| II Summary o | of the World Cens | sus for Agriculture | and Forestry 2000 |
|--------------|-------------------|---------------------|-------------------|
|              |                   |                     |                   |
|              |                   |                     |                   |
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|              |                   |                     |                   |

## [Farm Household Survey Results]

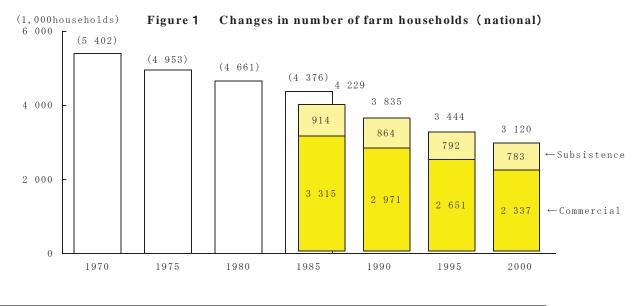
#### 1 The Number of Farm Households

#### (1) Total Number of Farm Households

#### - The total number of farm households was 3,120, 000 units -

The total number of farm households in our Country as of February 1, 2000 (December 1, 1999 in Okinawa) was 3,120, 000 units, a reduction of 323,000 (9.4%) in comparison with the previous census (1995 Census under same condition).

This number consisted of 2,337,000 commercial farm households (74.9% of the total), 783,000 subsistence farm households (25.1% of the total), respective reduction of 314,000 units (11.9%) and 9,000 units (1.1%).



| 5-year | total       | (△ 8.3) | (△ 5.9) | (△ 6.1) | △ 9.3  | △ 10.2 | △ 9.4  |
|--------|-------------|---------|---------|---------|--------|--------|--------|
| change | Commercial  |         |         |         | △ 10.4 | △ 10.7 | △ 11.9 |
| (%)    | Subsistence |         |         |         | △ 5.4  | △ 8.3  | △ 1.1  |

Note:1 Figures in parentheses for  $1970 \sim 1985$  were those under old definitions

- 2 1985 total of 4,229,000 is a figure obtained under new definitions.
- $3 \triangle$  indicates reduction throughout this report.
- 4 ... indicates either unknown or unsurveyed.

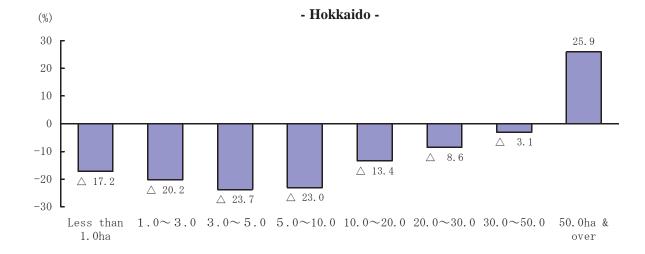
| Farm Household > =         |      |   |
|----------------------------|------|---|
| Farm household             |      | A household managing excess of 10 a as of the census      |
|                            |      | date or farm income in excess of 150,000 yen during a     |
|                            |      | period of 1 year to the census including those with land  |
|                            |      | holding of less than 1 a.                                 |
| Commercial farm household  |      | Those operating cultivated land in excess of 30 a or farm |
|                            |      | income in excess of 500,000 yen.                          |
| Subsistence farm household |      | Those operating on cultivated land of less than 30 a and  |
|                            |      | Received farm income of less than 500,000 yen.            |
| Subsistence farm household | •••• | •   |

# (2) Stratification of Farm Households by Cultivated Land Holdings (Commercial Farm Households)

#### - Increase in the number of large-scale farm household is continuing -

Considering the course of the change the number of farm households the strata of operational scale, they are increasing in Hokkaido in the over 50.0 ha category and in the remaining Prefectures in the over 40.0 ha category as compared to the last Census.

Figure 2 The changes in farm household scale by cultivated land holding area (%) (Commercial Farm Households)(2000/1995) 50 -Prefectures excluding Hokkaido-42.9 40 30 18.0 20 10 1.8 0  $\triangle$ 4. 1 -10 $\triangle$ 9.8 △ 12.1 △ 13.2 △ 13.8 -20  $0.5 \sim 1.0 \quad 1.0 \sim 2.0 \quad 2.0 \sim 3.0 \quad 3.0 \sim 4.0 \quad 4.0 \sim 5.0 \quad 5.0 \sim 10.0$ Less than 0.5 ha over



- (3) Classification of Farm Households by Degree of Member's Devotion to Agriculture (Commercial Farm Households)
  - Farm households that include full-time farmers under 65 operate half of active cultivated land -

Regarding farm households in terms of devoted *vs.* sideline member category, farm household with devoted members numbered 500,000. Of this number, 438,000 farm households included full-time farmers under the age of 65. The numbers of devoted farm member household and those that included full-time farm hand under 65 decreased by 26.1 and 23.6 %, respectively.

The scale of the devoted farm households was on the average larger among commercial farm households, 2.4 and 2.0 times in average operating area and leased cultivated land, respectively.

Among devoted member farm households, the share in the operating area of those with full-time farmer under 65 (proportion of the total operating cultivated land of commercial farm households) was 49.2 %; about half of all cultivated land was managed by commercial farm households with at least 1 member under the age of 65.

Table 1. Course of Changes in the Number of Full- and Sideline farm households (National, Commercial Farm Households)

Thousands Unit: Proportion in % Classification Number % Change % Composition 2000/1995 1995 2000 1995 2000 Commercial Farm Househods 2 3 3 7 2 651  $\triangle$  11.9 100.0 100.0 500 678  $\triangle$  26.1 21.4 25.6 Devoted Farm Households  $\triangle$  23.6 with full-time farmer under 65 438 573 18.7 21.6 Quasi-Devoted Farm Households 599 695  $\triangle$  13.7 25.7 26.2 8.2 with full-time farmer under 65 196 218 10.0 8.4 1 279 3.3 Sideline Farm Households 1 237 52.9 48.3

Table 2 Operational scale and cultivated land area in devoted and sideline farm households (National, Commercial Farm Households)

|                                | Operation                | al scale                      | in de                        | voted and                        | sideline             | farm                  | househols               | Share of                               |
|--------------------------------|--------------------------|-------------------------------|------------------------------|----------------------------------|----------------------|-----------------------|-------------------------|--|
| Classification                 | Full-Time<br>Farm Worker | Area of<br>Cultivated<br>Land | Rented<br>Cultivated<br>Land | Area in<br>Protdcted<br>Facility | Area in Rice<br>Crop | Heads of<br>Milk Cows | Heads of<br>Beef Cattle | Cultivated<br>Land under<br>Management |
|                                |                          | a                             | a                            | a                                | a                    |                       |                         | %                                      |
| Commercial Farm Households     | 0.8                      | 160                           | 87                           | 20                               | 84                   | 49                    | 20                      | 100.0                                  |
| Devoted Farm Households        | 2.0                      | 391                           | 177                          | 26                               | 168                  | 56                    | 37                      | 52.3                                   |
| with full-time farmer under 65 | 2.2                      | 419                           | 185                          | 26                               | 175                  | 56                    | 40                      | 49.2                                   |
| Quasi-Devoted Farm Households  | 0.6                      | 123                           | 52                           | 10                               | 82                   | 15                    | 8                       | 19.8                                   |
| Sideline Farm Households       | 0.4                      | 84                            | 33                           | 10                               | 57                   | 14                    | 7                       | 27.9                                   |

 $=<\mathrm{Classification}$  by degree of devotion to farm operation of its members >

This classification was adopted starting with the 1995 Census for Agriculture and is based on an index derived by adding to the proportion of farm and non-farm income of each farm household to a measure of the type of agricultural labor provided by its working member(s). It was devised to identify the principal worker(s) of its farm operation.

Devoted farm household ....

Farm income constitutes the principal income (in excess of 50 % of the total income of the household) and includes in the household a farmer under 65 who contributes over 60 days of farm labor annually.

Quasi-devoted farm household

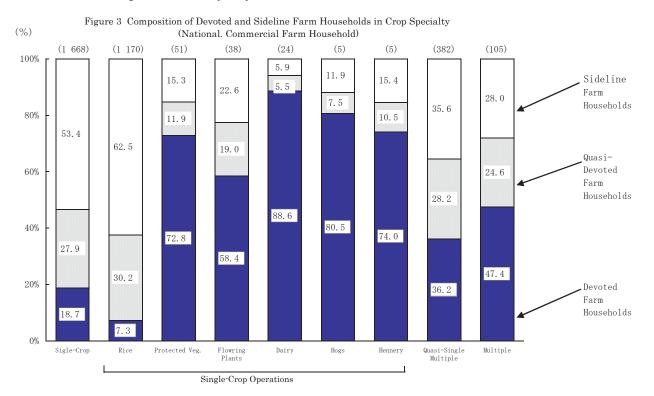
.... Non-farm income constitutes the principal household income and includes in the household a farmer under 65 who contributes over 60 days of farm labor annually non-farm income constitutes the principal household ncome and includes in the household a farmer under 65 who contributes over 60 days of farm labor annually.

Sideline farm household ....

A farm household without a farmer under 65 who annually contributes over 60 days of farm labor (non-devoted and non quasi-devoted farm household).

## - The proportion of devoted farm household is high among single-crop entities in beef cattle husbandry and protected horticulture of vegetables -

Considering the proportion of devoted and sideline farmers in crop specialties, protected horticulture, vegetables, flowering plants and trees, dairy, hog, and hennery single-crop households comprises the majority.



Note: Figures in parentheses are actual number (in thousands).

# (4) The Number of Devoted and Sideline Farm Households (Commercial Farm Households)

#### - Number of farm household lacking male members of productive age is on the increase -

In these classes of farm households, the number of devoted farm households is 426,000 units, maintaining the last Census level; however, those without male worker of productive age (individuals of over 15 and below 65 years of age) increased by 20.8%. This increase in the farm households without a male member of productive age raised the proportion in the devoted farm households to exceed 50 %.

Thousands

Unit:

Table 3 The course of changes in the number of devoted and sideline farm households

|                 |                     |        |          |                                   |                                 | 0 11     | 11 t · { P               | roportion in %      |  |  |
|-----------------|---------------------|--------|----------|-----------------------------------|---------------------------------|----------|--------------------------|---------------------|--|--|
|                 |                     |        | Devote   | d Farm Hou                        | seholds                         | Sidelin  | Sideline Farm Households |                     |  |  |
|                 | Classifi-<br>cation | Total  | Subtotal | Productive<br>Age Male<br>Present | Procutive<br>Age Male<br>Absent | Subtotal | Class 1<br>Sideline      | Class 2<br>Sideline |  |  |
| No. 01<br>Units | 1995                | 2651   | 428      | 240                               | 188                             | 2224     | 498                      | 1725                |  |  |
| of<br>its       | 2000                | 2337   | 426      | 200                               | 227                             | 1911     | 350                      | 1561                |  |  |
| % C             | Change 00/99        | △ 11.9 | △ 0.3    | △ 16.8                            | 20.8                            | △ 14.1   | △ 29.8                   | △ 9.5               |  |  |
| % Composition   | 1995                | 100.0  | 16.1     | 9.1                               | 7.1                             | 83.9     | 18.8                     | 65.1                |  |  |
| sition          | 2000                | 100.0  | 18.2     | 8.5                               | 9.7                             | 81.8     | 15.0                     | 66.8                |  |  |

## (5) Stratification by Farm Income (Commercial Farm Households)

### - The proportion of income of over 10 million yen was 6.3% -

Focussing on changes in the number of farm households in farm earnings strata, decrease was noted in all except in the no sales, farm income of less than 500,000 yen stratum.

The farm households earning over 10 million yen in farm products constituted 6.3%, maintaining the level seen in the last Census.

Table 4 Changes in the Farm Earnings by Income Strata (National, Commercial Farm Households)

Proportion in % Bellow ¥0.5 ¥1.0~3.0 ¥3.0~5.0 ¥5.0∼10.0 10 Million & ¥0.5~1.0 Classification Total No Sales Million Million Million Million Million over 2 971 177 878 558 799 227 199 133 1995 2 651 164 746 523 653 204 198 164 2 3 3 7 182 751 441 506 150 159 148 2000 % Change 1995/1990 △ 10.7 7.6 △ 15.0 △ 18.2 △ 10.3 0.5 23.4  $\triangle$ 6.2  $\triangle$ 2000/1995 0.8 △ 11.9 11.0 △ 15.8  $\triangle$  22.5 △ 26.3 △ 19.4 △ 10.1 % Composition 1990 100.0 6.0 29.5 18.8 26.9 7.6 6.7 4.5 100.0 1995 6.2 28.1 19.7 24.6 7.7 7.5 6.2 2000 100.0 7.8 32.1 18.9 21.7 6.4 6.8 6.3

## Reference: Change in farm price index (National)

|       |       |       |       |       | Unit: % |
|-------|-------|-------|-------|-------|---------|
| 1994  | 1995  | 1996  | 1997  | 1998  | 1999    |
| 100.0 | 96. 6 | 96. 1 | 90. 2 | 96. 7 | 89.8    |

Note: Base year set at 1994.

# (6) Classification of Farm Household by Crop Specialty (Commercial Farm Households)

- Single-crop farm household in was declining, while protected horticulture and beef cattle were on the increase -

Looking at the number of farm household in various crop specialties, total number of single-crop farm households declined since the last Census; however, gains were seen in protected vegetable horticulture, wheats growing and beef cattle husbandry.

Table 5 Changes in the Number Farm Households in Crop Specialties (National, Commercial Farm Households)

|               |             |                 |                |         |        |                |                  |        |             | Unit: { Pr    | oportion in % |
|---------------|-------------|-----------------|----------------|---------|--------|----------------|------------------|--------|-------------|---------------|---------------|
| Cla           | ssification | Farm Households | Single-Crop Op | eration |        |                |                  |        |             | Quasi-Single- | Multiple      |
| Cia           | ssification | with Sales      |                | Rice    | Wheats | Protected Veg. | Flowering Plants | Dairy  | Beef Cattle | Crop Multiple | Operation     |
| 7             | 1990        | 2 793           | 1 965          | 1 365   | 14     |                |                  | 37     | 35          | 630           | 198           |
| Number        | 1995        | 2 488           | 1 903          | 1 376   | 4      | 44             | 40               | 29     | 27          | 461           | 124           |
| er            | 2000        | 2 155           | 1 668          | 1 170   | 5      | 51             | 38               | 24     | 28          | 382           | 105           |
| % Ch          | 1995/1990   | △ 10.9          | △ 3.2          | 0.8     | △ 69.3 |                |                  | △ 21.1 | △ 22.3      | △ 26.9        | △ 37.3        |
| Change        | 2000/1995   | △ 13.4          | △ 12.3         | △ 15.0  | 13.1   | 15.5           | △ 4.8            | △ 17.0 | 4.0         | △ 17.2        | △ 15.4        |
| % Cc          | 1990        | 100.0           | 70.4           | 48.9    | 0.5    |                |                  | 1.3    | 1.2         | 22.6          | 7.1           |
| % Composition | 1995        | 100.0           | 76.5           | 55.3    | 0.2    | 1.8            | 1.6              | 1.2    | 1.1         | 18.5          | 5.0           |
| ition         | 2000        | 100.0           | 77.4           | 54.3    | 0.2    | 2.4            | 1.8              | 1.1    | 1.3         | 17.7          | 4.9           |

< Crop Specialty >

Single-crop .... Sale of a single crop constitutes over 80 % of farm income

Quasi-single crop ... Sale of a single crop constitutes under 80 % but over 60 % of farm

income

Multiple-crop .... Sale of any single crops constitutes under 60 % of farm income

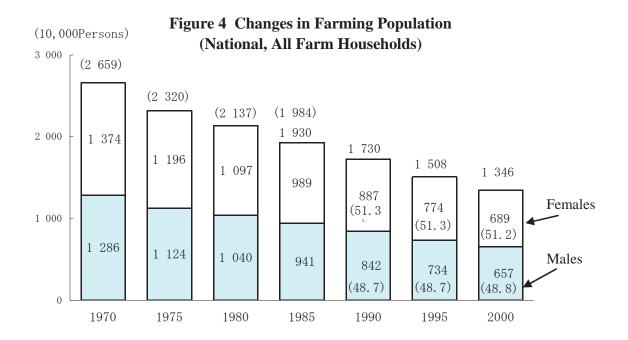
## 2 Farm Household Population and Employment Structure

## (1) Farm Population

- Farm population numbered 13,460,000 --

Farm population (members of farm households) was 13,460,000; a decrease of 1,630,000 (10.8 %) since the last Census.

Farm population constituted 10.6 % of the population of Japan (estimate as of October 1, 1999; Ministry of Public Management, Home Affairs, Post and Telecommunications), a decrease of 1.4 % in comparison with the last Census.



| % Change | Total   | (△ 12.8) | (△ 7.9) | (△ 7.1) | △ 10.4 | △ 12.8 | △ 10.8 |
|----------|---------|----------|---------|---------|--------|--------|--------|
| in       | Males   | (△ 12.5) | (△ 7.5) | (△ 7.1) | △ 10.5 | △ 12.8 | △ 10.5 |
| 5 Years  | Females | (△ 13.0) | (△ 8.3) | (△ 7.2) | △ 10.3 | △ 12.8 | △ 11.0 |

Notes: 1 1970-85 figures (in parentheses) are based on the old definition of farm household

- 2 1985 farm population of 19,300,000 is based on new definition of farm household
- 3 Figures in parentheses after 1990 are proportions of males to females

Reference: Age Composition of the Population of Japan (Oct. 1, 1999)

|       |      |       |       |       |      | Unit: % |
|-------|------|-------|-------|-------|------|---------|
| 1970  | 1975 | 1980  | 1985  | 1990  | 1995 | 2000    |
| 25. 9 | 21.0 | 18. 4 | 16. 0 | 14. 0 | 12.0 | 10.6    |

Note: All proportions are based on estimated population as of October 1 of the year preceding the census.

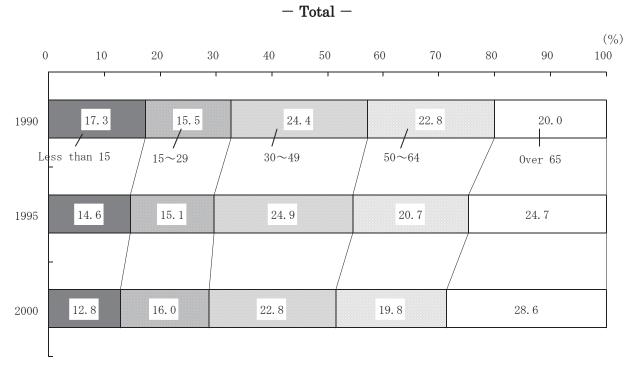
#### - Farming population is aging -

Considering the age composition of the farming population, the proportion of those who are passed the age of 65 has increased 3.9 % from 24.7% in the last Census to 28.6 % in the World Census 2000.

In terms of sex of the 65 or older strata, males constituted 25.9 % and females 31.2 %, showing increase of 3.7 % and 4.2 %, respectively.

In comparison with the proportion of those over 65 in the total population of Japan (17%, of which males constitute 14 % and females 19 %), aging in the segment of the population in farming was pronounced.

Figure 5. Changes in Constitution of Age Strata in the Farming Population (National, All Farm Households)



Reference: Proportion of farmers in the population of Japan (National)

|              |       |       |       | Unit: % |
|--------------|-------|-------|-------|---------|
| Less than 15 | 15~29 | 30~49 | 50~64 | 0ver 65 |
| 14.8         | 20.9  | 26.8  | 20.8  | 16. 7   |

Reference: Annual Report of Estimated Population (Statistics Bureau, Ministry of Public Management, Home Affairs, Post and Telecommunications)

## (2) Employment Status (Commercial Farm Households)

#### - Agricultural labor force is decreasing -

Of farm household members over 15 years of age, those who participated in farm operation (agricultural participants) numbered 6,860,000, a decrease of 7.3 % since the last Census.

Of these, the farm family members who were over 15, those who worked principally as farm hands (farm workers) numbered 3,890,000, declining by 6.0 % in comparison with the last Census, and the number of those who primarily worked on agricultural tasks (core farm workers) numbered 2,400,000, a decrease of 6.3 %.

Table 6 Changes in the Number of Agricultural Participants, Farm Workers and Core Farm Workers (National, Commercial Farm Households)

Unit  $\begin{cases} \text{Thousands} \\ \text{Proportion in } \% \end{cases}$ 

|        |                       |        | Troportion in |                  |        |        |                   |        |       |        |
|--------|-----------------------|--------|---------------|------------------|--------|--------|-------------------|--------|-------|--------|
| Class  | Agricultural Paticipa |        | cipants       | nts Farm Workers |        |        | Core Farm Workers |        |       |        |
| Class  | arreation             | Total  | Male          | Female           | Total  | Male   | Female            | Total  | Male  | Female |
|        | 1990                  | 8 493  | 4 441         | 4 052            | 4 819  | 1 978  | 2 841             | 2 927  | 1 522 | 1 405  |
| Number | 1995                  | 7 398  | 3 960         | 3 438            | 4 140  | 1 767  | 2 372             | 2 560  | 1 372 | 1 188  |
|        | 2000                  | 6 856  | 3 638         | 3 219            | 3 891  | 1 721  | 2 171             | 2 400  | 1 260 | 1 140  |
| %      | 1995/1990             | △ 12.9 | △ 10.8        | △ 15.2           | △ 14.1 | △ 10.6 | △ 16.5            | △ 12.5 | △ 9.9 | △ 15.4 |
|        |                       |        |               |                  |        |        |                   |        |       |        |
| Change | 2000/1995             | △ 7.3  | △ 8.1         | △ 6.4            | △ 6.0  | △ 2.6  | △ 8.5             | △ 6.3  | △ 8.2 | △ 4.1  |

| == < Agricultural labor force >                                |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
| Family member over 15 who participated in agricultural work    |  |  |  |  |  |  |  |
| during a one-year prior of the World Census 2000.              |  |  |  |  |  |  |  |
| Of agricultural participants, those who "only worked in agri-  |  |  |  |  |  |  |  |
| culture" and those who concurrently worked outside agriculture |  |  |  |  |  |  |  |
| whose involvement in agriculture in terms of the number of     |  |  |  |  |  |  |  |
| days was greater in agriculture than in outside work.          |  |  |  |  |  |  |  |
| Of farm workers, those who normally worked in agriculture      |  |  |  |  |  |  |  |
| during a one-year period prior to the World Census 2000.       |  |  |  |  |  |  |  |
| Those who worked in agriculture over 150 during one-year       |  |  |  |  |  |  |  |
| period prior to the World Census 2000.                         |  |  |  |  |  |  |  |
| Those who worked in agriculture between 60 and 149 days        |  |  |  |  |  |  |  |
| during a one-year period prior to the World Census 2000.       |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

## - Aging of agricultural labor force is advancing -

Focusing on age strata of farm workers and core farm workers, the number in over 70 year old stratum was showing an increase.

The actual population in the 60-65 stratum of the World Census was significantly greater than that in the 55-59 stratum in the last Census.

Figure 6. Change in Age Stratification of Farm Workers (National, (Thousands) Commercial Farm Households) 900 841 776 800 704 700 695 **▲** 659 688 600 507 500 433 400 284 281 268 267 300 285 -- 1990 203 <del>-</del> 1995 200 238 211 154 100 115 0 35~39 45~49 55~59  $70 \sim 74$ 75 &  $15 \sim 29$ 30~34 40~44  $50 \sim 54$  $60 \sim 64$  $65 \sim 69$ 

over

(National, Commercial Farm Households) (Thousands) 600 500 466 440 400 331 367 306 300 178 214 200 195 186 164 - 1990 100 <del>-</del> 1995 107 2000 64 36 0 15~29 30~34 35~39 50~54 60~64  $70 \sim 74$ 40~44  $45 \sim 49$  $55 \sim 59$  $65 \sim 69$ 75 &

Figure 7. Change in Age Stratification of Core Farm Workers

## (3) Status of Farm Operators (Commercial Farm Households)

#### - Younger operators concentrate in dairy farming and protected horticulture -

Regarding the age composition of farm operators in various crop specialties, the proportion of over-60-year- olds is high in open vegetable growing and single-crop orchard operation, while single-crop dairy, hog farm and protected horticulture in vegetables are made up by a high proportion of those under 49 years old.

Table 7 Age Composition of Single-Crop Farm Operations (National, Commercial Farm Households)

Unit: %

|                |                          |                       |       |        |          |       |       |           | OIII . 70 |
|----------------|--------------------------|-----------------------|-------|--------|----------|-------|-------|-----------|-----------|
|                | Cla                      | ssification           | Т     | 'otal  | Under 40 | 40~49 | 50~59 | 60 & over | 65 & over |
| Cor            | nme                      | rcial Farm Households | 100.0 | (2337) | 3.4      | 17.8  | 25.4  | 53.3      | 38.4      |
|                | Sin                      | gle-Crop Operation    | 100.0 | (1668) | 3.4      | 18.1  | 25.9  | 52.5      | 37.8      |
|                | Rice                     |                       | 100.0 | (1170) | 3.2      | 18.4  | 26.7  | 51.8      | 37.1      |
|                |                          | Opeh Field Vegetables | 100.0 | (87)   | 3.4      | 14.9  | 21.5  | 60.3      | 45.3      |
| Corp Specialty |                          | Protected Vegetables  | 100.0 | (51)   | 5.8      | 22.1  | 27.9  | 44.3      | 28.1      |
|                |                          | Fruit Trees           | 100.0 | ( 160) | 3.1      | 14.8  | 24.0  | 58.2      | 43.8      |
| pecia          |                          | Flowering Plants      | 100.0 | ( 38)  | 5.3      | 21.9  | 27.7  | 45.1      | 31.8      |
| lty            |                          | Dairy                 | 100.0 | ( 24)  | 9.6      | 32.2  | 29.0  | 29.2      | 15.6      |
|                |                          | Beef Cattle           | 100.0 | (28)   | 4.0      | 18.4  | 22.1  | 55.6      | 39.3      |
|                |                          | Hogs                  | 100.0 | (5)    | 4.3      | 24.7  | 32.8  | 38.2      | 22.1      |
|                |                          | Hennery               | 100.0 | (5)    | 4.3      | 20.7  | 30.7  | 44.4      | 28.1      |
|                | Quasi-Single-Crop Multi. |                       | 100.0 | ( 382) | 3.5      | 17.5  | 23.7  | 55.4      | 39.4      |
|                | Multiple Crop Operation  |                       | 100.0 | ( 105) | 4.6      | 19.3  | 24.3  | 51.7      | 35.6      |

Note: Figures in parentheses are actual numbers (thousands).

#### = < Farm operator >

A farm operator is the person responsible for farm management of a farm household. This is a new concept adapted for the first time in the World Census 2000; up to the last Census, the term farm household head (one responsible for financial aspect of farm operation) was used.

In case where a multiple number of individuals are involved in farm management, one of them is designated as the farm operator.

## (4) Status of Farm Succession (Commercial Farm Households)

#### - Farm successors who primarily engage in farming constitute 7 % -

Farm households in which the successor is co-habiting constitute 57.3 %. Of these farm households where the successors are engaged primarily in agricultural work comprise 7.2 %, and 13.1 % of successors of farm household is living outside of the parental house.

In terms of crop-specialty, those farm households with successor who primarily is engaged in agricultural work are single-crop farm households in dairy and hog husbandry operations both at over 20 %.

Table 8. Status of Successors in Farm Households of Various Crop Specialties (National, Commercial Farm Households)

Unit: %

| -              |                            |                        |       |        | Successo | or over 15 yea          | rs old in co-h | abitation      |            | No Successor |             |
|----------------|----------------------------|------------------------|-------|--------|----------|-------------------------|----------------|----------------|------------|--------------|-------------|
|                |                            |                        |       |        |          |                         |                | orking outside | farming    |              | Primarily   |
|                | Cla                        | assification           | То    | tal    | Subtotal | Agriculture Other Field |                | ~              | Over 15 in | Works        |             |
|                |                            |                        |       |        |          | as Core                 | as Core        | Worked in      | Did not    |              | Outside     |
|                |                            |                        |       |        |          | Occupation              | Occupation     | Agriculture    | Work       | Cohabitation | Agriculture |
| Comn           | Commercial Farm Households |                        | 100.0 | (2337) | 57.3     | 7.2                     | 43.7           | 34.2           | 6.4        | 42.7         | 13.1        |
|                | Single-Crop Operation      |                        | 100.0 | (1668) | 57.4     | 6.9                     | 43.9           | 34.6           | 6.6        | 42.6         | 13.1        |
|                |                            | Rice                   | 100.0 | (1170) | 59.6     | 4.8                     | 48.1           | 38.6           | 6.8        | 40.4         | 13.5        |
|                |                            | Opeh Field Vegetables  | 100.0 | ( 87)  | 56.8     | 11.4                    | 39.9           | 27.7           | 5.4        | 43.2         | 10.5        |
|                |                            | Protected Vegetables   | 100.0 | (51)   | 54.5     | 17.3                    | 29.9           | 20.8           | 7.2        | 45.5         | 9.2         |
| Ω              |                            | Fruit Trees            | 100.0 | ( 160) | 53.4     | 9.4                     | 38.5           | 29.3           | 5.5        | 46.6         | 13.6        |
| op Sı          |                            | Flowering Plants       | 100.0 | ( 38)  | 54.0     | 17.8                    | 28.1           | 18.9           | 8.1        | 46.0         | 10.7        |
| Crop Specialty |                            | Dairy                  | 100.0 | ( 24)  | 50.4     | 24.2                    | 17.8           | 12.5           | 8.5        | 49.6         | 6.9         |
| ty             |                            | Beef Cattle            | 100.0 | ( 28)  | 40.7     | 9.5                     | 26.5           | 21.2           | 4.7        | 59.3         | 17.1        |
|                |                            | Hogs                   | 100.0 | ( 5)   | 51.8     | 21.1                    | 22.2           | 14.0           | 8.5        | 48.2         | 10.5        |
|                |                            | Hennery                | 100.0 | ( 5)   | 52.6     | 19.3                    | 25.1           | 16.1           | 8.1        | 47.4         | 11.8        |
|                | Qua                        | asi-Single-Crop Multi. | 100.0 | ( 382) | 58.2     | 9.2                     | 43.1           | 35.1           | 5.9        | 41.8         | 12.6        |
|                | Mu                         | ltiple Crop Operation  | 100.0 | ( 105) | 57.1     | 11.9                    | 39.2           | 32.2           | 6.0        | 42.9         | 12.2        |

Note: Figures in parentheses are actual numbers (thousands).

### < Farm successors >

Farm successors is offspring of farm operator of over 15 years of age, co-habiting or otherwise. He/she is expected to succeed the farm operation of the farm household.

## 3 Land holdings

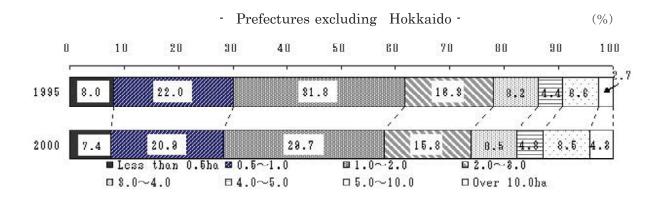
- (1) Cultivated Land under Management (Commercial Farm Households)
  - Cultivated land is concentrating in the hands of farm households with managed land holdings of over 3 ha -

The total area of cultivated land under management in the hands of commercial farm households is 3,734,000 ha, an average per commercial farm household of 160 a (average of all farm households is 125 a), an increase of 10 a (all farm household average of 5 a) since the last Census.

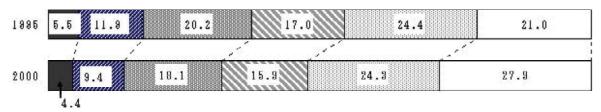
Regarding the change in the shares of cultivated land under management in terms of prefectural classification of farm household based on cultivated land under management (proportion of the total cultivated land under cultivation), the shares of all strata above farm households with 3 ha showed increases. This indicates that cultivated land is transferring into the hands of large-scale farm households.

With respect to rented land among farm households of various operational scale, large scale farm households tend to rent larger area of cultivated land, along with average rented land per farm household. This indicates acceleration of land movement through leasing.

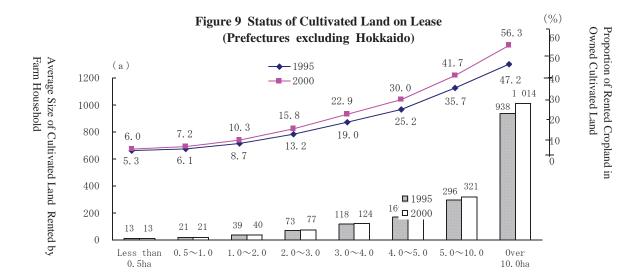
Figure 8. Difference of the Area of Cultivated Land and the Scale of Farm Operation (Commercial Farm Households)



- Hokkaido -



■ Less than 5.0ha 25.0~10.0 10.0~20.0 20.0~30.0 30.0~50.0 0ver 50.0ha



## (2) Cultivated Land on Lease

#### - High rate of leasing among subsistence and small farm households -

Focusing on the proportion of land on lease in owned cultivated land in terms of the scale of cultivated land under management as compiled by prefectures, the proportion of leased land was large among small scale farm households, and consisted of 33.2 % of subsistence farm households and those owning less than 0.5 ha constituted 17.0 %.

**Table 9** The Status of Cultivated Land on Leanse

Unit: { Area in thousand ha Proportion in %

|        |            |                           | Cropla | and on | Proportion of Rented   |      |  |
|--------|------------|---------------------------|--------|--------|------------------------|------|--|
|        |            | Classification            | Lea    | ase    | Cropland in Owned Land |      |  |
|        |            |                           | 1995   | 2000   | 1995                   | 2000 |  |
| Nat    | iona       | al (All Farm Households)  | 205    | 236    | 5.4                    | 6.7  |  |
|        | All        | Farm Households           | 178    | 204    | 6.2                    | 7.8  |  |
|        | Com        | total                     | 121    | 134    | 4.5                    | 5.6  |  |
| Prefe  | Commercial | Less than 0.5ha           | 37     | 39     | 14.3                   | 17.0 |  |
| ctures | Farm House | 0.5~1.0                   | 43     | 47     | 6.6                    | 8.2  |  |
|        |            | 1.0~2.0                   | 27     | 31     | 3.1                    | 4.0  |  |
|        |            | 2.0~3.0                   | 8      | 9      | 1.8                    | 2.5  |  |
|        | hold       | Over 3.0ha                | 6      | 8      | 1.3                    | 1.7  |  |
|        | Sub        | osistence Farm Households | 57     | 70     | 28.5                   | 33.2 |  |

#### (3) Fallow and Abandoned Cropland

#### - The Rate of abandoned cropland is increasing -

The total area of abandoned fallows is 210,000 ha; the area increased to 48,000 ha (29.8 %) to 5.1 % of all cultivated land.

The rate of abandoned fallow is high in Tosan, Sanyo and Shikoku Agricultural Regions, while Sanyo and North Kanto Agricultural Regions showed a high-rate of fallow.

Table 10 Situation of Farming Abandonement and Fallow Viewing From Agricultural Regions

Unit: { Area in thousand ha

|                |      | Abandonme | nt (All Farm | Households) |         |      |              | Fallow   |           |         |
|----------------|------|-----------|--------------|-------------|---------|------|--------------|----------|-----------|---------|
| Classification |      | Area      |              | Proporti    | on in % | U    | nplanted Lai | nd       | Proportio | on in % |
|                | 1995 | 2000      | % Change     | 1995        | 2000    | 1995 | 2000         | % Change | 1995      | 2000    |
| National       | 162  | 210       | 29.8         | 3.8         | 5.1     | 156  | 278          | 77.6     | 3.9       | 7.4     |
| Hokkaido       | 9    | 9         | 6.3          | 0.9         | 0.9     | 10   | 21           | 104.7    | 1.0       | 2.1     |
| Prefectures    | 153  | 201       | 31.2         | 4.7         | 6.5     | 146  | 257          | 75.7     | 5.0       | 9.4     |
| Tohoku         | 31   | 44        | 42.8         | 3.8         | 5.6     | 28   | 68           | 145.0    | 3.6       | 9.3     |
| Hokuriku       | 8    | 11        | 31.7         | 2.7         | 3.7     | 7    | 27           | 261.9    | 2.5       | 9.7     |
| Kanto/Tosan/   | 41   | 55        | 33.8         | 5.7         | 8.1     | 49   | 58           | 18.2     | 7.6       | 9.8     |
| North Kanto    | 16   | 24        | 48.8         | 4.5         | 7.0     | 25   | 32           | 32.2     | 7.5       | 10.7    |
| South Kanto    | 13   | 17        | 34.4         | 5.7         | 8.3     | 18   | 17           | △ 5.1    | 9.0       | 9.4     |
| Tosan          | 12   | 14        | 13.8         | 9.1         | 11.1    | 6    | 8            | 32.1     | 5.4       | 7.9     |
| Tokai          | 14   | 16        | 14.4         | 5.6         | 6.8     | 13   | 20           | 53.1     | 6.0       | 9.9     |
| Kinki          | 7    | 10        | 42.2         | 3.2         | 4.7     | 9    | 17           | 85.2     | 4.8       | 9.5     |
| Chugoku        | 15   | 20        | 29.5         | 6.1         | 8.5     | 11   | 22           | 110.3    | 4.9       | 11.6    |
| Sanin          | 3    | 5         | 45.1         | 4.5         | 7.1     | 2    | 6            | 167.3    | 3.2       | 9.7     |
| Sanyo          | 12   | 15        | 25.0         | 6.7         | 9.1     | 8    | 17           | 95.7     | 5.7       | 12.5    |
| Shikoku        | 9    | 12        | 32.2         | 6.4         | 9.0     | 6    | 9            | 65.6     | 4.5       | 8.2     |
| Kushu          | 26   | 31        | 22.1         | 5.0         | 6.5     | 23   | 35           | 55.5     | 4.9       | 8.2     |
| North Kyushu   | 18   | 22        | 22.2         | 5.3         | 6.8     | 17   | 26           | 56.4     | 5.3       | 8.9     |
| South Kyushu   | 7    | 9         | 22.0         | 4.5         | 5.7     | 6    | 9            | 52.9     | 4.1       | 6.6     |
| Okinawa        | 2    | 2         | △ 6.5        | 4.7         | 4.8     | 1    | 1            | △ 14.9   | 4.7       | 4.3     |

## = < Abandoned fallow $\cdot$ Fallow >

Abandoned fallow is cultivated land unused in the past 1 year and no further plan for growing in the future.

Fallow is cultivated land unused in the past 1 year and has plans for growing in the future. Abandonment rate = Area of abandoned area / (abandoned area + cultivated land under management) x 100.0.

## 4 Agricultural Output (Commercial Farm Households)

## (1) Cultivation of (Open Field) Agricultural Products

## - Eighty-five percent of commercial farm household production is intended for sale -

There were 1,989,000 farm households that planted in open fields for commercial purposes. Of these, rice crop was planted by 1,747,000 farm households (87.8 % of all those who planted), 226,000 planted legumes (11.3 % of all who planted), 450,000 planted vegetables (22.6 % of all those planted) among other crops.

Table 11. Farm Households that Planted for Commercial Purposes (National, Commercial Farm Households)

|                |            |       |        |         | Unit: { | Thousands<br>Proportion | in % |
|----------------|------------|-------|--------|---------|---------|-------------------------|------|
| Classification |            | Rice  | Wheats | Legumes |         | Flowering<br>Plants     |      |
|                | Households |       |        |         |         | Plants                  |      |
| Number         | 1 989      | 1 747 | 122    | 226     | 450     | 66                      |      |
| % Composition  | 100.0      | 87.8  | 6. 1   | 11. 3   | 22. 6   | 3. 3                    |      |

Table 12 Number of Rice Growers by Planting Area (National, Commercial Farm Households)

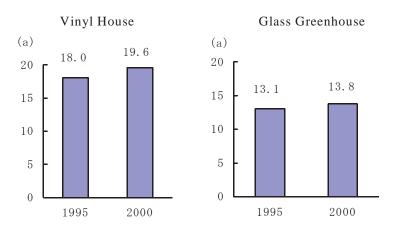
|                |       |            |       |           |         |         | Unit: { | Proportion in % |
|----------------|-------|------------|-------|-----------|---------|---------|---------|-----------------|
| Classification | Total | Bellow 30a | 30~50 | 50a∼1.0ha | 1.0~2.0 | 2.0~3.0 | 3.0~5.0 | Over 5.0ha      |
| Number         | 1 747 | 378        | 443   | 513       | 277     | 71      | 38      | 25              |
| % Composition  | 100.0 | 21.7       | 25.4  | 29.4      | 15.9    | 4.1     | 2.2     | 1.4             |

#### (2) Protected Horticulture

#### - Average area of protected horticulture is on the increase -

Farm households with protected horticulture facilities number 226,000, a decrease of 29,000 (11.3 %) since the last Census. Even though the number of farm households with such facilities decreased, average area of vinyl-covered facilities increased to 19.6 a (increase of 8.9 %), and that of glass-covered greenhouses to 13.8 a (5.3% increase) as compared with the last Census.

Figure 10 Change in the Protected Area in Farm Households (National, Commercial Farm Households)



## (3) Livestock Husbandry

## - Increases was observed in all livestock husbandry operations -

While the total number of farm households in livestock husbandry declined, average number of animals in the operation of each farm household is increasing.

Table 13. Changes in the Number of Farm Households in Animal Husbandry and Their Operational Scale (National, Commercial Farm Households)

Unit: { Thousands Heads, 100 Chickens

|                  |       |           |             |       | ( 110000), 1     | oo chickens   |
|------------------|-------|-----------|-------------|-------|------------------|---------------|
| Classifica       | ation | Milk Cows | Beef Cattle | Hogs  | Laying Hen (100) | Broiler (100) |
| Livestock        |       |           |             |       |                  |               |
| Tended           | 1990  | 62.8      | 213.7       | 32.2  | 9.1              | 4.8           |
| (Shipped)        | 1995  | 45.1      | 156.2       | 14.5  | 6.4              | 3.5           |
| Farm Number      | 2000  | 33.3      | 106.1       | 8.8   | 4.7              | 2.7           |
| Average          | 1990  | 31.3      | 10.4        | 248.6 | 73.1             | 782.1         |
| Tended (Shipped) | 1995  | 41.5      | 15.1        | 387.5 | 92.9             | 907.1         |
| Livestock No.    | 2000  | 49.3      | 20.0        | 565.0 | 109.5            | 1 079.3       |

Note: Henneries with fewer than 100 chickens were excluded; the 1990 and 1995 counts under management are those of birds over 6 months of age.

# 5 Consignment of Agricultural Production (Commercial Farm Households)

#### - High occurrence of consignment crop management -

The nation-wide number of farm households that planted under consignment was 161,000, or 6.9 % of commercial farm households.

The proportion of farm households that undertook consignment rice growing on the prefectural level indicated that the rate of participation in the arrangement was higher among farm households with large cultivated land under management. It can be inferred that consignment growing plays a part in expansion of farm operation.

Table 14. The Number of Consignment-Growing Farm Households

Unit: Thousands Grower Consignm Rice Wheat Livestock Classification Growing Farm 0ther Grower Grower Husbandry Households Crops 1.7 National 160.9 151.9 6.9 9.8 Hokkaido 3.4 1.0 1. 1 0.2 1.6 Prefectures 157.6 150.3 5.9 8.6 1.4

Table 15. Proportion of Farm Households with Consignment Rice-Growing (Commercial Farm Households, Prefectures excluding Hokkaido)

Unit: %

|      |      |           |    |      | No. Farm   | Entire  |          |                   | Parti            | al Process |                       |                        |
|------|------|-----------|----|------|------------|---------|----------|-------------------|------------------|------------|-----------------------|------------------------|
|      | Clas | ssificati | on |      | Households | Process | Seedling | Spring<br>Tilling | Rice<br>Planting | Spraying   | Harvest,<br>Thrashing | Drying<br>Conditioning |
| 1995 |      |           |    | 6.0  | 1.5        | 1.3     | 2.6      | 2.5               | 0.5              | 3.6        | 2.4                   |                        |
|      |      | Tota      | 1  |      | 7.6        | 1.5     | 1.6      | 3.3               | 3.5              | 0.6        | 4.8                   | 3.2                    |
| 2    | less | than      | 1  | ha   | 3.3        | 0.5     | 0.4      | 1.4               | 1.4              | 0.3        | 1.9                   | 1.1                    |
| 0    | 1    | $\sim$    |    | 3    | 10.1       | 2.0     | 1.8      | 4.2               | 4.5              | 0.7        | 6.2                   | 4.1                    |
| 0    | 3    | $\sim$    |    | 5    | 27.4       | 7.0     | 7.8      | 11.7              | 13.5             | 2.1        | 18.8                  | 13.7                   |
|      | 5    | ha or     | •  | over | 47.4       | 13.6    | 19.9     | 23.0              | 26.9             | 4.9        | 36.6                  | 28.4                   |

Note: The proportion is those of farm household that is growing rice in its own farm operation.

## 6 Trends in Farm Operation (Commercial Farm Households)

#### (1) Contract Growing

## - Eight per cent of farm households are undertaking contract growing -

Those farm households undertaking crop growing by contract numbered 178,000, the percentage of which was 7.6% among commercial farm households.

Table 16. Farm Households Undertaking Contract Growing in Selected Crop Specialties (National, Commercial Farm Household)

| 11        | housands       |
|-----------|----------------|
| Unit: { P | roportion in % |

|                        | Consignment |                 |                 |       |           |  |  |  |
|------------------------|-------------|-----------------|-----------------|-------|-----------|--|--|--|
| Classification Growing |             | Consigned crops |                 |       |           |  |  |  |
|                        | Farm        | Rice            | Vegetables      | Fruit | Livestock |  |  |  |
|                        | Households  | Rice            | (Open, Protect) | Trees | Husbandry |  |  |  |
| Number                 | 178         | 88              | 34              | 15    | 15        |  |  |  |
| % Composition          | 100.0       | 49.4            | 19.2            | 8.3   | 8.2       |  |  |  |

Note: The core crops are those in which contract growing is most frequent.

#### = <Contract growing>

In contract growing, a farm household concludes a contract with consumers or retailers (supermarkets, consumer cooperatives) for specific crops to be produced.

## (2) Movement toward Environmentally Friendly Farming

#### - About 20 % of farm households are adopting environmentally considered farming methods

The number of farm households practicing farm operation with consideration toward environmental protection was 502,000. Of these farm households, 21.5 % was commercial farm households.

Environmentally correct contents of farming practice included controlling the nitrogen content of chemical fertilizer, halving the recommended frequency of pesticide spray and effort for soil improvement by use of compost.

Table 17 Move toward Environment-Friendly Farming (National, Commercial Farm Household)

- Multiple Returns -

Unit: %

| _   |                |              |               |                             |                    |                 | UIIII. 70 |
|---|----------------|--------------|---------------|-----------------------------|--------------------|-----------------|-----------|
|   |                |              | Applica       | tion of chemica             | l fertilizer and p | esticide        |           |
|   |                |              | Nitrogen cont | ent of fertilizer           | Frequency of       | pesticide spray | Making    |
|   | Classification | Total        |               | Less than 1/2 Less than 1/2 | Less than 1/2      |                 |           |
|   |                |              | Not used      | of Recommend-               | Not used           | of Recommend-   | Compost   |
|   |                |              |               | ed Amount                   |                    | ed Amount       |           |
| Farm households practicing environmentally-friendly methods |                | 100.0 ( 502) | 6.4 62.6      |                             | 5.3                | 67.3            | 73.4      |
|   | Rice           | 100.0 ( 270) | 5.4           | 67.3                        | 5.2                | 74.1            | 64.7      |
| Crops   | Vegetables     | 100.0 ( 120) | 6.9           | 61.7                        | 5.0                | 67.0            | 87.6      |
| ops   | Fruit Trees    | 100.0 ( 60)  | 9.3           | 56.2                        | 4.2                | 52.6            | 76.9      |
|   | Other Crops    | 100.0 ( 52)  | 7.2           | 47.9                        | 8.3                | 49.8            | 82.2      |

Note: Figures in parentheses are numbers of households in thousands.

## (3) Animal Waste Management

## - A majority of farm households return animal wasted to cropland or use waste-processing equipment -

A majority of farm households returned the animal wastes to the land. However, 23.2 % of them stocked in either holes made in the ground or in piles.

Table 18. Animal waste processing methods of Farm Households (National, Commercial Farm Household, Farm Household in Animal Husbandry)

— Multiple returns —

|                |             | 1           |                |                |                 | Thousands<br>Proportion in % |
|----------------|-------------|-------------|----------------|----------------|-----------------|------------------------------|
|                | Farm House- | Nun         | nber of Farm H | ouseholds by V | Vaste Processin | g Methods                    |
|                | holds in    | Return Ani- | Exchange       | Discards       | In-house        | Co-operative                 |
| Classification | Livestock   | mal Waiste  | with           | in Hole or     |                 |                              |
|                | Husbandry   | to Cropland | Litter         | in Pile        | Equipment       | Equipment                    |
| Number         | 151         | 97          | 19             | 35             | 41              | 7                            |
| % Composition  | 100.0       | 64.2        | 12.7           | 23.2           | 27.2            | 4.4                          |