sheep and goats ¹ | (D) | (D) | (D) | (D) | (D) |
| Vegetables and melons..... | 107 | 21 | 27 | 39 | 20 |
| Other..... | 62 | 32 | 4 | 12 | 14 |
| Factors in operation's decision to expand commercial agricultural production: | | | | | |
| Achieve vertical integration in commercial production..... | 158 | 51 | 27 | 46 | 34 |
| Engage in food self-sufficiency and create local employment opportunities..... | 462 | 213 | 81 | 103 | 65 |
| Increase market share..... | 338 | 103 | 74 | 82 | 79 |
| Increase profit..... | 841 | 365 | 140 | 205 | 131 |
| Increase competitiveness with imported commodities..... | 258 | 96 | 53 | 70 | 39 |
| Reduce cost of production and transportation..... | 354 | 137 | 64 | 86 | 67 |
| Other..... | 224 | 106 | 41 | 60 | 17 |
| Operation's expected results from expanding commercial agricultural production: | | | | | |
| Additional employment opportunities..... | 679 | 243 | 116 | 184 | 136 |
| Additional tax revenues for county and state governments..... | 594 | 272 | 95 | 141 | 86 |
| Create potential business opportunities for related/allied industries such as services, processing, shipping, etc. | 164 | 69 | 42 | 33 | 20 |
| Higher wages for current employees..... | 414 | 123 | 78 | 127 | 86 |
| Increased consumption and business activities in regional economy and beyond..... | 475 | 204 | 86 | 117 | 68 |
| Increased direct business activities with suppliers and buyers..... | 630 | 272 | 110 | 146 | 102 |
| Other..... | 169 | 80 | 31 | 46 | 12 |
| Barriers or challenges to expanding commercial agricultural production: | | | | | |
| Access to ag infrastructure..... | 236 | 105 | 52 | 52 | 27 |
| Climate change..... | 225 | 116 | 50 | 37 | 22 |
| Cost of shipping/transportation..... | 417 | 165 | 86 | 100 | 66 |
| Government regulations..... | 303 | 115 | 51 | 91 | 46 |
| High cost of production..... | 611 | 251 | 111 | 150 | 99 |
| Local tax burden..... | 170 | 66 | 30 | 53 | 21 |
| Marketing..... | 248 | 97 | 64 | 66 | 21 |
| Not enough access to adequate water..... | 233 | 98 | 47 | 51 | 37 |
| Not enough access to capital..... | 389 | 145 | 85 | 106 | 53 |
| Not enough access to labor..... | 440 | 144 | 72 | 129 | 95 |
| Not enough access to land..... | 289 | 116 | 65 | 65 | 43 |
| Not enough cash flow..... | 389 | 177 | 69 | 90 | 53 |
| Plant/animal diseases..... | 330 | 134 | 64 | 78 | 54 |
| Relatively low profit margin..... | 377 | 179 | 76 | 74 | 48 |
| Uncertainties due to COVID-19..... | 379 | 159 | 76 | 87 | 57 |
| Other..... | 184 | 83 | 27 | 52 | 22 |

See footnote(s) at end of table.

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Table 3. Farms by Value of Sales (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Dollars-- | | | | |
|---|-------------|-------------|------------------|--------------------|-----------------|
| | Total | 0 to 49,999 | 50,000 to 99,999 | 100,000 to 499,999 | 500,000 or more |
| | Number | Number | Number | Number | Number |
| Technologies needed to increase productivity in commercial agricultural production: | | | | | |
| Block chain..... | 34 | 12 | 5 | 10 | 7 |
| Farm automation and robotics..... | 227 | 74 | 40 | 52 | 61 |
| Livestock technology..... | 187 | 99 | 41 | 28 | 19 |
| Modern greenhouses/controlled environment agriculture..... | 358 | 128 | 58 | 111 | 61 |
| More advanced farm equipment..... | 689 | 288 | 119 | 179 | 103 |
| Precision agriculture and artificial intelligence..... | 134 | 44 | 23 | 27 | 40 |
| Other..... | 149 | 75 | 21 | 42 | 11 |
| Average margin of profit over the past 3 years: | | | | | |
| Negative..... | 203 | 129 | 22 | 28 | 24 |
| 0 to 4.99%..... | 293 | 182 | 46 | 48 | 17 |
| 5 to 9.99%..... | 170 | 53 | 48 | 37 | 32 |
| 10 to 14.99%..... | 139 | 45 | 18 | 43 | 33 |
| 15 to 19.99%..... | 91 | 25 | 8 | 41 | 17 |
| 20 to 24.99%..... | 71 | 15 | 13 | 24 | 19 |
| Over 25%..... | 95 | 25 | 19 | 39 | 12 |
| Operation's current markets for majority of commercial agricultural production: | | | | | |
| Local..... | 944 | 420 | 162 | 236 | 126 |
| U.S. mainland..... | 417 | 142 | 73 | 112 | 90 |
| International markets..... | 120 | 23 | 25 | 30 | 42 |
| Land tenure status and duration of commercial agricultural operations: | | | | | |
| Short-term lease (< than 5 years) | 193 | 70 | 36 | 46 | 41 |
| Medium-term lease (5 to 19 years) | 150 | 47 | 22 | 50 | 31 |
| Long-term lease (20 or more years) | 332 | 138 | 56 | 77 | 61 |
| Own (freehold) | 577 | 270 | 77 | 151 | 79 |
| Land lessors by type: | | | | | |
| Federal government..... | 11 | 6 | (D) | (D) | (D) |
| State government..... | 254 | 114 | 24 | 60 | 56 |
| County government..... | 24 | 4 | 7 | 6 | 7 |
| Private entity (for-profit)..... | 363 | 119 | 72 | 97 | 75 |
| Private entity (non-profit)..... | 88 | 33 | 14 | 28 | 13 |
| Marketing outlets (wholesale and retail) of agricultural products sold: | | | | | |
| Brokers.....percent | 19.4 | 21.5 | 21.8 | 14.0 | 20.2 |
| CSAs.....percent | 0.3 | 0.2 | 0.4 | 1.2 | 0.2 |
| Farmers markets.....percent | 1.7 | 8.8 | 6.6 | 4.0 | 1.0 |
| Food hubs.....percent | 0.2 | 2.0 | 2.2 | 0.9 | (Y) |
| Meat packers.....percent | 1.4 | 8.0 | 6.1 | 3.8 | 0.8 |
| On-line/e-commerce.....percent | 8.4 | 10.3 | 8.7 | 8.6 | 8.3 |
| On-farm.....percent | 11.7 | 17.9 | 10.1 | 13.2 | 11.3 |
| Produce wholesalers.....percent | 17.7 | 15.4 | 20.9 | 19.6 | 17.4 |
| Restaurants/caterers.....percent | 2.0 | 3.0 | 4.8 | 3.0 | 1.8 |
| Roadside stands.....percent | 0.7 | 3.1 | 1.7 | 2.4 | 0.4 |
| Schools/hospitals/correction facilities.....percent | 0.2 | 0.9 | 1.7 | 0.5 | (Y) |
| Supermarkets/groceries/supercenters.....percent | 17.6 | 4.2 | 8.4 | 17.5 | 18.1 |
| Other.....percent | 18.7 | 4.7 | 6.6 | 11.3 | 20.5 |

See footnote(s) at end of table.

--continued

Table 3. Farms by Value of Sales (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Dollars-- | | | | |
|--|---------------|---------------|------------------|--------------------|-----------------|
| | Total | 0 to 49,999 | 50,000 to 99,999 | 100,000 to 499,999 | 500,000 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Expected impact from \$100,000 grant scenario | | | | | |
| Increase in total gross value of sales at end of 12-month period: | | | | | |
| 0 to 4.99%..... | 279 | 142 | 32 | 53 | 52 |
| 5 to 9.99%..... | 164 | 66 | 27 | 33 | 38 |
| 10 to 14.99%..... | 169 | 79 | 23 | 41 | 26 |
| 15 to 19.99%..... | 111 | 49 | 18 | 36 | 8 |
| 20 to 24.99%..... | 107 | 41 | 20 | 35 | 11 |
| over 25%..... | 232 | 97 | 54 | 62 | 19 |
| Additional employees added to payroll: | | | | | |
| None..... | 214 | 122 | 41 | 34 | 17 |
| 1 to 4..... | 750 | 317 | 113 | 200 | 120 |
| 5 or more..... | 98 | 35 | 20 | 26 | 17 |
| Time period required for expansion to begin: | | | | | |
| less than 1 month..... | 342 | 148 | 56 | 104 | 34 |
| 1 to 2 months..... | 249 | 98 | 44 | 51 | 56 |
| 2 to 3 months..... | 143 | 72 | 23 | 27 | 21 |
| 3 to 6 months..... | 196 | 93 | 28 | 46 | 29 |
| more than 6 months..... | 132 | 63 | 23 | 32 | 14 |
| Operations interested in expanding agricultural production within next 6-9 months..... | 710 | 303 | 117 | 189 | 101 |

- Represents zero.
(D) Withheld to avoid disclosing data for individual operations.
(Y) Less than level of precision shown.
¹ Included in 'Other'.

Table 4. Hired Farm Labor (>= \$50,000 Estimated Gross Value of Production) : 2020

| Item | --Workers-- | | | | |
|---|-------------|--------|--------|--------|------------|
| | Total | None | 1 to 4 | 5 to 9 | 10 or more |
| | Number | Number | Number | Number | Number |
| Farms..... | 1,062 | 458 | 382 | 113 | 109 |
| Farm Type by largest gross value of sales ¹ | | | | | |
| Aquaculture..... | 37 | 5 | 8 | 9 | 15 |
| Cattle and calves..... | 253 | 139 | 91 | 15 | 8 |
| Coffee and tea..... | 115 | 36 | 48 | 13 | 18 |
| Floriculture and nursery..... | 208 | 76 | 79 | 31 | 22 |
| Fruits and nuts..... | 255 | 143 | 83 | 16 | 13 |
| Hogs ² | (D) | (D) | (D) | (D) | (D) |
| Landscaping..... | 25 | 7 | 7 | (D) | (D) |
| Poultry ² | (D) | (D) | (D) | (D) | (D) |
| Sheep and goats ² | (D) | (D) | (D) | (D) | (D) |
| Vegetables and melons..... | 107 | 33 | 42 | 17 | 15 |
| Other..... | 62 | 19 | 24 | (D) | (D) |
| Factors in operation's decision to expand commercial agricultural production: | | | | | |
| Achieve vertical integration in commercial production..... | 158 | 48 | 65 | 20 | 25 |
| Engage in food self-sufficiency and create local employment opportunities..... | 462 | 179 | 185 | 44 | 54 |
| Increase market share..... | 338 | 110 | 129 | 43 | 56 |
| Increase profit..... | 841 | 347 | 306 | 95 | 93 |
| Increase competitiveness with imported commodities..... | 258 | 92 | 115 | 33 | 18 |
| Reduce cost of production and transportation..... | 354 | 137 | 128 | 43 | 46 |
| Other..... | 224 | 111 | 82 | 20 | 11 |
| Operation's expected results from expanding commercial agricultural production: | | | | | |
| Additional employment opportunities..... | 679 | 225 | 261 | 100 | 93 |
| Additional tax revenues for county and state governments..... | 594 | 236 | 235 | 72 | 51 |
| Create potential business opportunities for related/allied industries such as services, processing, shipping, etc. | 164 | 77 | 54 | 19 | 14 |
| Higher wages for current employees..... | 414 | 108 | 186 | 73 | 47 |
| Increased consumption and business activities in regional economy and beyond..... | 475 | 175 | 211 | 49 | 40 |
| Increased direct business activities with suppliers and buyers..... | 630 | 254 | 244 | 61 | 71 |
| Other..... | 169 | 82 | 71 | 7 | 9 |
| Barriers or challenges to expanding commercial agricultural production: | | | | | |
| Access to ag infrastructure..... | 236 | 102 | 94 | 16 | 24 |
| Climate change..... | 225 | 111 | 85 | 14 | 15 |
| Cost of shipping/transportation..... | 417 | 172 | 154 | 47 | 44 |
| Government regulations..... | 303 | 141 | 89 | 39 | 34 |
| High cost of production..... | 611 | 258 | 214 | 69 | 70 |
| Local tax burden..... | 170 | 61 | 70 | 22 | 17 |
| Marketing..... | 248 | 102 | 101 | 23 | 22 |
| Not enough access to adequate water..... | 233 | 108 | 82 | 21 | 22 |
| Not enough access to capital..... | 389 | 156 | 153 | 45 | 35 |
| Not enough access to labor..... | 440 | 160 | 161 | 52 | 67 |
| Not enough access to land..... | 289 | 123 | 111 | 28 | 27 |
| Not enough cash flow..... | 389 | 167 | 142 | 39 | 41 |
| Plant/animal diseases..... | 330 | 150 | 111 | 31 | 38 |
| Relatively low profit margin..... | 377 | 183 | 129 | 37 | 28 |
| Uncertainties due to COVID-19..... | 379 | 150 | 147 | 42 | 40 |
| Other..... | 184 | 86 | 67 | 20 | 11 |

See footnote(s) at end of table.

--continued

Table 4. Hired Farm Labor (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Workers-- | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| | Total | None | 1 to 4 | 5 to 9 | 10 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Technologies needed to increase productivity in commercial agricultural production: | | | | | |
| Block chain..... | 34 | 14 | 11 | - | 9 |
| Farm automation and robotics..... | 227 | 62 | 91 | 37 | 37 |
| Livestock technology..... | 187 | 104 | 64 | 11 | 8 |
| Modern greenhouses/controlled environment agriculture..... | 358 | 137 | 141 | 37 | 43 |
| More advanced farm equipment..... | 689 | 285 | 258 | 69 | 77 |
| Precision agriculture and artificial intelligence..... | 134 | 32 | 57 | 19 | 26 |
| Other..... | 149 | 68 | 60 | 11 | 10 |
| Average margin of profit over the past 3 years: | | | | | |
| Negative..... | 203 | 112 | 47 | 20 | 24 |
| 0 to 4.99%..... | 293 | 153 | 106 | 22 | 12 |
| 5 to 9.99%..... | 170 | 54 | 73 | 18 | 25 |
| 10 to 14.99%..... | 139 | 50 | 52 | 12 | 25 |
| 15 to 19.99%..... | 91 | 29 | 43 | 13 | 6 |
| 20 to 24.99%..... | 71 | 19 | 31 | 14 | 7 |
| Over 25%..... | 95 | 41 | 30 | 14 | 10 |
| Operation's current markets for majority of commercial agricultural production: | | | | | |
| Local..... | 944 | 409 | 343 | 99 | 93 |
| U.S. mainland..... | 417 | 141 | 164 | 49 | 63 |
| International markets..... | 120 | 28 | 45 | 17 | 30 |
| Land tenure status and duration of commercial agricultural operations: | | | | | |
| Short-term lease (< than 5 years) | 193 | 86 | 49 | 33 | 25 |
| Medium-term lease (5 to 19 years) | 150 | 45 | 70 | 8 | 27 |
| Long-term lease (20 or more years) | 332 | 134 | 114 | 44 | 40 |
| Own (freehold) | 577 | 262 | 194 | 58 | 63 |
| Land lessors by type: | | | | | |
| Federal government..... | 11 | 7 | (D) | (D) | (D) |
| State government..... | 254 | 111 | 81 | 31 | 31 |
| County government..... | 24 | 9 | 5 | (D) | (D) |
| Private entity (for-profit)..... | 363 | 137 | 124 | 50 | 52 |
| Private entity (non-profit)..... | 88 | 28 | 41 | 7 | 12 |
| Marketing outlets (wholesale and retail) of agricultural products sold: | | | | | |
| Brokers.....percent | 19.4 | 22.4 | 13.0 | 11.3 | 22.4 |
| CSAs.....percent | 0.3 | 1.2 | 0.8 | - | 0.2 |
| Farmers markets.....percent | 1.7 | 3.5 | 3.8 | 5.5 | 0.2 |
| Food hubs.....percent | 0.2 | 0.6 | 1.1 | 0.1 | 0.1 |
| Meat packers.....percent | 1.4 | 5.2 | 1.7 | 1.7 | 1.0 |
| On-line/e-commerce.....percent | 8.4 | 6.7 | 13.9 | 5.9 | 7.9 |
| On-farm.....percent | 11.7 | 12.4 | 16.7 | 18.6 | 8.9 |
| Produce wholesalers.....percent | 17.7 | 20.7 | 22.7 | 5.0 | 19.4 |
| Restaurants/caterers.....percent | 2.0 | 3.8 | 2.8 | 1.5 | 1.8 |
| Roadside stands.....percent | 0.7 | 0.9 | 0.9 | 3.6 | - |
| Schools/hospitals/correction facilities.....percent | 0.2 | 1.3 | 0.3 | - | (Y) |
| Supermarkets/groceries/supercenters.....percent | 17.6 | 10.9 | 14.9 | 22.0 | 17.7 |
| Other.....percent | 18.7 | 10.4 | 7.4 | 24.8 | 20.4 |

See footnote(s) at end of table.

--continued

Table 4. Hired Farm Labor (>= \$50,000 Estimated Gross Value of Production) : 2020 (continued)

| Item | --Workers-- | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| | Total | None | 1 to 4 | 5 to 9 | 10 or more |
| | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> | <i>Number</i> |
| Expected impact from \$100,000 grant scenario | | | | | |
| Increase in total gross value of sales at end of 12-month period: | | | | | |
| 0 to 4.99%..... | 279 | 138 | 77 | 29 | 35 |
| 5 to 9.99%..... | 164 | 61 | 56 | 22 | 25 |
| 10 to 14.99%..... | 169 | 76 | 58 | 17 | 18 |
| 15 to 19.99%..... | 111 | 42 | 46 | 13 | 10 |
| 20 to 24.99%..... | 107 | 42 | 47 | 7 | 11 |
| over 25%..... | 232 | 99 | 98 | 25 | 10 |
| Additional employees added to payroll: | | | | | |
| None..... | 214 | 144 | 50 | 8 | 12 |
| 1 to 4..... | 750 | 293 | 293 | 82 | 82 |
| 5 or more..... | 98 | 21 | 39 | 23 | 15 |
| Time period required for expansion to begin: | | | | | |
| less than 1 month..... | 342 | 155 | 131 | 27 | 29 |
| 1 to 2 months..... | 249 | 91 | 92 | 29 | 37 |
| 2 to 3 months..... | 143 | 54 | 59 | 11 | 19 |
| 3 to 6 months..... | 196 | 94 | 64 | 25 | 13 |
| more than 6 months..... | 132 | 64 | 36 | 21 | 11 |
| Operations interested in expanding agricultural production within next 6-9 months..... | 710 | 278 | 273 | 86 | 73 |

- Represents zero.

(D) Withheld to avoid disclosing data for individual operations.

(Y) Less than level of precision shown.

¹ May not add to totals due to rounding and disclosure concerns.

² Included in 'Other'.

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