

# 2020 CENSUS OF AGRICULTURE, FORESTRY, FISHERY AND ANIMAL HUSBANDRY

## Vol. 2 GENERAL REPORT

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DIRECTORATE-GENERAL OF BUDGET, ACCOUNTING AND STATISTICS,  
EXECUTIVE YUAN, REPUBLIC OF CHINA

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# PREFACE

The census of agriculture, forestry, fishery, and animal husbandry is conducted in accordance with the Statistics Act; it is one of basic national censuses. The purpose of conducting the census is to understand the current development situation of agriculture, forestry, fishery and animal husbandry and the current situation of agricultural development. The census collects basic information on the characteristics of the rural population, the distribution and use of farmland resources, and the income from the sale of agricultural products, as well as important information on the development of the agricultural industry, such as safe agriculture, labor inputs, and the distribution of sales of agricultural products, for reference and application in the relevant policies of the central government and the local government. The first census was launched in 1956, and the 2020 Census was the 14<sup>th</sup> one.

Agriculture is a basic industry for economic development. According to the Food and Agriculture Organization of the United Nations (FAO), more than 90% of the countries in the world will conduct agricultural census before and after 2020, which is one of the most important policy items in the world. Due to the global outbreak of COVID-19 during this period, many countries, including Japan, South Korea, and Canada, have postponed, or extended the implementation period to cope with the impact on the countries where the census is being conducted. During the enumeration period in May 2021, the Census was under epidemic alert level 3. To promote the smooth conduct of the Census, the implementation period was extended to the end of August, and epidemic prevention work was carried out during the enumeration process to protect the safety of the respondents and enumerators. All census team members showed high enthusiasm and a strong sense of duty, continuously communicating with respondents to gain their trust and support. They also collaborated with relevant administrative resources to improve the response rate and return rate, ensuring the successful completion of the census work during the pandemic.

In addition to taking into consideration the important recommendations of the Food and Agriculture Organization of the United Nations (FAO) and the experiences of other countries in conducting the census, this year's census is also based on the review of the previous census, the discussions of experts and scholars, and two pilot surveys, which have been used to gradually test the appropriateness of the layout of the census questionnaire, the questionnaire design, the compilation of name lists, the allocation of manpower, the interviewing procedures, and the handling of the data in order to enhance the efficiency of the census and the quality of the data. In addition, in consideration of the increasing digitalization of the country, combined with information technology

to support the census operation, an online reporting system was established for the first time to provide multiple channels for filling in the data, to increase the willingness of the respondents to cooperate and reduce the workload of census team members.

The raw data were mainly processed by personal computer; some special cases were handled by staffs and data clerks. To strive for timeliness and to meet the needs of all circles, we first selected important items, then compiled into various statistical tables, preliminary statistical analysis and reports. After being deliberated and approved by Census Evaluation Commission, DGBAS, and then reported to Executive Yuan for promulgation, providing application for all circles.

The detailed census results are cross analyzed by census item. In addition to the general situation of agriculture, forestry, fishery, and animal husbandry in the preliminary report, it also includes detailed statistical items such as household population and labor force status, crop cultivation and livestock breeding, forest operations, major fishing methods, and species of aquaculture and aquatic organisms. Based on these statistics, summary analyses will be prepared, and reports such as the consolidated report, industry-specific reports, and county and city-specific reports will be compiled, to widely provide references to the government's agricultural policies and academic institutions' research.

Thanks to the detailed planning beforehand, the census workers at all levels, who adhered to the established operation plan and principles, and the support and cooperation of all agricultural, forestry, fishery, and animal husbandry operators, the census has provided detailed information and made a great contribution to the society. Finally, the Department of Census, DGBAS acknowledges and appreciates the comprehensive review and recommendations by experts, scholars, and the members of Census Evaluation Commission, which enabled the census work to be successfully completed.

# LEGENDS

- I. This report is the abstract of the 2020 Census reports on Agriculture, Forestry, Fishery and Animal Husbandry by industry.
- II. Because of the round-off and truncate error in calculating, the total or sum will be an approximated number.
- III. The following symbols are used throughout the tables:
  - 0 : Less than half of the unit shown.
  - : No number.
  - ... : Figures not yet released.



# CONTENTS

## PREFACE

## LEGENDS

<b>A.Extract Tables</b> .....	(1)
Table I Summary of Historical Comparison of Agriculture, Forestry, Fishery and Animal Husbandry Census Results .....	(2)
Table II Statistical Summary of Agriculture, Forestry, Fishery and Animal Husbandry , by County/City .....	(4)
Table III Comparison of Two Census Results of Agriculture, Forestry, Fishery and Animal Husbandry .....	(8)
Table IV International Agriculture Census Information Comparison .....	(10)
<b>B.Census Planning and Conduction</b> .....	(11)
I. Brief Summary .....	(12)
II. Census Planning .....	(12)
III. Census Operation and Contents .....	(13)
IV. Preparatory Operation .....	(17)
V. Census Implementation .....	(21)
VI. Data Processing .....	(22)
VII. Compilation of Census Reports .....	(22)
<b>C.Summary Analysis</b> .....	(23)
I. The Number of Agriculture, Forestry, Fishery and Animal Husbandry Enterprises .....	(24)
II. The Resource Application of Agriculture, Forestry, Fishery and Animal Husbandry .....	(25)
III. The Population of Farm Households and Agricultural Labor Force .....	(27)
IV. Production Overview of Major Agricultural and Fishery Products .....	(29)
V. Agriculture-related and Fishery-related Business .....	(35)
VI. Agricultural and Fishery Sales Overview .....	(36)

<b>D. Tables</b> .....	1
<b>I. Agriculture and Animal Husbandry</b> .....	1
Table 1 Enterprises of Operating Agriculture, by Type of Organization .....	2
Table 2 Enterprises of Operating Agriculture, by Ownership of Cultivated Land.....	4
Table 3 Enterprises of Operating Agriculture, by Scale of Cultivated Land .....	6
Table 4 Enterprises of Operating Agriculture, by Operation Type .....	10
Table 5 Enterprises of Operating Agriculture, by Main Industry.....	16
Table 6 Enterprises of Operating Agriculture, by Status of Food Processing, Leisure.....	24
Table 7 Enterprises of Operating Agriculture, by Own Farm Work Being Consigned to Agricultural Service Enterprises .....	28
Table 8 Enterprises of Operating Agriculture Planting Rice, by the Distributors of Rice Revenue.....	32
Table 9 Enterprises of Operating Agriculture Planting Vegetables, by the Distributors of Vegetables Revenue .....	36
Table 10 Enterprises of Operating Agriculture Planting Fruits, by the Distributors of Fruits Revenue.....	40
Table 11 Enterprises of Operating Agriculture, by Status of Food Processing.....	44
Table 12 Enterprises of Operating Agriculture, by Main Business Type of Leisure Agriculture .....	48
Table 13 Enterprises of Operating Agriculture, by Number of Employees and Workers without Wages .....	52
Table 14 Enterprises of Operating Agriculture, by Agricultural Products Revenue .....	56
Table 15 Enterprises of Operating Food Processing, by Food Processing Revenue .....	64
Table 16 Enterprises of Operating Leisure Agriculture, by Leisure Service Revenue .....	68
Table 17 Enterprises of Operating Agriculture, by Gross Income of Agriculture .....	72
Table 18 Enterprises of Operating Agriculture, by Operating Agriculture-related Business....	80
Table 19 Enterprises of Operating Agriculture Planting Crops, by Species of Crops .....	84
Table 20 Enterprises of Operating Agriculture of Raising Livestock & Poultry, by Species of Livestock & Poultry .....	96
Table 21 Farm Managers of Operating Agriculture, by Sex and Age.....	98
Table 22 Farm Managers of Operating Agriculture, by Sex and Level of Education.....	106
Table 23 Farm Managers of Operating Agriculture, by Annual Man-days Engaged in Own Farm Work.....	114
Table 24 Employees and Workers without Wages of Operating Agriculture, by Type of Organization .....	118
Table 25 Employees and Workers without Wages of Operating Agriculture, by Sex.....	122
Table 26 Employees in Agriculture, by Annual Man-days and Sex .....	126
Table 27 Cultivated Land Area of Enterprises of Operating Agriculture, by Ownership .....	134
Table 28 Average Cultivated Land Area of Enterprises of Operating Agriculture .....	138



Table 29 Cultivated Land Area of Enterprises of Operating Agriculture, by Sources of Irrigation Water .....	142
Table 30 Cultivated Land Area of Enterprises of Operating Agriculture, by Main Utilization.....	144
Table 31 Non-cultivated Land Area of Enterprises of Operating Agriculture, by Ownership .....	146
Table 32 Farm Households Which Engaged in Agriculture, by Full-time or Part-time.....	148
Table 33 Farm Households Which Engaged in Agriculture, by No. of Family Members .....	152
Table 34 Farm Households Which Engaged in Agriculture, by No. of Family Members, 15 Years Old and Over .....	154
Table 35 Farm Households Which Engaged in Agriculture, by No. of Family Members Engaged in Own Farm Work.....	156
Table 36 Farm Households Which Engaged in Agriculture, by No. of Farm Successors .....	158
Table 37 Population of Farm Households Which Engaged in Agriculture, by Sex and Age ....	160
Table 38 Population of Farm Households Which Engaged in Agriculture, 15 Years Old and Over, by Sex and Age .....	162
Table 39 Population of Farm Households Which Engaged in Agriculture, 15 Years Old and Over, by Sex and Level of Education.....	166
Table 40 Population of Farm Households Which Engaged in Agriculture, 15 Years Old and Over, by Annual Man-days Engaged in Own Farm Work.....	170
Table 41 Population of Farm Households Which Engaged in Agriculture, 15 Years Old and Over, by Regular Work .....	174
Table 42 Family Livelihood Maintainers of Farm Households Which Engaged in Agriculture, by Sex and Level of Education .....	180
Table 43 Farm Successors of Farm Households Which Engaged in Agriculture, by Sex and Level of Education .....	188
<b>II.Agricultural Service.....</b>	<b>197</b>
Table 1 Agricultural Service Enterprises, by Type of Organization .....	198
Table 2 Agricultural Service Enterprises, by Main Service Item.....	200
Table 3 Agricultural Service Enterprises, by Number of Employees .....	208
Table 4 Annual Quantities of Agricultural Service, by Various Service Items .....	210
Table 5 Managers Engaged in Agricultural Service, by Sex and Level of Education .....	222
Table 6 Employees Engaged in Agricultural Service, by Annual Man-days and Sex .....	226
Table 7 Employees Engaged in Agricultural Service, by Property of Employment and Sex .....	234
<b>III.Forestry .....</b>	<b>239</b>
Table 1 Number of Forestry Units, by Type of Organization .....	240
Table 2 Number of Forestry Units, by Forest Operational Situation .....	246
Table 3 Forest Land Area, by Type of Organization .....	250
Table 4 Affiliated Forest Land Area, by Type of Organization.....	252
Table 5 Forest Land Area, by Ownership.....	254

Table 6	Forest Land Area, by Forest Type .....	258
Table 7	Forest Land Area, by Participating of Reward.....	262
Table 8	Reforestation in Forestry .....	266
Table 9	Felling Operation in Forestry .....	270
Table 10	Forest Households, by No. of Family Members .....	274
Table 11	Population of Forest Households, by Sex and Age .....	276
<b>IV. Fishery</b>	.....	279
Table 1	Fishery Units Which Engaged in Fishery, by Type of Organization.....	280
Table 2	Fishery Units Which Engaged in Fishery, by Type of Production .....	284
Table 3	Fishery Units Which Engaged in Fishery, by Main Industry .....	286
Table 4	Fishery Units Which Engaged in Fishery, by Status of Food Processing, Leisure .....	292
Table 5	Fishery Units Which Engaged in Fishery, by Status of Food Processing .....	296
Table 6	Fishery Units Which Engaged in Fishery, by Main Business Type of Leisure Fishery .....	300
Table 7	Fishery Units Which Engaged in Fishery, by Number of Employees and Workers without Wages .....	304
Table 8	Fishery Units Which Engaged in Fishery, by Fishery Products Revenue.....	312
Table 9	Fishery Units of Operating Food Processing, by Food Processing Revenue.....	320
Table 10	Fishery Units of Operating Leisure, by Leisure Service Revenue.....	324
Table 11	Fishery Units Which Engaged in Fishery, by Gross Income of Fishery .....	328
Table 12	Fishery Units Which Engaged in Fishery, by Operating Fishery-related Business.....	330
Table 13	Managers of Fishery Units Which Engaged in Fishery, by Sex and Age .....	334
Table 14	Employees and Workers without Wages Engaged in Fishery, by Type of Organization .....	342
Table 15	Employees and Workers without Wages Engaged in Fishery, by Sex .....	346
Table 16	Fishery Units Which Engaged in Fishing Fishery of General Status.....	350
Table 17	Fishery Units Which Engaged in Fishery of Powered Fishing Crafts, by Main Type of Fishing Fishery.....	354
Table 18	Fishery Units Which Engaged in Fishery of Powered Fishing Crafts, by Tonnage .....	362
Table 19	Fishery Units Which Engaged in Fishery of General Status for Aquaculture.....	366
Table 20	Fishery Units Which Engaged in Fishery of Aquaculture Area (Excluding Cage Culture), by Purposes .....	368
Table 21	Fishery Units Which Engaged in Fishery of Aquaculture Area (Excluding Cage Culture), by Water Sources .....	372
Table 22	Fishery Households of Sole Proprietorship Which Engaged in Fishery, by No. of Family Members .....	380
Table 23	Fishery Households of Sole Proprietorship Which Engaged in Fishery, by No. of Successors.....	382
Table 24	Fishery Households of Sole Proprietorship Which Engaged in Fishery, by Main Source of Income .....	384

Table 25 Population of Fishery Households of Sole Proprietorship Which Engaged in Fishery, by Sex and Age.....	388
Table 26 Population of Fishery Households of Sole Proprietorship Which Engaged in Fishery, 15 Years Old and Over, by Sex and Age .....	392
Table 27 Population of Fishery Households of Sole Proprietorship Which Engaged in Fishery, 15 Years Old and Over, by Sex and Level of Education .....	400
Table 28 Population of Fishery Households of Sole Proprietorship Which Engaged in Fishery and Own Fishery Work, 15 Years Old and Over, by Annual Man-days.....	408
Table 29 Population of Fishery Households of Sole Proprietorship Which Engaged in Fishery, 15 Years Old and Over, by Regular Work .....	414
Table 30 Managers of Fishery Households of Sole Proprietorship Which Engaged in Fishery, by Sex and Level of Education.....	422
Table 31 Successors of Fishery Households of Sole Proprietorship Which Engaged in Fishery, by Sex and Level of Education.....	430
<b>E. Appendix</b> .....	439
Explanations of Terms.....	440



## **A. Extract Tables**

(2)

**Table I. Summary of Historical Comparison of Agriculture, Forestry, Fishery and Animal Husbandry Census Results**

Abstracted items	Unit	1956	1960	1970	1980	1990
<b>A. Agriculture</b>						
1. Farm households	household	743 928	807 600	924 048	896 528	863 634
% of total households	%	45.66	41.63	35.03	23.88	16.92
2. Farm households population	person	5 227 375	5 863 381	6 269 335	5 421 891	4 309 787
% of total population	%	57.59	54.04	42.49	30.35	21.13
Mean farm households size	person	7.03	7.26	6.78	6.05	4.99
3. Cultivated lands in farm households and farms	ha.	881 610	791 531	827 048	759 948	723 452
4. Farms	farm	235	667	1 274	862	840
<b>B. Agricultural Service</b>						
5. Agricultural service enterprises	enterprise	—	—	—	—	24 218
{ Crop service enterprises	enterprise	—	—	—	—	23 857
{ Livestock & poultry service enterprises	enterprise	—	—	—	—	361
<b>C. Forestry</b>						
6. Forestry enterprises	enterprise	—	—	—	—	50 791
7. Forestry land area	ha.	—	—	—	—	1 781 338
{ Forest land area	ha.	—	—	—	—	1 666 548
{ Affiliated forest land area	ha.	—	—	—	—	114 790
<b>D. Fishery</b>						
8. Fishery enterprises	enterprise	—	—	42 649	52 144	52 295
9. Fishing enterprises	enterprise	—	—	24 640	26 329	22 899
10. Aquaculture enterprises	enterprise	—	—	18 009	27 240	30 754
11. Fishing crafts	vessel	—	—	19 454	21 455	16 811
12. Non-powered sampans, fishing crafts	vessel	—	—	10 176	8 940	5 998
13. Powered fishing crafts						
{ Number	vessel	—	—	9 278	12 515	10 813
{ Tonnage	ton	—	—	229 459	464 521	761 319
14. Area of aquaculture						
{ Pond, shallow sea, and others	ha.	—	—	34 785	40 851	40 161
{ Cage culture	m <sup>3</sup>	—	—	—	—	—
15. Sole proprietorship fishery households	household	—	—	34 668	44 420	48 427
16. Sole proprietorship fishery households population	person	—	—	580 986	273 196	246 261

Note: 1. The census results in 1956 and 1960 were from Taiwan area.

2. Fishing and aquaculture enterprises included those who owned fishing equipment and aquaculture resources but did not engage in fishing and aquaculture.

**Table I. Summary of Historical Comparison of Agriculture, Forestry, Fishery and Animal Husbandry census Results (Continued)**

Abstracted items	Unit	2000	2005	2010	2015	2020
<b>A. Agriculture</b>						
1. Farm households	household	724 645	771 579	780 388	778 930	761 854
% of total households	%	10.85	10.58	9.83	9.20	8.53
2. Farm households population	person	3 688 885	3 417 572	2 975 523	2 710 680	2 527 853
% of total population	%	16.56	15.01	12.85	11.54	10.73
Mean farm households size	person	5.09	4.43	3.81	3.48	3.32
3. Cultivated lands in farm households and farms	ha.	624 215	597 438	579 196	564 857	557 058
4. Farms	farm	617	775	1 130	1 326	1 619
<b>B. Agricultural Service</b>						
5. Agricultural service enterprises	enterprise	6 602	4 682	4 657	3 919	4 210
{ Crop service enterprises	enterprise	6 458	4 504	4 438	3 706	3 921
{ Livestock & poultry service enterprises	enterprise	144	178	219	213	289
<b>C. Forestry</b>						
6. Forestry enterprises	enterprise	51 486	68 398	83 312	87 466	89 599
7. Forestry land area	ha.	1 775 627	1 843 577	1 852 555	1 884 920	1 912 348
{ Forest land area	ha.	1 656 825	1 743 734	1 755 012	1 795 287	1 820 959
{ Affiliated forest land area	ha.	118 802	99 843	97 543	89 633	91 389
<b>D. Fishery</b>						
8. Fishery enterprises	enterprise	51 170	49 078	48 634	45 229	41 278
9. Fishing enterprises	enterprise	22 386	18 827	18 588	17 116	16 778
10. Aquaculture enterprises	enterprise	30 849	31 146	31 171	29 257	25 750
11. Fishing crafts	vessel	21 273	17 633	17 156	16 092	15 968
12. Non-powered sampans, fishing crafts	vessel	11 883	8 868	7 607	6 272	6 389
13. Powered fishing crafts						
{ Number	vessel	9 390	8 765	9 549	9 820	9 579
{ Tonnage	ton	663 794	591 187	526 206	454 952	451 153
14. Area of aquaculture						
{ Pond, shallow sea, and others	ha.	41384	44 932	44 082	41 724	38 949
{ Cage culture	m <sup>3</sup>		850 967	393 421	341 730	407 976
15. Sole proprietorship fishery households	household	49 512	46 653	47 130	44 265	40 347
16. Sole proprietorship fishery households population	person	245 864	193 993	175 456	151 365	128 437

3. Powered fishing crafts included "unpowered sampans with outboard motor" in 2015. Cage culture was changed ruler measurements from hectare to cubic meters since 2005.

(4)

**Table II. Statistical Summary of Agriculture, Forestry, Fishery and Animal Husbandry, by County/City**

By county/city	Agriculture at the end of 2015						
	Number			Farm households population	Cultivated land		
	Total	Farm households	Farms		By managers located	By cultivated land located	% of total land area of that county/city
(enterprise)	(household)	(farm)	(person)	(ha.)	(ha.)	(%)	
<b>Total</b>	<b>780 256</b>	<b>778 930</b>	<b>1 326</b>	<b>2 710 680</b>	<b>564 857</b>	<b>564 857</b>	<b>15.61</b>
<b>Northern Region</b>	<b>148 381</b>	<b>148 046</b>	<b>335</b>	<b>523 457</b>	<b>83 128</b>	<b>77 229</b>	<b>10.50</b>
New Taipei City	34 310	34 229	81	108 905	15 344	12 417	6.05
Taipei City	8 825	8 798	27	28 018	5 930	1 881	6.92
Taoyuan City	45 077	44 996	81	166 874	25 898	26 348	21.58
Keelung City	1 277	1 271	6	3 691	690	376	2.83
Hsinchu City	5 549	5 531	18	21 957	2 194	1 603	15.39
Yilan County	28 357	28 283	74	99 721	17 028	17 563	8.19
Hsinchu County	24 986	24 938	48	94 291	16 045	17 041	11.94
<b>Central Region</b>	<b>304 499</b>	<b>304 053</b>	<b>446</b>	<b>1 122 755</b>	<b>211 197</b>	<b>214 862</b>	<b>20.45</b>
Taichung City	66 875	66 759	116	267 550	42 451	40 616	18.34
Miaoli County	37 609	37 545	64	135 290	20 674	21 832	11.99
Changhua County	83 637	83 494	143	338 961	49 819	50 316	46.83
Nantou County	43 893	43 839	54	145 571	35 273	37 533	9.14
Yunlin County	72 485	72 416	69	235 383	62 980	64 565	50.02
<b>Southern Region</b>	<b>290 847</b>	<b>290 384</b>	<b>463</b>	<b>951 059</b>	<b>223 395</b>	<b>223 601</b>	<b>22.34</b>
Tainan City	91 622	91 455	167	295 204	69 827	71 759	32.74
Kaohsiung City	70 362	70 279	83	224 703	40 330	35 264	11.95
Chiayi City	5 379	5 370	9	18 152	3 391	1 578	26.29
Chiayi County	57 058	56 970	88	181 946	61 146	62 737	32.96
Pingtung County	60 316	60 203	113	213 391	47 545	50 939	18.35
Penghu County	6 110	6 107	3	17 663	1 156	1 323	10.43
<b>Eastern Region</b>	<b>32 849</b>	<b>32 775</b>	<b>74</b>	<b>101 029</b>	<b>44 525</b>	<b>46 538</b>	<b>5.71</b>
Taitung County	16 120	16 080	40	48 845	21 508	22 370	6.36
Hualien County	16 729	16 695	34	52 184	23 017	24 168	5.22
<b>Kinma Region</b>	<b>3 680</b>	<b>3 672</b>	<b>8</b>	<b>12 380</b>	<b>2 613</b>	<b>2 627</b>	<b>14.56</b>
Kinmen County	3 619	3 611	8	12 177	2 609	2 622	17.29
Lienchiang County	61	61	—	203	5	5	0.16

Note: Due to operators' residence and their cultivated land may be located in different county/city, the classified statistics of cultivated land area by "county/city where managers located" and "county/city where cultivated land located" respectively in this table will be different.



**Table II. Statistical Summary of Agriculture, Forestry, Fishery and Animal Husbandry, by County/City (Continue 1)**

By county/city	Agriculture at the end of 2020						
	Number			Farm households population	Cultivated land		
	Total	Farm households	Farms		By managers located	By cultivated land located	% of total land area of that county/city
	(enterprise)	(household)	(farm)	(person)	(ha.)	(ha.)	(%)
<b>Total</b>	<b>763 473</b>	<b>761 854</b>	<b>1 619</b>	<b>2 527 853</b>	<b>557 058</b>	<b>557 058</b>	<b>15.39</b>
<b>Northern Region</b>	<b>150 555</b>	<b>150 237</b>	<b>318</b>	<b>502 837</b>	<b>80 952</b>	<b>74 967</b>	<b>10.19</b>
New Taipei City	34 269	34 200	69	104 979	15 248	11 895	5.80
Taipei City	9 074	9 033	41	27 876	5 259	1 783	6.56
Taoyuan City	47 119	47 021	98	167 244	25 898	25 634	21.00
Keelung City	1 224	1 224	—	3 286	650	342	2.58
Hsinchu City	5 494	5 485	9	19 872	2 018	1 575	15.13
Yilan County	28 714	28 669	45	91 520	16 329	17 179	8.01
Hsinchu County	24 661	24 605	56	88 060	15 550	16 558	11.60
<b>Central Region</b>	<b>294 835</b>	<b>294 302</b>	<b>533</b>	<b>1 033 553</b>	<b>208 374</b>	<b>211 929</b>	<b>20.17</b>
Taichung City	68 096	67 959	137	258 075	41 930	39 998	18.06
Miaoli County	37 568	37 502	66	125 573	20 076	21 402	11.76
Changhua County	79 588	79 432	156	302 190	48 943	49 697	46.26
Nantou County	42 795	42 724	71	135 309	34 956	36 855	8.97
Yunlin County	66 788	66 685	103	212 406	62 471	63 978	49.56
<b>Southern Region</b>	<b>281 976</b>	<b>281 303</b>	<b>673</b>	<b>883 227</b>	<b>221 052</b>	<b>221 659</b>	<b>22.14</b>
Tainan City	88 458	88 163	295	272 997	69 804	71 629	32.68
Kaohsiung City	71 444	71 331	113	216 490	40 655	34 798	11.79
Chiayi City	5 717	5 704	13	17 372	3 261	1 545	25.74
Chiayi County	53 996	53 900	96	165 460	60 226	62 158	32.65
Pingtung County	56 904	56 756	148	194 756	46 004	50 283	18.12
Penghu County	5 457	5 449	8	16 152	1 102	1 246	9.82
<b>Eastern Region</b>	<b>32 514</b>	<b>32 429</b>	<b>85</b>	<b>95 728</b>	<b>44 062</b>	<b>45 914</b>	<b>5.64</b>
Taitung County	16 011	15 969	42	47 058	21 380	22 313	6.35
Hualien County	16 503	16 460	43	48 670	22 682	23 601	5.10
<b>Kinma Region</b>	<b>3 593</b>	<b>3 583</b>	<b>10</b>	<b>12 508</b>	<b>2 618</b>	<b>2 588</b>	<b>14.34</b>
Kinmen County	3 537	3 527	10	12 305	2 612	2 584	17.04
Lienchiang County	56	56	—	203	6	5	0.16

Note: Due to operators' residence and their cultivated land may be located in different county/city, the classified statistics of cultivated land area by "county/city where managers located" and "county/city where cultivated land located" respectively in this table will be different.

**Table II. Statistical Summary of Agriculture, Forestry, Fishery and Animal Husbandry, by County/City (Continue 2)**

By county/city	Agriculture service enterprises at the end of 2015 (enterprise)	Forestry at the end of 2015			Fishery at the end of 2015		
		Number (enterprise)	Forestry land area (by managers located) (ha.)	Forest land area (by forest land located) (ha.)	Number (enterprise)	Powered fishing crafts (vessel)	Pond, shallow sea and other culture (by aquaculture area located) (ha.)
<b>Total</b>	<b>3 919</b>	<b>87 466</b>	<b>1 884 920</b>	<b>1 795 287</b>	<b>45 229</b>	<b>9 820</b>	<b>41 724</b>
<b>Northern Region</b>	<b>408</b>	<b>26 588</b>	<b>454 681</b>	<b>344 014</b>	<b>6 124</b>	<b>3 279</b>	<b>1 354</b>
New Taipei City	7	12 078	15 623	86 960	2 365	1 524	29
Taipei City	4	1 845	3 741	2 061	186	122	0
Taoyuan City	131	3 343	5 122	33 610	553	230	400
Keelung City	—	190	1 034	2 745	452	455	2
Hsinchu City	21	543	150 028	383	318	94	144
Yilan County	170	2 833	269 195	149 464	2 020	822	591
Hsinchu County	75	5 756	9 937	68 791	230	32	189
<b>Central Region</b>	<b>1 596</b>	<b>30 195</b>	<b>421 968</b>	<b>482 441</b>	<b>8 854</b>	<b>461</b>	<b>8 629</b>
Taichung City	123	5 185	110 700	100 983	709	177	62
Miaoli County	194	12 137	16 342	81 487	632	140	37
Changhua County	548	601	1 050	3 389	2 672	94	2 759
Nantou County	100	11 508	292 402	288 652	84	9	14
Yunlin County	631	764	1 474	7 930	4 757	41	5 756
<b>Southern Region</b>	<b>1 619</b>	<b>23 030</b>	<b>428 401</b>	<b>390 363</b>	<b>28 102</b>	<b>5 368</b>	<b>31 147</b>
Tainan City	515	3 197	7 226	38 175	7 604	444	15 156
Kaohsiung City	221	9 198	25 484	164 706	6 804	2 230	4 409
Chiayi City	12	369	149 610	31	93	23	2
Chiayi County	516	2 241	7 202	62 237	5 578	38	7 140
Pingtung County	355	8 023	237 635	123 265	5 883	998	4 223
Penghu County	—	2	1 243	1 949	2 140	1 635	217
<b>Eastern Region</b>	<b>290</b>	<b>7 652</b>	<b>573 478</b>	<b>572 139</b>	<b>1 466</b>	<b>391</b>	<b>480</b>
Taitung County	114	3 172	242 125	234 667	928	266	52
Hualien County	176	4 480	331 353	337 473	538	125	428
<b>Kinma Region</b>	<b>6</b>	<b>1</b>	<b>6 392</b>	<b>6 330</b>	<b>683</b>	<b>321</b>	<b>114</b>
Kinmen County	6	1	6 392	6 330	533	127	113
Lienchiang County	—	—	—	—	150	194	1

Note: Forestry land area included forest land areas and affiliated forest land area; indigenous forest conservation was incorporated into forestry land area in 2015.

**Table II. Statistical Summary of Agriculture, Forestry, Fishery and Animal Husbandry, by County/City (End of continued)**

By county/city	Agriculture service enterprises at the end of 2020 (enterprise)	Forestry at the end of 2020			Fishery at the end of 2020		
		Number (enterprise)	Forestry land area (by managers located) (ha.)	Forest land area (by forest land located) (ha.)	Number (enterprise)	Powered fishing crafts (vessel)	Pond, shallow sea and other culture (by aquaculture area located) (ha.)
<b>Total</b>	<b>4 210</b>	<b>89 599</b>	<b>1 912 348</b>	<b>1 820 959</b>	<b>41 278</b>	<b>9 579</b>	<b>38 949</b>
<b>Northern Region</b>	<b>550</b>	<b>26 816</b>	<b>460 861</b>	<b>349 623</b>	<b>6 086</b>	<b>3 355</b>	<b>915</b>
New Taipei City	11	12 193	14 794	87 359	2 254	1 503	31
Taipei City	3	2 094	4 148	1 881	224	147	0
Taoyuan City	248	3 592	5 504	33 061	729	408	191
Keelung City	—	173	324	1 971	468	469	1
Hsinchu City	23	621	154 105	295	323	96	64
Yilan County	171	2 530	272 966	151 641	1 834	677	475
Hsinchu County	94	5 613	9 020	73 415	254	55	153
<b>Central Region</b>	<b>1 697</b>	<b>32 662</b>	<b>422 202</b>	<b>484 146</b>	<b>7 830</b>	<b>550</b>	<b>7 458</b>
Taichung City	167	5 914	111 155	101 312	728	237	11
Miaoli County	204	12 792	16 138	81 511	600	112	38
Changhua County	525	688	1 058	3 568	2 305	101	2 446
Nantou County	88	11 400	291 518	288 339	77	22	8
Yunlin County	713	1 868	2 333	9 416	4 120	78	4 955
<b>Southern Region</b>	<b>1 686</b>	<b>22 977</b>	<b>433 973</b>	<b>393 186</b>	<b>25 303</b>	<b>4 845</b>	<b>30 060</b>
Tainan City	496	3 155	6 887	38 120	6 925	541	14 892
Kaohsiung City	236	9 093	25 877	164 900	6 310	2 115	4 152
Chiayi City	24	461	152 800	42	102	37	0
Chiayi County	537	1 978	7 278	62 061	4 919	67	6 720
Pingtung County	393	8 287	240 711	126 112	5 262	877	4 204
Penghu County	—	3	421	1 950	1 785	1 208	91
<b>Eastern Region</b>	<b>274</b>	<b>7 140</b>	<b>589 319</b>	<b>588 007</b>	<b>1 397</b>	<b>473</b>	<b>410</b>
Taitung County	126	3 086	249 988	243 114	855	321	42
Hualien County	148	4 054	339 331	344 894	542	152	368
<b>Kinma Region</b>	<b>3</b>	<b>4</b>	<b>5 993</b>	<b>5 997</b>	<b>662</b>	<b>356</b>	<b>107</b>
Kinmen County	3	4	5 993	5 997	520	177	51
Lienchiang County	—	—	—	—	142	179	56

Note: Forestry land area included forest land areas and affiliated forest land area; indigenous forest conservation was incorporated into forestry land area in 2015.

**Table III. Comparison of Two Census Results of Agriculture, Forestry, Fishery and Animal Husbandry**

Abstracted items	Unit	2020	2015	Comparison (increase /decrease)
<b>A. Agriculture</b>				
1. Enterprises engaged in agriculture	enterprise	693 055	721 220	-3.91 (%)
{ Farm households	household	691 477	719 922	-3.95 (%)
{ Farms	farm	1 578	1 298	21.57 (%)
2. Farm households engaged in agriculture				
% of total households	%	7.74	8.50	-0.76 (percentage point)
Farm households population	person	2 312 379	2 537 802	-8.88 (%)
Farm households population / total population	%	9.81	10.80	-0.99 (percentage point)
Mean farm households size	person	3.34	3.53	-0.19 (人)
The proportion of the population aged 15 years old and over who annually worked in own farm for more than one day	%	64.59	60.59	4.00 (percentage point)
Average age of managers	years old	64.44	63.52	0.92 (years old)
The proportion of managers with college and above	%	12.34	8.77	3.57 (percentage point)
3. Cultivated lands in enterprises engaged in agriculture (include farms)	ha.	526 682	538 962	-2.28 (%)
The proportion of non-self-owned area	%	26.61	22.49	4.12 (percentage point)
4. Enterprises with cultivated land engaged in agriculture	enterprise	686 645	715 944	-4.09 (%)
{ Farm households	household	685 695	715 093	-4.11 (%)
{ Farms	farm	950	851	11.63 (%)
5. Average cultivated land of per enterprise with cultivated land engaged in agriculture	ha.	0.77	0.75	0.02 (ha.)
{ Farm households	ha.	0.74	0.72	0.02 (ha.)
{ Farms	ha.	23.04	27.74	-4.70 (ha.)
6. Enterprises with gross income of agriculture	enterprise	580 450	565 796	2.59 (%)
{ Farm households	household	578 951	564 569	2.55 (%)
{ Farms	farm	1 499	1 227	22.17 (%)
7. Gross income of agriculture	NT \$1 million	302 036	272 262	10.94 (%)
{ Farm households	NT \$1 million	267 246	241 906	10.48 (%)
{ Farms	NT \$1 million	34 790	30 357	14.60 (%)
8. Average of annual gross income of agriculture per enterprise with gross income of agriculture	NT \$1,000	520	481	8.14 (%)
{ Farm households	NT \$1,000	462	428	7.73 (%)
{ Farms	NT \$1,000	23 209	24 740	-6.19 (%)

Note: 1. Gross income of agriculture included the total agricultural products revenue, food processing revenue and leisure service revenue; all revenues were not deducted from expenditures and expenses.

2. The agricultural production value in the agricultural statistics annual report is estimated based on the agricultural production scale, which is different from the scope of statistics in which the gross income of agriculture sales and services in this table does not include unsold production and input loss costs.

**Table III. Comparison of Two Census Results of Agriculture, Forestry, Fishery and Animal Husbandry (Continued)**

Abstracted items	Unit	2020	2015	Comparison (increase /decrease)
<b>B. Agricultural Service</b>				
9. Agricultural service enterprises	enterprise	4 210	3 919	7.43 (%)
{ Crop service enterprises	enterprise	3 921	3 706	5.80 (%)
{ Livestock & poultry service enterprises	enterprise	289	213	35.68 (%)
<b>C. Forestry</b>				
10. Forestry households	household	89 291	87 152	2.45 (%)
11. Forestry farms	farm	308	314	-1.91 (%)
12. Forestry land area	ha.	1 912 348	1 884 920	1.46 (%)
{ Forest land area	ha.	1 820 959	1 795 287	1.43 (%)
{ Affiliated forest land area	ha.	91 389	89 632	1.96 (%)
13. Average forestry land area per forestry household	ha.	1.42	1.47	-0.05 (ha.)
14. Average forestry land area per forestry farm	ha.	5 796.64	5 595.08	201.56 (ha.)
<b>D. Fishery</b>				
15. Enterprises engaged in fishery	enterprise	34 991	40 166	-12.88 (%)
16. Enterprises engaged in fishing	enterprise	14 579	15 526	-6.10 (%)
17. Enterprises engaged in aquaculture	enterprise	21 605	25 771	-16.17 (%)
18. Powered fishing crafts with operation				
Number	vessel	8 393	9 016	-6.91 (%)
Tonnage	ton	419 671	417 569	0.50 (%)
Average tonnage per fishing craft with operation	ton	50.00	46.31	3.69 (ton)
19. Area of aquaculture in use				
{ Pond, shallow sea and others	ha.	35 385	39 588	-10.62 (%)
{ Cage culture	m <sup>3</sup>	407 976	341 730	19.39 (%)
20. Average age of managers engaged in fishery	years old	60.19	59.00	1.19 (years old)
21. Sole proprietorship fishery households engaged in fishery	household	34 129	39 279	-13.11 (%)
22. Population of sole proprietorship fishery households engaged in fishery	person	110 655	135 893	-18.57 (%)
23. Enterprise with gross income of fishery	enterprise	31 104	35 842	-13.22 (%)
{ Sole proprietorship fishery households	household	30 266	34 970	-13.45 (%)
{ Non-sole proprietorship fishery households	enterprise	838	872	-3.90 (%)
24. Gross income of fishery	NT \$1 million	71 396	76 577	-6.77 (%)
{ Sole proprietorship fishery households	NT \$1 million	46 253	54 555	-15.22 (%)
{ Non-sole proprietorship fishery households	NT \$1 million	25 143	22 022	14.17 (%)
25. Average of annual gross income of fishery per enterprise with gross income of fishery	NT \$1,000	2 295	2 137	7.44 (%)
{ Sole proprietorship fishery households	NT \$1,000	1 528	1 560	-2.04 (%)
{ Non-sole proprietorship fishery households	NT \$1,000	30 004	25 254	18.81 (%)

Note: Gross income of fishery included the total fishery products revenue, food processing revenue and leisure service revenue; all revenues were not deducted from expenditures and expenses.

**Table IV. International Agriculture Census Information Comparison****(1) Summary of Agriculture Census**

		Engaged in agriculture		
		Number (Unit)	Average age of manager (years old)	Female manager proportion (%)
Republic of China	{ 2015	721 220	63.5	20.9
	2020	693 055	64.4	21.3
Japan	{ 2015	1 377 266	—	—
	2020	1 075 705	67.8	5.8
Korea	{ 2015	1 088 518	65.1	17.8
	2020	1 035 193	66.1	20.3
United States	{ 2012	2 109 303	58.3	13.7
	2017	2 042 220	59.4	23.9

**(2) Distribution of Manager by Age Group**

	Republic of China in 2020		Japan in 2020		Korea in 2020		United States in 2017	
	Number (person)	proportion (%)	Number (person)	proportion (%)	Number (person)	proportion (%)	Number (person)	proportion (%)
<b>Total</b>	<b>693 055</b>	<b>100.00</b>	<b>1 075 705</b>	<b>100.00</b>	<b>1 035 193</b>	<b>100.00</b>	<b>2 042 220</b>	<b>100.00</b>
15 ~ 24 years old	705	0.10	422	0.04	205	0.02	10 518	0.52
25 ~ 34 years old	6 105	0.88	7 941	0.74	3 653	0.35	111 236	5.45
35 ~ 44 years old	28 050	4.05	37 274	3.47	27 553	2.66	207 348	10.15
45 ~ 54 years old	100 730	14.53	89 458	8.32	120 634	11.65	351 677	17.22
55 ~ 64 years old	213 468	30.80	249 573	23.20	303 829	29.35	580 769	28.44
Over 65 years old	343 997	49.63	691 037	64.24	579 319	55.96	780 672	38.23

References: The data of Republic of China was obtained from the Directorate-General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan; Japanese data was obtained from the Ministry of Agriculture, Forestry and Fishery of Japan; Korean data was obtained from the Statistics Korea; the data of the United States was obtained from United States Department of Agriculture.

Note: The statistics for Republic of China referred to the enterprises engaged in agriculture; for Japan referred to the commercial farm households which 500,000 yen or more of agricultural products were produced and sold; for Korea referred to the farm which 500,000 won or more of agricultural products were produced and sold; for the United States referred to the farm which \$1,000 or more of agricultural products were produced and sold.

## **B. Census Planning and Conduction**

## **I. Brief Summary**

Production of agriculture, forestry, fishery, and animal husbandry, in the overall economic and social development, is responsible for the provision of food and industrial raw materials, conservation of natural ecological balance and improvement of the living environment, and it is the livelihood industry most closely related to the community. With population growth, energy crisis and climate change, the management and development of agriculture, forestry, fishery, and husbandry, is not only related to the vital interests of farmers and fishermen, but also provides the function of food security and ecosystem maintenance. The census of agriculture, forestry, fishery, and animal husbandry is one of basic national censuses and should be conducted regularly in accordance with the Statistics Act. We have done fourteen censuses already since the first census was launched in 1956. The major purpose of this census is aimed to collect basic agricultural information, such as the characteristics of the population of farm households, the distribution and utilization of farmland resources, and gross income of agriculture and fishery, as well as the development of the agricultural industry, such as safe agriculture, labor inputs, and the distribution of agricultural products for sale, and continue providing numerous policy application to agricultural policy, the use of agricultural land, and the transformation of operation for the government.

## **II. Census Planing**

To meticulously plan the 2020 Census, DGBAS had reviewed the merits and demerits of last (2015) census, collected the current priorities and objectives of agricultural and fishery policy, and referred the advantages of foreign census designs. To collective wisdom, we invited the representatives of agricultural authorities, experts, and scholars to participate in several meetings and discussions, and after the programs, plans, census forms and analysis framework related to the census were considered by DGBAS Census Evaluation Commission meeting, various planning and design work were completed.

To test the adaptation and completeness of various preliminary designed census forms, guidance notes, audit methods and related operation methods for this census, we conducted pretests twice in July 2019 and in April 2020 respectively. The 1<sup>st</sup> pretest was conducted in form of fieldwork by related census designers of DGBAS and the staff sent by Statistics Department of 7 counties/cities governments where the samples of the pretest located; DGBAS planned the second pretest, selecting 15 counties/cities with larger number of agricultural and fishery units; the Departments of Budget, Accounting & Statistics and the Department of Agriculture in those counties/cities were responsible



for investigation. The problems were discovered from the two pretests, and then compiled into the work review reports, providing the basic principles of census revision forms and operation methods.

### III. Census Operation and Contents

**A. Census reference period:** The census reference day was December 31, 2020. The census reference period was from January 1 to December 31 in 2020.

**B. Enumeration period:** The census was enumerated from May 1 to August 30 in 2021

**C. Geographic area:** The census covered all, counties (cities).

**D. Scope of the census industries:** The census, based on the "Standard Industrial Classification System of the Republic of China, including Agriculture & animal husbandry (i.e., growing of crops, animal husbandry, and support activities to agriculture and animal husbandry), forestry and fishery (i.e., fishing and aquaculture).

#### E. Coverage

1. Agriculture: All enterprises operates growing of crops, animal husbandry, support activities to agriculture and animal husbandry ; its objects were divided into agricultural enterprises and agricultural service enterprises.

a. Agriculture and Animal Husbandary: Refer to enterprises had agricultural resources or engaged in agricultural and animal husbandary production or experimentation, such as crop cultivation, livestock and poultry raising, bees and silkworms keeping or operated leisure agriculture with agriculture resources. Enterprises should meet one of the following census criteria:

- (1) At the end of 2020, a unit managed (including on lease/occupy and be consigned; but not including on lending) cultivated land more than 0.05 hectares (included with or without actual crops grown).
- (2) At the end of 2020, a unit raised at least 1 big-sized animal (cattle, deer, horse, etc.).
- (3) At the end of 2020, a unit raised at least 3 medium-sized animals (hog, goat, ostrich, etc.).
- (4) At the end of 2020, a unit raised at least 100 small-sized animals (chicken, duck, goose, rabbit, etc.).
- (5) In 2020, a unit of produced and sold NT\$20,000 or more of agricultural products .

b. Agricultural service eneterprise: Refer to family households or non-family households offering direct service (i.e., cultivation activities, post-harvest crop activities, support

activities to animal husbandary) to farm households and farms, and gross income (without deducting from expenditures and expenses) of their service in 2020 was more than NT\$20,000.

2. Forestry: Refer to enterprises that had forestry resources or engaged in planting, cultivation, and management of forests and bamboo forests, including forestry activities that also provide leisure and recreation for the public, and manage (including on lease and be consigned) forest land area over 0.1 hectares at the end of 2020; however, the forestation and logging contractors should not consider the forest land area of contracting jobs as their managing forestry resources.
3. Fishery: Refer to enterprises that had fishery equipment and aquaculture resources, or engaged in production, and experimentation for fishing and aquaculture, or operated leisure fishery with fishing equipment and aquaculture resources. Enterprises should meet one of the following census criteria:
  - a. At the end of 2020, a unit had the right (including on lease; but not including on lending) to use fishing equipment (i.e., powered fishing crafts, sampan, and fishing raft).
  - b. At the end of 2020, a unit managed (including on lease/occupy and be consigned; but not including on lending) aquaculture area more than 0.05 hectares .
  - c. In 2020, a unit produced and sold NT\$20,000 or more of fishing and aquaculture products.

**F. Census Units:**

1. Family households as farm households, agricultural service households, forestry households, and fishery households are defined as common household that operates agricultural, forestry, fishery, and livestock production or service independently as a census enumeration unit.
2. Non-family households included farms, agricultural service enterprises, forest farms, and non-sole proprietorship fishery households refers to a census enumeration unit that comprises independently operated and managed locations involved in agricultural, forestry, fishing, or livestock production, experimentation, or services.

**G. Method of enumeration:** A comprehensive census is conducted through a variety of channels, such as personal interview investigation, leaving forms to be filled out, and online filing.

**H. Questionnaire item:**

## 1. Agriculture and Animal Husbandary:

- a. Type of organization.
  - b. Operating situation of agriculture in the census year.
  - c. The cultivated land and non-cultivated land which can be used for crops growing at the end of the census year and use situation in the census year.
  - d. Crops production in the census year.
  - e. Number of livestock and poultry at the end of the census year.
  - f. The main industry in agriculture in the census year.
  - g. Operation status consigned to agricultural service enterprise in the census year.
  - h. Operating situation of leisure agriculture in the census year.
  - i. Operating situation of agriculture-related business (excluding leisure agriculture) in the census year.
  - j. Characteristics of household population aged 15 years and over in farm households.
    - (1)Relationship of householder.
    - (2)Sex.
    - (3)Birth year.
    - (4)Education.
    - (5)Family livelihood maintainers.
    - (6)Status of own farm work.
    - (7)Annual man-days engaged in own farm work.
    - (8)Whether engaged in work other than self-own ariculture in the census year.
    - (9)Main working conditions in the census year.
    - (10)Whether is a new farmer after 2016.
  - k. Characteristics of manager of farms.
    - l. Number of employees and workers without wages engaged in self-owned agriculture enterprises (farms) in the census year.
    - m. Annual agriculture-related gross income in the census year.
    - n. Distribution of agricultural products in the census year.
2. Agriculture Service Enterprises:
- a. Type of organization.
  - b. Characteristics of manager.

- c. Number of employees engaged in agricultural service in the census year.
- d. Operating situation of agricultural service in the census year.
- e. Number of agricultural machinery at the end of the census year.
- f. Area of land and farm shed for agricultural service at the end of the census year.
- g. Annual gross income of agricultural service in the census year.

3. Forestry:

- a. Type of organization.
- b. Forestry-related work in the census year.
- c. Number of household population at the end of the census year.
- d. Characteristics of managers.
- e. The main forestry operating types in the census year.
- f. Forestry land area at the end of the census year.
- g. The forest land area involved in national afforestation program at the end of the census year.
- h. Forestry operation in the census year.
- i. The number of employees engaged in self-owned units (farms) and those who were not paid in the census year.
- j. Annual forestry-related gross income in the census year.

4. Fishery

- a. Type of organization.
- b. Operating situation of fishery in the census year.
- c. Number of fishing crafts at the end of the year and operating situation in the census year.
- d. Engaging in fishing without fishing crafts in the census year.
- e. The aquaculture area which can be used for cultivating and the fishing vessels used at the end of the census year and use situation in the census year.
- f. The main industry in fishery in the census year.
- g. Operating situation of leisure fishery in the census year.
- h. Operating situation of fishery-related business (excluding leisure fishery) in the census year.
- i. Characteristics of household population aged 15 years and over in sole proprietorship fishery households .

(1)Relationship of householder.

(2)Sex.

(3)Birth year.

(4)Education.

(5)Family livelihood maintainers.

(6)Status of own fishery work.

(7)Annual man-days engaged in own fishery work.

(8)Whether engaged in work other than self-own fishery in the census year.

(9)Main working conditions in the census year.

j. Characteristics of managers in non-sole proprietorship fishery households.

k. Numbers of employees and workers without wages engaged in self-owned fishery (this unit) in the census year.

l. Annual fishery-related gross income in the census year.

m. Distribution of fishery products in the census year.

#### **I. Demarcation of districts:**

1. In principle, an enumeration district would contain 120 census units; 10 to 12 enumeration districts would be grouped into an administrative district. However, the size of enumeration and administrative district could be enlarged or reduced as necessary.
2. Supervisory districts: In principle, a county/city was designed to be a supervisory district.

#### **J. Scope of specific survey:**

1. Ministry of Agriculture
2. Ministry of Education
3. Ministry of Justice
4. Ministry of Economic Affairs
5. Veterans Affairs Council
6. Municipality, County/City Government

### **IV. Preparatory Operation**

**A. Demarcation of enumeration districts:** To reduce the overlapping or omission of the census objects and enhance the accuracy of the data, during the period from January to February of the year 2021, the demarcation of enumeration districts was carried out by city and county authorities. Each municipality and county (city) government took responsibility for this task in collaboration with the local township (town, city, district) offices. The enumeration districts were used to recruit census staff at all levels and making census work smoothly.

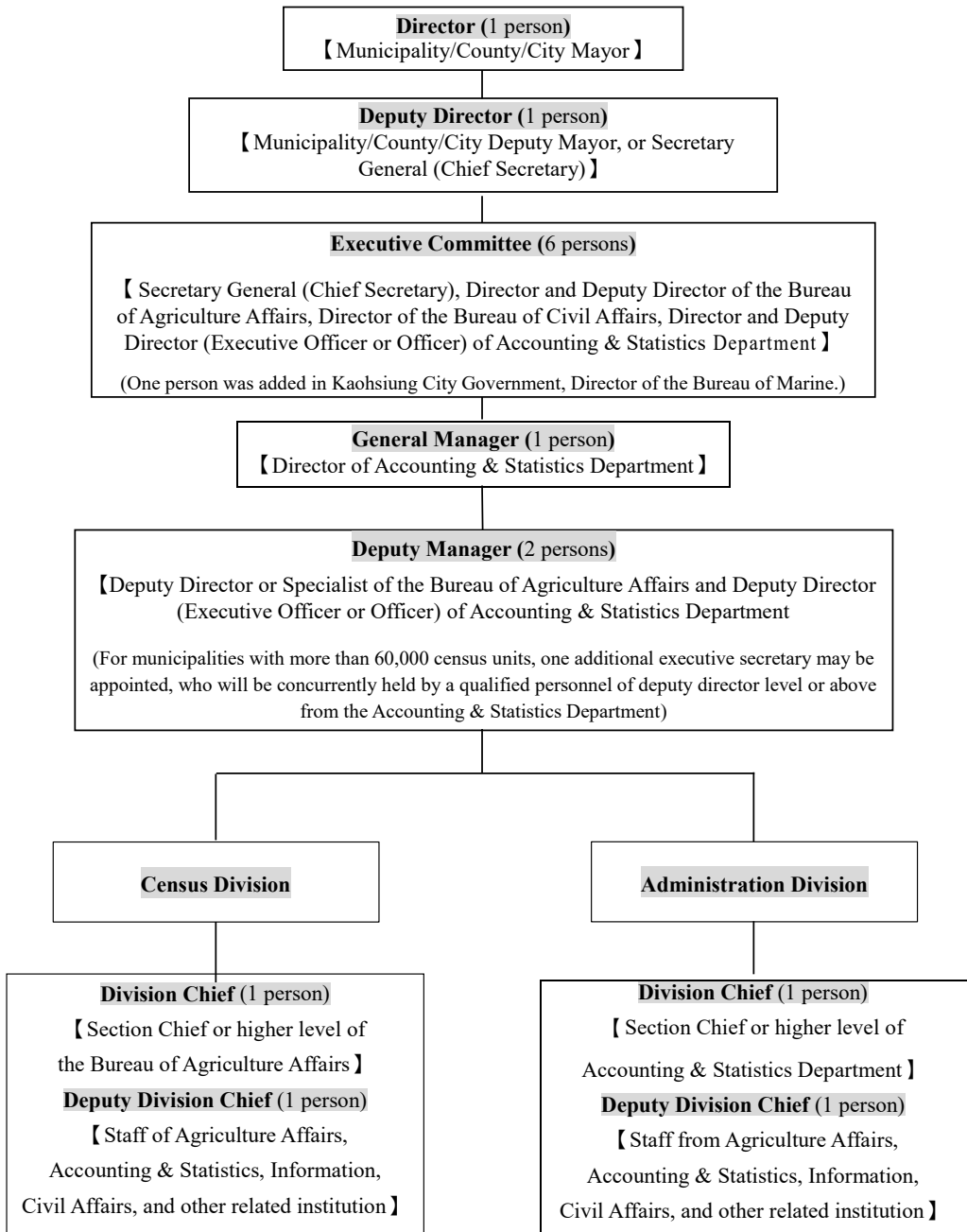
**B. Promulgation of census administrative system:** To save paper, reduce staff workloads and meet the timely requirement of the census, DGBAS has developed “Census Administration

System, CAS”, which installed with the function of staff recruitment, demarcation of enumeration districts, funding management, and staff performance evaluation. Municipality/County/City government’s administrative staff training was initiated on early January 2021 by DGBAS.

**C. Establishment of census organization:**

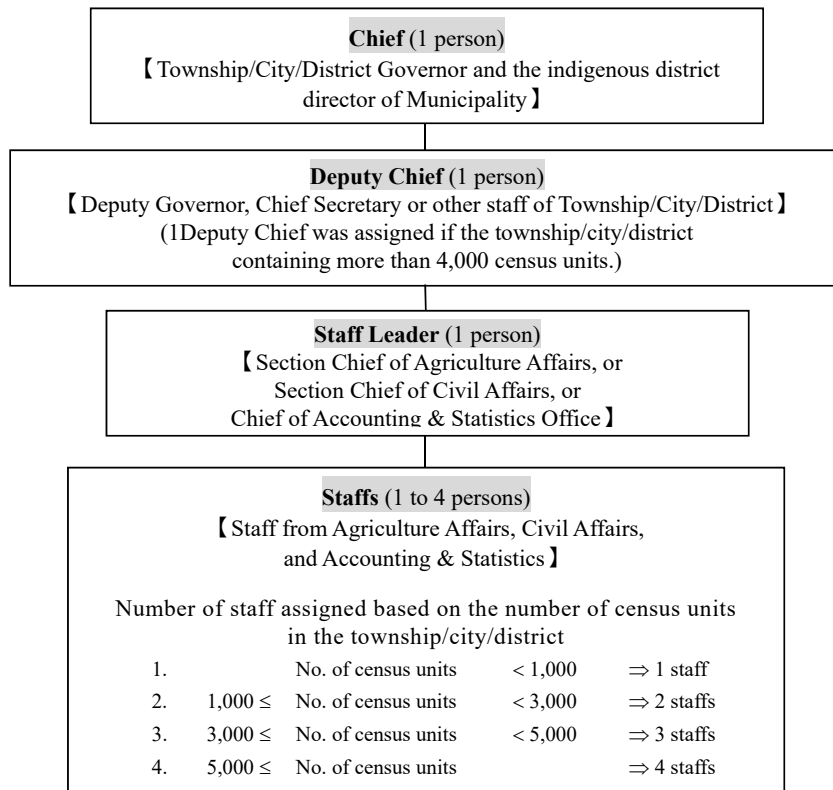
1. Specific survey organization: Each related authority set up organization and assigned counselors, officers, and enumerators, under the direction and supervision of DGBAS to conduct specific survey.
2. Census organization of Municipality/County/City: Municipality, county/city governments established the “Agriculture, Forestry, Fishery and Animal Husbandry Census Department” (hereinafter referred to as “the Census Department”) respectively, which was composed of accounting & statistics and agriculture related units under the direction and supervision of DGBAS to conduct census affairs.
3. Census of organization of Township/City/District: An "Agriculture, Forestry, Fishery and Animal Husbandry Census Office" (hereinafter referred to as the "Census Office") was established in each Township (Town/City/District) and the indigenous district office of city, under the direction and supervision of DGBAS. Each district office conducted census affairs of own district and was supervised by higher census authorities.

**Agriculture, Forestry, Fishery and Animal Husbandry**  
**Census Department of Municipality/County/City**



**Agriculture, Forestry, Fishery and Animal Husbandry**

**Census Office of Township/ City/District**



**D. Recruitment of census staff at all levels:** To successfully accomplish the census mission and enhance the functions of the census organization, local census organizations had set enumerators, administrators, inspectors, and supervisors to carry out field investigation from May to August 2021.

1. Enumerators: One enumeration district (about 120 units) was assigned to one enumerator. Enumerators were recruited either from government staff of agriculture affairs and accounting & statistics, or from civil labor force.
2. Administrators: One administrative district (about 10 to 12 enumeration districts) was assigned to one administrator. Administrators were recruited either from government staff of agriculture affairs and accounting & statistics, or from civil labor force.
3. Inspectors: One administrative district (about 10 to 12 enumeration districts) was assigned to one inspector. Inspectors were recruited from related personnel by census department of each Municipality, County/City government.
4. Supervisors: One supervisory district was assigned to one supervisor. Supervisors were recruited from those who possessed abundant experiences on censuses, surveys, or statistics by DBGAS.



**E. Compilation of enumeration rosters:** To reduce the omission and enhance the full coverage of interviewees, not only the 2015 census enumeration rosters were taken into consideration, but new rosters of authorities concerned were collected for census use.

**F. Training of census staffs:** To improve the quality of data and unify the enumeration procedures, it is imperative to let census staffs fully understand the implications and significance of the Census, such as operation rules and regulations, ways of reporting census questionnaire, interview skills. The training program was carried out as follows:

1. Census promulgation meeting: The half-day meeting was held by DGBAS in early February 2021. The chiefs of agricultural units, directors, and deputy directors (senior executive officers) and chief of Accounting & Statistics departments in each municipality, county/city were invited to the meeting.
2. Census administration system seminar: The meeting was held by DBGAS in early January of 2021, and lasted for 2 days. The participants included personnel designated by the municipal and county (city) governments.
3. Working seminar : The seminar was held by each County/City Census Department in March 2021. Not only directors, deputy directors, executive committee, general managers, deputy managers, division chiefs and deputy chiefs, and staffs in Census Department, but also directors, general managers, and staff in charge of census operations in their respective townships (towns/cities/districts).
4. Lecturers and supervisors training: The two-day meeting was held by DGBAS on middle and last March 2021. Participants included lecturers of investigators training, supervisors, and relative personnel.
5. Investigator training : Held from April 2021 by district. Participants included enumerators, administrators, inspectors, and staffs.

**G. Lecturers and training materials:** The recruitment of lecturers and compilation of training materials for this census were made by DGBAS.

**H. Census promotion:** To make the public fully aware of the purposes and implications of the Census, the Census Departments started local promotion programs as soon as Municipality, County/City Census District Departments had established. The promotion should be highly concentrated a week before field investigation started and finished at the end of investigation.

## **V. Census Implementation**

**A. Personal interview:** Enumerators are supposed to wear identification card and carry necessary forms to visit census units during this period, and conduct on-site assessments and preliminary inspections. They should proceed according to the prescribed schedule, and submit completing the verification of census forms and relevant documents to the administrator.

**B. Administration of field work:** During the implementation of the census, the administrators were required to assist the enumerators on how to conduct the enumeration work, including the application of enumeration techniques, the control of work progress, and the co-ordination and resolution of difficult issues, etc.; and should also review and approve the census forms submitted by the enumerators before sending them to the inspectors.

**C. Inspection of completed forms:** Upon receipt of the census form from the administrator, inspectors should conduct serious review of the completed forms for content. The completed forms with serious incidental omissions or contradictions were returned to enumerators to check again.

**D. Supervision of census operation:** To facilitate the census operation, DGBAS assigned one supervisor for each supervisory district. Supervisors are responsible for consulting of practical operations, monitoring the progress of field works and review of the data.

**E. Delivery of census documents:** Local census organizations are required to collect and deliver the completed census forms to DGBAS before deadline.

## **VI. Data Processing**

For those who return the census form in writing, DGBAS adopted the Optical Character Recognition (OCR) technology to scan the census forms, recognize and edit the data on line, and save the data in an image format; for those who provide the data by using the Internet filing system, the data will be directly registered in this census database after online checking. The compilation of census data and statistical tables were processed by the contractor assigned by DGBAS.

## **VII. Compilation of Census Reports**

Two types of census reports were compiled: preliminary report and final report. The contents of the former were the number of agriculture, forestry, fishery and animal husbandry enterprises, household population and structures of production, etc.; and it was edited and published in June 2022. The latter included general report, agriculture report, agricultural service report, forestry report, and fishery report. The general report was scheduled to be published during June 2023. The census reports (including electronic books) will be disseminated for public use.

## **C. Summary Analysis**

## I. The Number of Agriculture, Forestry, Fishery and Animal Husbandry Enterprises

**At the end of 2020, the number of enterprises which engaged in agriculture and fishery continued to decrease by 3.9% and 12.9% respectively.**

By the end of 2020, the number of agricultures, forestry, fishery, and animal husbandry (Including those who engaged in agriculture, forestry, fishery, and animal husbandry, and those who hold agricultural, forestry, fishery and animal husbandry resources but have not engaged in them, including households and business entities) amounted to 831,005 enterprises, decreasing by 13,578 enterprises or 1.6% comparing to last census (end of 2015). Among them, 693,055 were engaged in agriculture, a decrease of 28,165 or 3.9% due to the lack of business intention and the increasing enterprises in renting out, lending, abandon farming; 34,991 enterprises engaged in fishery, decreasing by 5,175 enterprises or 12.9%, subject to factors such as responsible fisheries' ship reduction policy, climate change, labor shortage and increase in operating costs.

**Table 1 The number and change of agriculture, forestry, fishery and animal husbandry enterprises**

	End of 2020		End of 2015		End of 2010		End of 2005	
	Number (enterprise)	Comparing to last census (%)	Number (enterprise)	Comparing to last census (%)	Number (enterprise)	Comparing to last census (%)	Number (enterprise)	Comparing to last census (%)
<b>The number of agriculture, forestry, fishery, and animal husbandry enterprises</b>	<b>831 005</b>	<b>-1.61</b>	<b>844 583</b>	<b>0.10</b>	<b>843 745</b>	<b>2.37</b>	<b>824 226</b>	<b>6.73</b>
Agriculture	763 473	-2.15	780 256	-0.16	781 518	1.19	772 354	6.49
Engaged in	693 055	-3.91	721 220	-0.03	721 446	-1.09	729 387	4.90
Non-engaged in	70 418	19.28	59 036	-1.72	60 072	39.81	42 967	43.63
Agricultural Service	4 210	7.43	3 919	-15.85	4 657	-0.53	4 682	-29.08
Forestry	89 599	2.44	87 466	4.99	83 312	21.80	68 398	32.85
Fishery	41 278	-8.74	45 229	-7.00	48 634	-0.90	49 078	-4.09
Engaged in	34 991	-12.88	40 166	-7.01	43 194	-4.84	45 390	-5.42
Non-engaged in	6 287	24.18	5 063	-6.93	5 440	47.51	3 688	16.01

Note: If there was any enterprise which operated more than two kinds of industry at the same time, then the enterprise was separately calculated into each industry which it operated, so that the accumulated number of all industries was larger than the number of census enterprise for agriculture, agricultural service, forestry, fishery.

## II. The Resource Application of Agriculture, Forestry, Fishery, and Animal Husbandry

### A. The cultivated land area of agriculture continued to decrease by 7,800 hectares or 1.4%, and the amount of decline slowed down.

By the end of 2020, the cultivated land area of agriculture amounted to 557,058 ha., 7,800 ha. less or 1.4% lower than that of the end of 2015. Due to continuous promotion of fallow activation policy, the cultivated land area for crops planting was 497,239 ha., increasing by 10,720 ha. or 2.2%.

**Table 2-1 Cultivated land area of agriculture, by main utilization**

	End of 2020				End of 2015				End of 2010	
	Area	Proportion	Comparing to last census		Area	Proportion	Comparing to last census		Area	Proportion
			Increased/Decreased number (ha.)	Increased/Decreased rate (%)			Increased/Decreased number (ha.)	Increased/Decreased rate (%)		
	(ha.)	(%)	(ha.)	(%)	(ha.)	(%)	(ha.)	(%)	(ha.)	(%)
<b>Total</b>	<b>557 058</b>	<b>100.00</b>	<b>-7 800</b>	<b>-1.38</b>	<b>564 857</b>	<b>100.00</b>	<b>-14 339</b>	<b>-2.48</b>	<b>579 196</b>	<b>100.00</b>
Crops planting	497 239	89.26	10 720	2.20	486 520	86.13	34 116	7.54	452 404	78.11
Green manure crops planting only	10 906	1.96	-16 862	-60.72	27 767	4.92	-50 397	-64.48	78 164	13.50
Afforestation (6 years & below)	787	0.14	-3 387	-81.14	4 175	0.74	-297	-6.63	4 471	0.77
Temporarily used for other purpose	4 871	0.87	1 488	43.99	3 383	0.60	911	36.85	2 472	0.43
Abandoned area throughout the year	43 254	7.76	241	0.56	43 013	7.61	1 328	3.18	41 685	7.20

Note: 1. The area for producing crops refers to the cultivated land used for crop production, including production of long and short-term crops, as well as opened to visit, picking (including the community gardens); same conditions applied to the following tables.  
 2. The area for green manure crops planting only the area of rice cropping fallow area throughout the year. In 2020, the area was 7,644 ha., decreasing by 17,562 ha. comparing to 25,206 ha. in 2015.  
 3. Temporarily used for other purpose included the cultivated land provided for agricultural recreation land, pasture land, and erection of solar panels, etc., to be restored crops growing at any time; abandoned area throughout the year included fallow/tuning the soil and no crops were planted throughout the year, nor for other purpose.

### B. Forest land area increased by 25,672 ha., or 1.4%.

By the end of 2020, land area for forestry amounted to 1,912,348 ha., among which forest land area amounted to 1,820,959 ha., or 95.2%, an increase of 25,672 ha., or 1.4%, from the end of 2015.

**Table 2-2 Land area for forestry, by ownership and type of organization**

		Forest land area					Unit: ha.	
		Grand total	Total	Self-owned	On lease from public forest land	On lease from private forest land	Be consigned	Affiliated forest land area
<b>End of 2020</b>	<b>Area</b>							
	<b>Percent(%)</b>		<b>100.00</b>	<b>96.37</b>	<b>2.22</b>	<b>0.22</b>	<b>1.20</b>	
	Forestry households	126 982	126 740	93 517	32 334	657	231	242
	Forestry farms	1 785 366	1 694 219	1 661 320	8 073	3 289	21 538	91 147
<b>End of 2015</b>	<b>Area</b>	<b>1 884 920</b>	<b>1 795 287</b>	<b>1 712 792</b>	<b>52 699</b>	<b>3 319</b>	<b>26 477</b>	<b>89 632</b>
	<b>Percent(%)</b>		<b>100.00</b>	<b>95.40</b>	<b>2.94</b>	<b>0.18</b>	<b>1.47</b>	
	Forestry households	128 064	127 812	89 766	36 580	884	582	252
	Forestry farms	1 756 856	1 667 475	1 623 026	16 119	2 435	25 895	89 381

### C. The number of fishing crafts and aquaculture area decreased by 0.8% and 6.7% respectively.

By the end of 2020, there were 15,968 fishing crafts (including powered fishing crafts and non-powered sampans, rafts with or without operation), less 124 vessels or 0.8% than that of the end of 2015; aquaculture area(including fishponds, shallow seas, and ponds, etc., excluding cage culture) amounted to 38,949 ha., also decreasing by 2,775 ha., or 6.7%.

**Table 2-3 Number of fishing crafts by types of fishing vessel**

		End of 2020			End of 2015		
		Total	Powered fishing crafts	Non-powered sampans, rafts	Total	Powered fishing crafts	Non-powered sampans, rafts
<b>Total</b>		<b>15 968</b>	<b>9 579</b>	<b>6 389</b>	<b>16 092</b>	<b>9 820</b>	<b>6 272</b>
	With operation	13 169	8 393	4 776	14 170	9 016	5 154
	Without operation throughout the year	2 799	1 186	1 613	1 922	804	1 118

Note: With operation includes fishing operation or sightseeing and leisure.

**Table 2-4 Overview of aquaculture area (excluding cage culture)**

	End of 2020			End of 2015		
	Area (ha.)	Proportion (%)	Increased/ Decreased rate of comparing to last census (%)	Area (ha.)	Proportion	
					(%)	
<b>Aquaculture area of pond, shallow sea and others</b>	<b>38 949</b>	<b>100.00</b>	<b>-6.65</b>	<b>41 724</b>	<b>100.00</b>	
<b>By type of aquaculture</b>						
Pond culture	33 338	85.59	-8.98	36 626	87.78	
Shallow sea culture	1 999	5.13	-31.30	2 909	6.97	
Other culture	2	0.01	-88.84	22	0.05	
Suspend-culture	3 610	9.27	66.60	2 167	5.19	

Note: 1. Area of aquaculture refers to the use of fishponds, shallow seas, rivers or lakes and other breeding outlets (places) for the purpose of breeding, rearing, and propagating aquatic organisms, including incubation, cultivation, and reproduction activities.

2. Suspend-culture includes those who hold breeding outlets (places) but are not engaged in fishery throughout the year, those who buy adult fish for human fishing and those who do not use them throughout the year.

### III. The Population of Farm Households and Agricultural Labor Force

#### A. The population of farm households which engaged in agriculture is aging rapidly, and the working-age population continues to decrease.

By the end of 2020, the population of farm households which engaged in agriculture amounted to 2,312,379 persons, decreasing by 225,423 persons or 8.9% in 5 years, with slightly higher decrease than the 8.6% at the end of 2015. By age, the working-age population from 15 years old to 64 years old continued to decrease by 14.5%; the elderly population above 65 years old increased by 6.5%. The average age of managers engaging in farm households was 64.4 years old, more 0.9 years old than that of the end of 2015.

**Table 3-1 Farm households population, by sex and age**

	End of 2020		End of 2015		End of 2010		End of 2005	
	Number (person)	Proportion (%)	Number (person)	Proportion (%)	Number (person)	Proportion (%)	Number (person)	Proportion (%)
<b>Farm households</b>	<b>2 312 379</b>	<b>100.00</b>	<b>2 537 802</b>	<b>100.00</b>	<b>2 776 301</b>	<b>100.00</b>	<b>3 259 545</b>	<b>100.00</b>
<b>By sex</b>								
Male	1 231 411	53.25	1 361 544	53.65	1 465 342	52.78	1 713 458	52.57
Female	1 080 968	46.75	1 176 258	46.35	1 310 959	47.22	1 546 087	47.43
<b>By age</b>								
Under 15 years old	214 100	9.26	228 124	8.99	372 436	13.41	551 275	16.91
15 ~ 64 years old	1 471 791	63.65	1 721 458	67.83	1 831 895	65.98	2 105 653	64.60
Above 65 years old	626 488	27.09	588 220	23.18	571 970	20.60	602 617	18.49

**Table 3-2 Farm managers of farm households which engaged in agriculture, by sex and age**

Unit:%

	Total		Sex		Age					Average age (years old)
	Number (peson)	Percent	Male	Female	15~24 years old	25~44 years old	45~64 years old	65~69 years old	Over 70 years old	
<b>Farm households</b>										
End of 2005	728 627	100.00	83.18	16.82	0.06	9.49	46.75	15.33	28.36	61.20
End of 2010	720 344	100.00	81.03	18.97	0.09	7.82	48.11	12.77	31.21	62.04
End of 2015	719 922	100.00	79.09	20.91	0.08	5.56	48.40	12.87	33.09	63.52
End of 2020	691 477	100.00	78.68	21.32	0.10	4.90	45.30	16.49	33.21	64.44

**B. Among the population over 15 years old working in farm households, those who worked in agriculture as their main working status throughout the year decreased by 9.2% in five years.**

Among the population over 15 years old working in farm households, the number of those who worked in agriculture as their main working status throughout the year amounted to 579,950 persons or 27.6%, decreasing by 58,570 persons or 9.2% in five years; Observing their age structure, 54.0% were 65 years old or above, an increase of 6.0 percentage points.

**Table 3-3 Population of farm households which engaged in agriculture, 15 years old and over, by regular work and by age.**

Unit:%

	Total		Engaged in		House-keeping	Attending school or preparing to take entrance exams	Sickness, or living a retired life	Others
	Number (person)	Percent	Agriculture mainly	Work other than agriculture mainly				
<b>End of 2005 {</b>	<b>2 708 270</b>		<b>641 786</b>	<b>1 169 499</b>	<b>366 200</b>	<b>259 754</b>	<b>251 782</b>	<b>19 249</b>
<b>person</b>								
<b>percent</b>		<b>100.00</b>	<b>23.70</b>	<b>43.18</b>	<b>13.52</b>	<b>9.59</b>	<b>9.30</b>	<b>0.71</b>
<b>End of 2010 {</b>	<b>2 403 865</b>		<b>592 172</b>	<b>1 064 818</b>	<b>300 710</b>	<b>207 237</b>	<b>222 857</b>	<b>16 071</b>
<b>person</b>								
<b>percent</b>		<b>100.00</b>	<b>24.63</b>	<b>44.30</b>	<b>12.51</b>	<b>8.62</b>	<b>9.27</b>	<b>0.67</b>
<b>End of 2015 {</b>	<b>2 309 678</b>		<b>638 520</b>	<b>1 078 898</b>	<b>194 579</b>	<b>196 863</b>	<b>189 029</b>	<b>11 789</b>
<b>person</b>								
<b>percent</b>		<b>100.00</b>	<b>27.65</b>	<b>46.71</b>	<b>8.42</b>	<b>8.52</b>	<b>8.18</b>	<b>0.51</b>
<b>End of 2020 {</b>	<b>2 098 279</b>		<b>579 950</b>	<b>1 025 861</b>	<b>164 115</b>	<b>127 402</b>	<b>193 539</b>	<b>7 412</b>
<b>person</b>								
<b>percent</b>		<b>100.00</b>	<b>27.64</b>	<b>48.89</b>	<b>7.82</b>	<b>6.07</b>	<b>9.22</b>	<b>0.35</b>
15~24 years old	203 919	100.00	1.58	36.32	0.48	60.74	0.23	0.65
25~44 years old	547 599	100.00	7.62	88.03	2.66	0.65	0.54	0.50
45~64 years old	720 273	100.00	30.77	57.45	9.98	—	1.33	0.46
Over 65 years old	626 488	100.00	50.01	8.93	12.23	—	28.82	—

Note: Engaged in work refers to self-runned and employed in agriculture production, processing or leisure agriculture-related work, as well as engaged in work other than agriculture, including self-runned and employed in agricultural service, forestry, fishery, business and service industry (including government agencies).



### C. Employees and workers without wages amounted to 619,224 persons.

In 2020, among the farm households which engaged in agriculture, a total of 431,746 households or 62.4% consigned to agricultural service for the production stage; there are 146,776 households or 21.2% of those who hired employees and workers without wages, and the number of persons is 619,224.

**Table 3-4 Outsourcing and employment situation of farm households**

	2020				
	Households engaged in agriculture	Households consigned to agricultural service enterprises		Households with employees and workers without wages	
		(household)	(household)	% of households engaged in agriculture (%)	(household)
<b>Total</b>	<b>691 477</b>	<b>431 746</b>	<b>62.44</b>	<b>146 776</b>	<b>21.23</b>
Crops planting	677 772	424 285	62.60	141 465	20.87
Rice	242 521	234 033	96.50	18 880	7.78
Coarse grains	53 052	43 517	82.03	10 166	19.16
Special crops	30 647	15 041	49.08	9 091	29.66
Vegetables	139 284	83 375	59.86	35 722	25.65
Fruits	195 471	43 210	22.11	62 769	32.11
Mushroom	1 168	671	57.45	880	75.34
Flowers	5 075	2 072	40.83	2 059	40.57
Other crops	10 554	2 366	22.42	1 898	17.98
Livestock & poultry raising	13 591	7 461	54.90	5 256	38.67
Livestock	6 705	3 534	52.71	2 373	35.39
Poultry	6 017	3 722	61.86	2 461	40.90
Other livestock & poultry	869	205	23.59	422	48.56
Transition leisure	114	—	—	55	48.25

Note: 1. Employees and workers without wages input does not include the manpower invested by inter-farm labor exchange and consigned to agricultural service, same conditions applied to the following table.

2. Workers without wages refers to those engaged in the work of the agriculture unit without receiving remuneration, including family members, relatives and friends of non-cohabiting households who assist in agricultural work during holidays or busy farming seasons, same conditions applied to the following table.

## IV. Production Overview of Major Agricultural and Fishery Products

### A. Banana and mango planted areas increased by 3.8% and 19.5% respectively.

In 2020, the planting area of crops is still led by rice cultivation at 188,938 hectares, an increase of 14,088 hectares or 8.1% compared to 2015; banana and mango planting areas were 14,658 hectares and 15,673 hectares, an increase of 3.8% and 19.5%; betel nut planting area of 20,805 hectares decreased by 14.4% over the five-year period due to the impact of the guided betel nut withdrawal policy.

**Table 4-1 The planting status of the top 10 crops by the largest number  
of crops planting enterprises**

	2020						2015		Comparison in 5 years	
	No. of crops planting (enterprise)	Planting area (ha.)	Main distributed county/city			% of planting area of the category (%)	No. of crops planting (enterprise)	Planting area (ha.)	Increased /Decreased rate of enterprises (%)	Increased /Decreased rate of area (%)
			1 <sup>st</sup> place	2 <sup>nd</sup> place	3 <sup>rd</sup> place					
<b>Crops planting enterprises</b>	<b>686 487</b>						<b>710 070</b>		<b>-3.32</b>	
Rice	261 124	188 938	Yunlin County	Changhua County	Chiayi County	44.81	257 400	174 850	1.45	8.06
Banana	40 540	14 658	Pingtung County	Kaohsiung City	Nantou County	59.29	36 747	14 127	10.32	3.76
Mango	38 160	15 673	Tainan City	Pingtung County	Kaohsiung City	86.39	30 171	13 117	26.48	19.48
Corn (Food)	35 878	11 906	Yunlin County	Tainan City	Chiayi County	65.13	33 521	9 840	7.03	21.00
Bamboo shoot	32 870	17 927	Chiayi County	Tainan City	Nantou County	48.86	36 691	19 214	-10.41	-6.69
Citrus	30 352	17 933	Taichung City	Hsinchu County	Chiayi County	41.75	30 510	16 774	-0.52	6.91
Guava	28 572	8 962	Kaohsiung City	Tainan City	Changhua County	68.28	22 658	6 994	26.10	28.14
Betel nut	28 247	20 805	Pingtung County	Nantou County	Chiayi County	86.10	34 666	24 301	-18.52	-14.38
Peanut	27 359	15 967	Yunlin County	Changhua County	Hualien County	92.51	31 719	17 450	-13.75	-8.50
Longan	26 561	11 983	Tainan City	Taichung City	Nantou County	63.57	24 650	11 258	7.75	6.44

Note: 1. The crops planting enterprises refer to total enterprises planting crops, not the total enterprises planting 10 kinds of crops listed in the Table.

2. If an enterprise planted more than two kinds of crops, the enterprise will be numbered into the enterprises planting each kind of crops.

3. The planting area of each crop is calculated based on the largest single planting area of the crop.

**B. The area with facilitated farming increased by 11.0%; the crops planting area without applying chemical fertilizers and synthetic pesticides continued increase by 31.1%.**

By the end of 2020, the area with facilitated farming (including use of cultivated land and artificial pavement) was 37,107 ha., increasing by 3,663 ha. or 11.0%, and which mainly used with shelving and green/net house. The crops planting area without applying chemical fertilizers and synthetic pesticides was 68,745 ha. or 13.8%, increasing by 16,313 ha. or 31.1% in five years.

**Table 4-2 The status for use of facilitated farming**  
End of 2020

	Number (enterprise)	% of enterprises using facilitated farming (%)	Area (ha.)	% of area using facilitated farming (%)
<b>Use of facilitated farming</b>	<b>55 262</b>	<b>100.00</b>	<b>37 107</b>	<b>100.00</b>
Tunnel shed	1 532	2.77	1 507	4.06
Shelving	27 271	49.35	16 395	44.18
Green/Net house	23 305	42.17	16 994	45.80
Screen house	15 023	27.19	11 010	29.67
Plastic house	6 124	11.08	4 218	11.37
Green house	2 395	4.33	1 766	4.76
Traditional mushroom shed	1 096	1.98	631	1.70
Climate-controlled mushroom shed	190	0.34	122	0.33
Other facilities	2 536	4.59	1 458	3.93

Note: 1. Enterprise using facilities farming refers to using facilitated farming to plant crops on cultivated land or non-cultivated land.  
2. If an enterprise used more than two kinds of facilitated farming, then the enterprise was separately calculated into the number of the enterprises using that kind of facilitated farming so that the accumulated number was larger than the total number of enterprises using facilitated farming.  
3. Other facilities include upright cultivation (such as pitaya), multi-shelf cultivation (such as strawberry), LED lighting (such as chrysanthemum), shade net, etc.

**Table 4-3 The status for crops planting in cultivated land and non-cultivated land  
without applying chemical fertilizers and synthetic pesticides**

	Area of productive crops (ha.)	Area without applying chemical fertilizers and synthetic pesticides (ha.)	% of area of productive crops (%)
<b>End of 2005</b> { enterprises area(ha.)	<b>720 013</b> <b>472 056</b>	<b>67 049</b> <b>39 081</b>	<b>8.28</b>
<b>End of 2010</b> { enterprises area(ha.)	<b>714 266</b> <b>452 404</b>	<b>78 754</b> <b>41 306</b>	<b>9.13</b>
<b>End of 2015</b> { enterprises area(ha.)	<b>710 070</b> <b>487 111</b>	<b>98 866</b> <b>52 431</b>	<b>10.76</b>
<b>End of 2020</b> { enterprises area(ha.)	<b>686 487</b> <b>498 184</b>	<b>120 477</b> <b>68 745</b>	<b>13.80</b>
Northern region	59 777	14 698	24.59
Central region	198 368	18 225	9.19
Southern region	199 505	24 242	12.15
Eastern region	38 812	11 274	29.05
Kinma region	1 721	304	17.68

**C. Hogs raised enterprises decreased by 14.5% in five years; however, at the end of the year, the raised number increased by 2.2%.**

At the end of 2020, among the enterprises raising livestock, 5,310 enterprises or 64.0% raising hogs were the most, decreasing by 903 enterprises or 14.5% in 5 years, and 4,817,638 hogs raised at the end of the year, with an increase range of 2.2%. As for the enterprises raising poultry, 9,611 enterprises or 72.6% raising broilers were the most, slightly decreasing by 58

enterprises or 0.6% in 5 years. 62,372,520 broilers raised at the end of the year, with an increase of 5.0%.

**Table 4-4 The raising status of the top 5 livestock by the largest number of raising enterprises**

	End of 2020					End of 2015		Comparison in 5 years	
	Number (enterprise)	Raised quantity	Main distributed county/city 1 <sup>st</sup> place 2 <sup>nd</sup> place 3 <sup>rd</sup> place			Number (enterprise)	Raised quantity	Increased/ Decreased number. (enterprise)	Increased/ Decreased quantity
<b>Livestock raising</b>	<b>8 295</b>					<b>9 769</b>		<b>-1 474</b>	
Hog (piglet)	5 310	4 817 638	Yunlin County	Pingtung County	Tainan City	6 213	4 713 294	-903	104 344
Breeding hog	3 529	587 918	Yunlin County	Pingtung County	Tainan City	3 419	510 601	110	77 317
Meat goat	1 224	88 619	Changhua County	Tainan City	Yunlin County	1 270	96 659	-46	-8 040
Beef cattle	819	32 241	Kinmen County	Pingtung County	Yunlin County	1 019	25 143	-200	7 098
Dairy cattle	583	91 884	Changhua County	Tainan City	Pingtung County	577	82 613	6	9 271

Note: 1. The number of livestock enterprises refers to the number of enterprises that raise livestock, not just the sum of the number of various livestock enterprises listed in the table.

2. When more than two kinds of livestock are raised, the number of enterprises raising (including breeding) the livestock is counted separately.

3. In this census, the number of livestock and poultry raised at the end of the year must meet the criteria that the number of large, medium, and small-sized animals reaches 1, 3 or 100 heads (pcs), or the production value of self-managed agricultural and livestock products is more than NTS20,000 dollars. Compared with the standard of raising more than 1 medium-sized and large-scale livestock and poultry in the agricultural situation survey object, or raising a total of 100 or more small-scale livestock and poultry in the whole farm, except for the definition of small and medium-sized animals, the number of livestock and poultry enterprises in this census also includes Those who mainly plant crops and also raise livestock and poultry for self-consumption, the following tables are the same.

4. The raising scale of hogs included the raising number of "piglets".

**Table 4-5 The raising status of the top 5 poultry by the largest number of raising enterprises**

	End of 2020					End of 2015		Comparison in 5 years	
	Number (enterprise)	Raised quantity	Main distributed county/city			Number (enterprise)	Raised quantity	Increased/ Decreased number (enterprise)	Increased/ Decreased quantity
			1 <sup>st</sup> place	2 <sup>nd</sup> place	3 <sup>rd</sup> place				
<b>Poultry raising</b>	<b>13 231</b>					<b>12 818</b>		<b>413</b>	
Broiler	9 611	62 372 520	Tainan City	Yunlin County	Pingtung County	9 669	59 390 204	-58	2 982 316
Duck	2 076	5 577 684	Pingtung County	Yunlin County	Changhua County	2 249	5 854 289	-173	-276 605
Layer	1 892	39 318 557	Changhua County	Pingtung County	Kaohsiung City	1 458	34 647 749	434	4 670 808
Goose	1 053	1 106 166	Yunlin County	Chiayi County	Tainan City	801	458 102	252	648 064
Tsaiya	491	1 745 961	Pingtung County	Changhua County	Tainan City	363	1 573 626	128	172 335

Note: 1. The number of poultry enterprises refers to the number of enterprises that raise poultry, not just the sum of the number of various poultry enterprises listed in the table.

2. When more than two kinds of poultry are raised, the number of enterprises raising (including breeding) the poultry is counted separately.

3. The enterprises raising broilers included the enterprises raising “white broilers”, “colored broilers”, and breeders for chicken”.

#### **D. Milkfish and hard clams have a larger aquacultural area.**

In 2020, the aquacultural area of milkfish was 10,352 hectares, a decrease of 2,140 hectares or 17.1% in 5 years; the aquacultural area of hard clams was 8,200 hectares, an increase of 15.5% in 5 years; affected by the epidemic, the aquacultural area of Grouper and Tilapia decreased by 28.3% and 20.2%.

**Table 4-6 The aquacultural status of the top 10 species of aquaculture, by the largest number of aquaculture enterprises**

	2020					2015		Comparison in 5 years		
	Number (enterprise)	Area (ha.)	Main distributed county/city			% of Aquaculture area of the category (%)	Number (enterprise)	Area (ha.)	Increased/ Decreased rate of number (%)	Increased/ Decreased rate of area (%)
			1 <sup>st</sup> place	2 <sup>nd</sup> place	3 <sup>rd</sup> place					
<b>Aquaculture enterprises</b>	<b>21 499</b>					<b>25 632</b>		<b>-16.12</b>		
Milkfish	5 134	10 352	Tainan City	Kaohsiung City	Chiayi County	97.94	6 299	12 492	-18.49	-17.13
Hard clam	3 426	8 200	Tainan City	Yunlin County	Changhua County	90.39	3 536	7 102	-3.11	15.46
Tilapia	3 232	4 121	Tainan City	Chiayi County	Yunlin County	78.77	4 409	5 164	-26.70	-20.19
Oyster	2 151	1 804	Tainan City	Chiayi County	Changhua County	78.32	2 589	2 739	-16.92	-34.14
Giant fresh water prawns	1 703	2 212	Pingtung County	Kaohsiung City	Changhua County	92.33	1 691	2 014	0.71	9.80
Whiteleg shrimp	1 519	1 572	Tainan City	Chiayi County	Pingtung County	76.09	1 887	1 909	-19.50	-17.65
Grouper	1 481	2 082	Tainan City	Pingtung County	Kaohsiung City	91.89	2 205	2 904	-32.83	-28.31
Sea perch	908	1 216	Chiayi County	Kaohsiung City	Pingtung County	80.69	1 085	1 256	-16.31	-3.20
Kenneth larvae	510	485	Pingtung County	Kaohsiung City	Tainan City	98.62	365	319	39.73	52.00
Eel	472	575	Yunlin County	Pingtung County	Chiayi County	82.78	499	634	-5.41	-9.43

Note: 1. The total number of aquacultures enterprises refers to the number of aquaculture enterprises (excluding suspend-culture), not just the total number of the 10 species of aquaculture enterprises listed in the table.

2. Where two or more species of aquatic organisms are under aquacultures, each aquaculture enterprise shall be counted separately.

3. Tilapia includes Redbelly tilapia, Red Tilapia, Taiwan Tilapia and other edible Cichlidae, same conditions applied to the following table.

## V. Agriculture-related and Fishery-related Business

**Agriculture and fishery enterprises operated related businesses at the sametime were 41,283 and 2,891 enterprises respectively.**

By the end of 2020, the number of enterprises engaged in agriculture simultaneously operating processing, leisure, and other related businesses (with agricultural and livestock products input on their own business or operated leisure activities with agricultural resources) was 41,283, or 6.0%. Among them, the peddlers accounted for 73.6% as the most, the food processing and retail sales accounted for 17.3% and 7.6%. As for enterprises engaged in fishery simultaneously operating related businesses was 2,891, or 8.3%, an increase of 14.6% in 5 years. Among them, 69.1% still operated peddlers as the most, 12.1% operated in leisure fishery, and 11.0% operated fishery products export.

**Table 5 Agriculture and fishery enterprises operated related businesses at the same time**

	End of 2020		End of 2015		Comparison in 5 years	
	(enterprise)	% of enterprises operating related businesses (%)	(enterprise)	% of enterprises operating related businesses (%)	Increased/Decreased number (enterprise)	Increased/Decreased rate (%)
<b>Agriculture</b>	<b>41 283</b>	<b>100.00</b>	<b>38 709</b>	<b>100.00</b>	<b>2 574</b>	<b>6.65</b>
Agricultural and livestock product processing	7 155	17.33	5 992	15.48	1 163	19.41
Leisure agriculture	2 063	5.00	1 876	4.85	187	9.97
Restaurant	383	0.93	346	0.89	37	10.69
Retail sales	3 144	7.62	1 685	4.35	1 459	86.59
Internet sales	1 255	3.04	771	1.99	484	62.78
Peddlers	30 388	73.61	30 121	77.81	267	0.89
Agricultural products export	150	0.36	196	0.51	-46	-23.47
<b>Fishery</b>	<b>2 891</b>	<b>100.00</b>	<b>3 386</b>	<b>100.00</b>	<b>-495</b>	<b>-14.62</b>
Fishery product processing	131	4.53	92	2.72	39	42.39
Leisure fishery	350	12.11	323	9.54	27	8.36
Restaurant	83	2.87	124	3.66	-41	-33.06
Retail sales	117	4.05	75	2.22	42	56.00
Internet sales	54	1.87	34	1.00	20	58.82
Peddlers	1 997	69.08	2 537	74.93	-540	-21.28
Fishery products export	317	10.97	329	9.72	-12	-3.65

Note: If agriculture and fishery enterprises operate two or more related businesses at the same time, they shall be included in the number of related businesses in each detail, so that the total of each detail is greater than the total.

## VI. Agricultural and Fishery Sales Overview

**A. The annual sales revenue of rice from the government and processing factories accounted for 40% each; vegetables and fruits sales are mainly targeted at shippers & wholesaler, accounting for more than 60% of the revenue.**

In 2020, the main sales targets of primary agricultural products, the annual sales revenue of rice, accounted for more than 40% by the government purchase, and the distribution ratio of sales to processing factories is also nearly 40%; more than 60% of the annual sales of vegetables and fruits were sold to shippers and wholesaler, while 9.6% and 13.0% were sold to consumers respectively.

**Table 6-1 Main sales distribution object for agricultural products revenue (rice, vegetables and fruits) in agriculture**  
2020

	Annual products revenue (Including the calculated amount) (NTD million)	Main distributors						% of annual products revenue of this category (%)
		1 <sup>st</sup> place	(%)	2 <sup>nd</sup> place	(%)	3 <sup>rd</sup> place	(%)	
Rice	39 220	Government purchase	40.15	Processing factory	39.50	Shippers, wholesaler	10.53	90.18
Vegetables	43 058	Shippers, wholesaler	60.56	Wholesale market	17.13	Consumers	9.57	87.26
Fruits	63 919	Shippers, wholesaler	66.49	Consumers	12.98	Wholesale market	12.34	91.82

Note: The main sales distribution objects in this table are calculated based on the percentage of annual sales revenue, not the production distribution of agricultural and livestock products.

**B. Fish, shrimp and shellfish are mainly sold to shippers, and their income accounts for more than 78%.**

In 2020, primary fisheries products are mainly sold to shippers, accounting for 79% of the annual sales of fish, and 8.3% to exporters; More than 87% of the annual sales of shrimp and shellfish are sold to shippers and less than 10% to wholesale markets.



**Table 6-2 Main sales distribution object for fishery products revenue  
(fish, shrimp and shellfish) in fishery  
2020**

	Annual products revenue (Including the calculated amount) (NTD million)	Main distributors						% of annual products revenue of this category (%)
		1 <sup>st</sup> place	(%)	2 <sup>nd</sup> place	(%)	3 <sup>rd</sup> place	(%)	
Fish	19 713	Shippers	78.93	Exporters	8.26	Wholesales market	4.72	91.91
Shrimp	7 019	Shippers	87.03	Wholesales market	7.24	Others	2.36	96.64
Shellfish	7 333	Shippers	89.35	Wholesales market	6.26	Retailers, Specialty Stores	2.04	97.66

Note: 1. The main sales distribution object in this table is based on the percentage of annual sales revenue, not the production distribution of fishery products.

2. The "other" category includes fishermen groups, supermarkets, retail stores, large consumers (such as restaurants, military, schools, etc.), and consumers.

**C. Farm households' average gross income per household was NT\$462,000, an increase of 7.7% over 2015.**

There are 578,951 farm households with gross income in 2020. Due to the impact of the epidemic and climate change on exports and production, the average gross income per household was NT\$462,000, an increase of 7.7% over 2015. Among them, the gross income of animal husbandry increased due to the expansion of domestic livestock and poultry feeding scale, and the average gross income of livestock raising industry per household was NT\$6,787,000, an increase of 23.7%.

**Table 6-3 Annual gross income of agriculture, by type of organization**

	Total	With gross income						No. of households without gross income
		Total	Less than NTS 200 thousand	NTS 200 thousand ~less than NTS 500 thousand	NTS 500 thousand ~less than NTS 1 million	More than NTS 1 million	Average annual gross income per household (NTS 1,000)	
<b>Number (enterprise)</b>								
<b>2020</b>	<b>693 055</b>	<b>580 450</b>	<b>345 807</b>	<b>126 746</b>	<b>61 087</b>	<b>46 810</b>	<b>520</b>	<b>112 605</b>
Farm households	691 477	578 951	345 745	126 689	61 024	45 493	462	112 526
Farms	1 578	1 499	62	57	63	1 317	23 209	79
<b>2015</b>	<b>721 220</b>	<b>565 796</b>	<b>345 609</b>	<b>122 787</b>	<b>56 417</b>	<b>40 983</b>	<b>481</b>	<b>155 424</b>
Farm households	719 922	564 569	345 554	122 712	56 338	39 965	428	155 353
Farms	1 298	1 227	55	75	79	1 018	24 740	71
<b>Percent (%)</b>								
<b>2020</b>	<b>100.00</b>	<b>83.75</b>	<b>49.90</b>	<b>18.29</b>	<b>8.81</b>	<b>6.75</b>		<b>16.25</b>
Farm households	100.00	83.73	50.00	18.32	8.83	6.58		16.27
Farms	100.00	94.99	3.93	3.61	3.99	83.46		5.01
<b>2015</b>	<b>100.00</b>	<b>78.45</b>	<b>47.92</b>	<b>17.02</b>	<b>7.82</b>	<b>5.68</b>		<b>21.55</b>
Farm households	100.00	78.42	48.00	17.05	7.83	5.55		21.58
Farms	100.00	94.53	4.24	5.78	6.09	78.43		5.47

Note: The number of households with no sales and service revenue includes those receiving the policy fallow subsidy.

**Table 6-4 Farm households with gross income, by main industry**

	2020		2015		Comparison of the average annual gross income per household in 5 years	
	Number	Avg. annual gross income per household	Number	Avg. annual gross income per household	Increased/Decreased number	Increased/Decreased rate
	(household)	(NTS\$1,000)	(household)	(NTS\$1,000)	(NTS\$1,000)	(%)
<b>Total</b>	<b>578 951</b>	<b>462</b>	<b>564 569</b>	<b>428</b>	<b>33</b>	<b>7.73</b>
Crops planting	565 852	331	551 594	310	22	6.95
Rice	214 306	175	213 669	160	15	9.50
Coarse grains	44 325	184	47 689	188	-4	-2.11
Special crops	24 169	522	26 363	443	79	17.79
Vegetables	108 053	421	99 253	387	34	8.77
Fruits	165 302	416	153 041	407	9	2.34
Mushroom	1 159	4 413	1 257	3 973	440	11.08
Flowers	4 499	1 351	4 628	1 388	-38	-2.71
Other crops	4 039	950	5 694	722	228	31.55
Livestock & poultry raising	12 989	6 129	12 896	5 496	633	11.51
Livestock	6 541	6 787	7 452	5 486	1 301	23.72
Poultry	5 587	5 855	5 165	5 753	102	1.78
Other livestock & poultry	861	2 910	279	1 028	...	...
Transition leisure	110	555	79	782	-227	-29.01

Note: For other animal husbandry, due to the expansion of the beekeeping Association membership information for the first time in the 2020 census, the average revenue of the last two censuses is not compared, the following tables are the same.

**D. Average gross income per fishery household of sole proprietorship was NT\$1,528,000, and decrease by 2.0% over 2015.**

In 2020, there are 30,266 sole proprietorship fishery households with gross income, with an average annual gross income per household of NT\$1,528,000. Affected by the epidemic, the number decreased by 2.0% compared with 2015. Among them, the average gross income of offshore fishery per household was NT\$1,770,000, which decreased by 17.9% due to the reduction of fishermen's operations at sea.

**Table 6-5 Gorss income of fishery, by type of organization**

	Total	With gross income							No. of households without gross income
		Total	Less than NT\$ 200 thousand	NT\$ 200 thousand ~less than NT\$ 500 thousand	NT\$ 500 thousand ~less than NT\$ 1 million	NT\$ 1 million ~less than NT\$ 3 million	More than NT\$ 3 million	Average annual gross income per household (NT\$ 1,000)	
<b>Number (enterprise)</b>									
<b>2020</b>	<b>34 991</b>	<b>31 104</b>	<b>6 264</b>	<b>6 832</b>	<b>6 325</b>	<b>7 113</b>	<b>4 570</b>	<b>2 295</b>	<b>3 887</b>
Sole proprietorship fishery households	34 129	30 266	6 227	6 812	6 292	7 015	3 920	1 528	3 863
Non-sole proprietorship fishery households	862	838	37	20	33	98	650	30 004	24
<b>2015</b>	<b>40 166</b>	<b>35 842</b>	<b>6 674</b>	<b>7 973</b>	<b>7 532</b>	<b>8 416</b>	<b>5 247</b>	<b>2 137</b>	<b>4 324</b>
Sole proprietorship fishery households	39 279	34 970	6 640	7 952	7 504	8 268	4 606	1 560	4 309
Non-sole proprietorship fishery households	887	872	34	21	28	148	641	25 254	15
<b>Percent (%)</b>									
<b>2020</b>	<b>100.00</b>	<b>88.89</b>	<b>17.90</b>	<b>19.53</b>	<b>18.08</b>	<b>20.33</b>	<b>13.06</b>		<b>11.11</b>
Sole proprietorship fishery households	100.00	88.68	18.25	19.96	18.44	20.55	11.49		11.32
Non-sole proprietorship fishery households	100.00	97.22	4.29	2.32	3.83	11.37	75.41		2.78
<b>2015</b>	<b>100.00</b>	<b>89.23</b>	<b>16.62</b>	<b>19.85</b>	<b>18.75</b>	<b>20.95</b>	<b>13.06</b>		<b>10.77</b>
Sole proprietorship fishery households	100.00	89.03	16.90	20.24	19.10	21.05	11.73		10.97
Non-sole proprietorship fishery households	100.00	98.31	3.83	2.37	3.16	16.69	72.27		1.69

Note: The number of households without gross income includes those receiving fishing moratorium incentives.

**Table 6-6 Sole proprietorship fishery households with gorss income , by main industry**

	2020		2015		Comparison of the average annual gross income per household in 5 years	
	Number	Avg. annual gross income per household	Number	Avg. annual gross income per household	Increased/ Decreased number	Increased/ Decreased rate
	(household)	(NT\$1,000)	(household)	(NT\$1,000)	(NT\$1,000)	(%)
<b>Total</b>	<b>30 266</b>	<b>1 528</b>	<b>34 970</b>	<b>1 560</b>	<b>-32</b>	<b>-2.04</b>
Fishing fishery	10 138	1 199	11 133	1 352	-152	-11.27
Far sea	244	12 149	308	10 839	1 310	12.08
Offshore	3 996	1 770	4 403	2 156	-386	-17.92
Costal	5 683	367	6 098	356	11	3.22
Inland	215	167	324	146	21	14.18
Aquaculture	19 980	1 701	23 681	1 663	38	2.26
Marine	2 009	1 395	2 416	932	464	49.77
Inland brackish water	10 489	1 787	12 952	1 788	-1	-0.04
Fresh water	7 482	1 661	8 313	1 681	-20	-1.19
Transition Leisure	148	769	156	776	-8	-1.00

**D. Tables**  
**I. Agriculture and Animal Husbandary**



## **E. Appendix**

## Explanations of Terms

### I. Agriculture

- A. **Engaged in agriculture:** Refers to the enterprises which engaged in crops planting, livestock and poultry raising, bees and silkworms keeping, or agricultural activity enterprises that provide public leisure and entertainment with agricultural production equipment and places.
- B. **Non-engaged in agriculture:** Refers to the enterprises which owned agricultural resources, but did not engage in agricultural production, nor provide leisure activity, including those who turn over the soil without planting green manure.
- C. **Main industry:** If the enterprises operate more than two kinds of agricultural products, which are classified the most by annual production value or cost-input. Among which “transition leisure” refers to an agricultural activity enterprise not engaging in the production of agriculture and husbandry but providing public leisure and entertainment with agricultural production equipment and places.
- D. **Cultivated land:** Refers to land where the soil on the ground can be used to cultivate crops directly, regardless of whether it is cultivated or not, and where at the end of 2020 has not been transferred to other uses (e.g., converted to concrete paving for housing, livestock and poultry houses, fishponds, storage rooms for agricultural machinery, parking lots, etc.). In terms of recognition, cultivated land should be based on the actual utilization situation, for example, if river land or forest land is planted with crops, it should still be regarded as cultivated land.
- E. **Non-cultivated land:** Refers to the facilities area converted to greenhouse, screen house, mushroom house, and plant factories can be used in the growing crops and is difficult to be the cultivated land after the ground laying of cement or asphalt.
- F. **Afforestation (6 years & below):** The tree planted on cultivated land less than 6 years (including the 6<sup>th</sup> year), such as participated in short-term afforestation, if it more than 6 years shall be regarded as woodland.
- G. **Not-owned cultivated land:** Refers that cultivated land is leased (borrowed, occupied) and consigned for operation.
- H. **Main irrigation water sources:** Water sources that supply crop irrigation water in 2020, no matter how much water is supplied (excluding rainwater) or how long the period is, they are considered as irrigation, and the water sources with more water supply are checked and filled.
- I. **Farm manager:** Refers to the commander of agriculture operations, that is, the person who is mainly responsible for the decision of the unit's agricultural



management policy or command and management of various agricultural and animal husbandry operations. Each unit should have one agricultural work commander, and only one person.

- J. Farm successor:** Refers to agricultural households who are the successor of their own agricultural work, not the successors of agricultural resources. It means that the population over the age of 15 in the household has the willingness to engage in agriculture and can take over the household's agricultural work in the future. There is no limit to the number of people in each household.
- K. Own manpower:** Refers to the population of farm households over 15 years old who work in their own agriculture for more than 1 day throughout the year
- L. Number of employees and workers without wages in agriculture:** Refers to the regular employees, temporary employees and workers without wages who participate in the agricultural work of the unit throughout the year, excluding farm households' own manpower, inter-agricultural exchange workers and manpower input by consigned agricultural service.
- M. Gross income of agriculture:** Includes sales revenue of agricultural and livestock products, food processing, and leisure service revenue, all of which are not deducted from cost expenditures.
- N. Units without gross income of agriculture:** Refers to those who have received policy-based fallow subsidy, or those who consume products for their own use, or those who have no income from the sale of primary agricultural and livestock products due to recent stocking, natural disasters, or illnesses during the year, or those who have no income from the sale of processed products, or income from leisure services.
- O. Sales revenue of agricultural and livestock products:** Refers to the unit's annual sales revenue of agricultural and livestock products, including the amount of public grain purchases, the amount received from entrusted planting (raising), and the sales amount of picking and purchasing by the public after entering the park, excluding various agricultural items received subsidies from the government in 2020 such as fallow (including seed subsidies), conversion, afforestation (6 years & below), natural disaster relief funds, and scholarships for farmers and fishermen's children, etc.
- P. Sales revenue of agricultural and livestock products processing:** Includes sales revenue of primary fishery products after self-processing and outsourcing processing. Self-processing and sales revenue refers to the annual sales revenue (including processing fee revenue) after the unit's equipment is used to process the primary

agricultural and livestock products; revenue from outsourced processing refers to the annual sales revenue from the commissioned processing of primary agricultural and livestock products produced by the unit and then selling the processed agricultural and livestock products by the unit itself.

- Q. Leisure service revenue:** Refers to the unit provides income from sightseeing and leisure services throughout the year, including leisure experience, tickets, accommodation, catering, commodity sales, recreation, and rental income from citizen farms, etc. If the sightseeing farm collects tickets (including admission experience and tasting fees) when entering the farm, this income will be included in the leisure service income; if it is for the public to buy their own agricultural and livestock products after entering the farm, the sales amount must be included in the sales income of their own agricultural and livestock products.
- R. Agricultural and livestock products sales distribution object:** Refers to the actual payment of primary agricultural products sold by the household or the cost of input into processing, leisure, and other agricultural related businesses, as the distribution object.
- S. Year-round fallow for rice crops:** Refers to the first and second stages of rice cropping are all fallow, and except for planting green manure, no other crops are planted, and no livestock and poultry are raised.
- T. Agriculture-related business:** Agricultural and livestock product processing and leisure agriculture with own agricultural resources, or related business outside of own agricultural resources (internet sales and agricultural and livestock products export are excluded) and must have agricultural and livestock products invested in own production.

## II. Agricultural Service

- A. Farm households concurrently engaged in Agricultural Service:** Refers to the unit is eligible for the census of agricultural service and farm households.
- B. Gross income of agricultural service:** Refers to the total of revenue for agricultural service in the census year, without deducting from expenditures and expenses.
- C. Main service item:** Refers to the service item with the most annual service revenue among various service items.

## III. Forestry

- A. Forestry land area:** Combined forest land area and affiliated forest land area.
- B. Forest land area:** The land area used for growing woods including self-owned, leased (borrowed) or entrusted to operate.

- C. Affiliated forest land area:** The land was used for forestry purpose except forest land, including land for forest road, wood storing pond (land), logs nursery land, land for recreation and leisure, and other area as rock land, collapse land, swampland, and fixed equipment land in forest land etc.
- D. Gross income of forestry:**
- (1) Sales revenue of forest products: Refers to the annual sales revenue of various forest products including timber, bamboo, industrial raw wood, industrial raw bamboo, etc.
  - (2) Forestry by-product sales revenue: Refers to the annual sales revenue of products other than the above-mentioned main products. Forestry by-products include wildlife collection, such as Jelly Fig, ratten, medicinal materials, grass, raw bamboo shoots, dried bamboo shoots, rice paper-plant, shell ginger, tree fruit, bark, fungi, bamboo bark, palm, turmeric, etc.
  - (3) Under-forest economy product sales revenue: Refers to the sales revenue of such under-forest economy products as basswood mushroom, fungus, Taiwan golden thread, and forest bee forests.
  - (4) Forest recreation revenue: including annual ticket revenue, vehicle parking revenue, visitor accommodation revenue, food and beverage revenue, etc.
  - (5) Forest product processing, by-product processing and under-forest economic product processing sales revenue: Refers to the annual sales revenue of the household (unit) after processing its own forest products and by-products and under-forest economic products.

#### IV. Fishery

- A. Engaged in fishery:** Refers to the enterprises which engaged in fishing or aquaculture, or operated leisure fishery with fishery production equipment and places.
- B. Non-engaged in fishery:** Refers to the enterprises which owned fishery resources, but did not engage in fishery production, nor provide leisure activity.
- C. Main industry:** If the enterprises operate more than two types of fishery products, which are classified by annual production value, or the most cost-input, among which “Transformed leisure” refers to not engaging in fishery production, but operating leisure activity with fishery resources.
- D. Fishery manager:** Refers to the commander of fishery operations, that is, the person who is mainly responsible for the decision of the unit's fishery management policy or command and management of various fishery operations. Each unit should have one fishery work commander, and only one person.

- E. Fishery successor:** Refers to sole proprietorship fishery households who are the successor of their own fishery work, not the successors of fishery resources. It means that the population over the age of 15 in the household has the willingness to engage in fishing and can take over the household's fishery work in the future. There is no limit to the number of people in each household.
- F. Own manpower:** Refers to the population of sole proprietorship fishery households over 15 years old who work in their own fishery for more than 1 day throughout the year.
- G. Number of employees and workers without wages in fishery:** Refers to the regular employees, temporary employees and unpaid personnel who participate in the fishery work of the unit throughout the year, excluding sole proprietorship fishery households' own manpower, inter-fishery exchange workers and outsourced manpower.
- H. Gross income of fishery:** Includes sales revenue of fishery products and their processed products, and leisure service revenue, all of which are not deducted from cost expenditures.
- I. Units without gross income of fishery:** Refers to those who have received incentive payments from the fishing moratorium, or those who consume fish for their own use, or those who have no income from the sale of primary fishery products due to recent stocking, natural disasters, or illnesses during the year, or those who have no income from the sale of processed fishery products or leisure services.
- J. Sales revenue of fishery products:** Refers to sales revenue of various catches (fry) of the unit throughout the year, including the sales amount purchased by the public after entering the fishing area, excluding self-sufficiency, gifts to relatives and friends, input into processing, and leisure services, and various fishery subsidies received from the government in 2020, such as fishing moratorium incentives, natural disaster relief funds, and scholarships for farmers and fishermen's children, etc.
- K. Sales revenue of fishery products processing:** Includes sales revenue of primary fishery products after self-processing and outsourcing processing. Self-processing sales revenue refers to the annual gross income (including processing fee revenue) of which the unit's equipment is used to process the fishery products; revenue from outsourced processing refers to the annual sales revenue from the commissioned processing of primary fishery products produced by the unit and then selling the processed fishery products by the unit itself.

- L. Leisure service revenue:** Refers to the annual revenue from sightseeing and leisure services provided by the unit, such as leisure experience, tickets, accommodation, catering, commodity sales, recreation, and rental income.

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