SPIA - VHLSS 2023 – Variable Dictionary

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# Identification variables in all sets

| **No.** | **Variables provided in GSO's dataset** | **Variables translated into English** | **Description** |
| --- | --- | --- | --- |
|  | MATINH | PROVINCE\_ID | unique province ID provided in the classification of territorial administrative units |
|  | MAHUYEN | DISTRICT\_ID | unique district ID provided in the classification of territorial administrative units |
|  | MAXA | COMMUNE\_ID | unique commune ID provided in the classification of territorial administrative units |
|  | MADIABAN | EAID | enumeration area code within communes |
|  | HOSO | HHCODE | household ID within EA, ranging from 01 to 20 |
|  | IDHO | HHID | unique household ID, concatenated from variables COMMUNE\_ID, EAID, and HHCODE |
|  | KYDIEUTRA | SURVEY PERIOD | Survey Quarter |

# Muc4B11 - 4B1.1.Rice (GSO)

| **No.** | **Variables** | **Question code**  **in 4B1*.*1.Rice** | **Description** |
| --- | --- | --- | --- |
|  | M4B11\_MA | Q2 | The types of rice harvested in the last 12 months:  1. Year-round ordinary rice  2. Winter-Spring ordinary rice  3. Summer-autumn ordinary rice  4. Tenth-month or autumn-winter rice  5. Ordinary rice planted in terraced field  6. Year-round glutinous rice  7. Year-round specialty rice |
|  | M4B11\_C3 | Q3 | The cultivated area (m2) of the rice in the last 12 months |
|  | M4B11\_C3AD | Q3A | Sowing calendar - DAY |
|  | M4B11\_C3AM | Q3A | Sowing calendar - MONTH |
|  | M4B11\_C3AY | Q3A | Sowing calendar - YEAR |
|  | M4B11\_C3B | Q3B | The type of calendar  1. Lunar calendar  2. Gregorian calendar |
|  | M4B11\_C4 | Q4 | The output (kg rice) harvested in the last 12 months |
|  | M4B11\_C5 | Q5 | The value (thousand VND) of rice harvested |

# Muc4B12 - Other starchy, vegetable, and annual plants (GSO)

| **No.** | **Variables** | **Question code**  **in Muc4B12** | **Description** |
| --- | --- | --- | --- |
|  | M4B15\_MA | Q2 | Which of the following products have you harvested in the last 12 months?  8 - Maize (corn)  9 - Sweet potato  10 - Cassava/manioc  11 - Other staple food crops  12 - Potato  13 - Morning glory vegetable  14 - Kohlrabi  15 - Cabbage, cauliflower  16 - Cruciferous vegetables  17 - Edible beans  18 - Tomato  19 - Seasoning herb  20 - Other edible vegetables, fruits and roots  21 - Other annual crops (green, black and red bean, flowers, decorative plants, plants for animal feed and manure, etc.) |
|  | M4B12\_C4 | Q4 | What was the output of […] that you harvested in the last 12 months? (in kg) |
|  | M4B12\_C5 | Q6 | How much did you earn from sale/barter of […] in the last 12 months? (thousand VND) |
|  | M4B12\_C6 | Q8 | Do you currently have […] planted on at least one plot? 1 – Yes  2 – No |

# Muc4B13 - Annual and perennial industrial crops (GSO)

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Variables** | **Question code**  **in Muc4B13** | **Description** |
|  | M4B13\_MA | Q2 | Which of the following products has your household harvested in the last 12 months?  22 - Soya bean/soybean  23 - Peanut/groundnut  24 - Sesame  25 - Sugarcane  26 - Tobacco, rustic tobacco  27 - Cotton  28 - Jute, ramie  29 - Sedge  30 - Other industrial annual plants  31 - Tea  32 - Coffee  33 - Rubber  34 - Pepper  35 - Coconut  36 - Mulberry  37 - Cashew  38 - Other industrial perennials |
|  | M4B13\_C4 | Q4 | What was the ouput of […] your household harvested in the last 12 months? (in kg) |
|  | M4B13\_C5 | Q6 | How much did you earn from sale/barter of […] in the last 12 months? (thousand VND) |

# Muc4B51 - Revenues from fishery production and catching (GSO)

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Variables** | **Question code**  **in Muc4B51** | **Description** |
|  | M4B51\_MA | Q2 | Which of the following products has your household get revenues from?  1 – Fish production  2 – Shrimp production  3 - Fish and shrimp seedlings production  4 - Other aquatic production  5 – Fish catching  6 – Shrimp catching  7 - Other aquatic products catching  9 – Tilapia production |
|  | M4B51\_C3 | Q3 | Total output in the past 12 months? (Kg) |
|  | M4B51\_C5 | Q5 | TOTAL VALUE OF PRODUCTS GAINED for the last 12 months? (thousand VND) |
|  | M4B51\_GHIRO | M4B51\_OTHER (SPECIFY) | Specify for either M4B51\_MA == 4 or M4B51\_MA == 7 |

# SPIA\_M4B11A - Rice

| **No.** | **Variables** | **Question code in SPIA modules** | **Description** |
| --- | --- | --- | --- |
|  | M4B11A2\_C1 | 4B1.1.A.2. Seeds Q1 | During the last Winter-Spring season, which method did you use for seeding in your largest plot?  1 - Hand seeding 2 - Row seeder/ drum seeder 3 - Seed blower 4 - Transplanting by hand using hard plating 5 - Transplanting by hand using soft plating 6 - Transplanting by machine 7 - Other 99 - Don't know |
|  | M4B11A2\_C2A | 4B1.1.A.2. Seeds Q2 | During the last Winter-Spring season, which seed rate did you use on your largest plot? (Code of area unit)  1 - In m2 2 - Sào Bắc Bộ (360m2) 3 - Sào Trung Bộ (500m2) 4 - Sào Nam Bộ or Công Nhà nước (1000m2) 5 - Công Tầm Cắt or Công Lớn (~ 1300m2)  99 - Don't know |
|  | M4B11A2\_C2B | 4B1.1.A.2. Seeds Q2 | Seed rate during the last Winter-Spring season (kg per area unit) |
|  | M4B11A2\_C3 | 4B1.1.A.2. Seeds Q3 | How long have you been using this seed rate for the last winter-spring season? (YEARS) |
|  | M4B11A2\_C4A | 4B1.1.A.2. Seeds Q4 | What was your seed rate before this time? (Code of area unit)  1 - In m2 2 - Sào Bắc Bộ (360m2) 3 - Sào Trung Bộ (500m2) 4 - Sào Nam Bộ or Công Nhà nước (1000m2) 5 - Công Tầm Cắt or Công Lớn (~ 1300m2)  99 - Don't know |
|  | M4B11A2\_C4B | 4B1.1.A.2. Seeds Q4 | Seed rate before the current rate (kg per area unit) |
|  | M4B11A2\_C5 | 4B1.1.A.2. Seeds Q5 | During the last Winter-Spring season, did you use certified seeds?  1 - Only certified seeds  2 - Combination of certified seeds and your own seeds  3 - Only self-produced seeds or seeds from other farmers  99 - Don't know |
|  | M4B11A2\_C6 | 4B1.1.A.2. Seeds Q6 | Name of the main rice variety that you used last Winter-Spring season? |
|  | M4B11A3\_C1 | 4B1.1.A.3. Pesticides Q1 | In the last WS season, how many times did you apply plant protection drugs on your main plot, including herbicides, molluscicides, insecticides, fungicides, and rodenticides? |
|  | M4B11A3\_C2 | 4B1.1.A.3. Pesticides Q2a | Of these, how many times did you apply insecticides and fungicides? |
|  | M4B11A3\_C2B | 4B1.1.A.3. Pesticides Q2b | If 0 application, do you normally experience bugs, diseases, or fungus on your main plot?  1 - Yes  2 - No |
|  | M4B11A4\_C1 | 4B1.1.A.4. Fertilizer Q1 | In the last WS season, how many times did you apply chemical fertilizer on your plots? |
|  | M4B11A5\_C1 | 4B1.1.A.5. Water Q1 | During the last Winter-Spring season, which water source did you use to irrigate your fields?  1 - Cooperative, irrigation service center  2 - Agent Level II  3 - Only own pump  4 - Own pump and others  5 - Other (Specify) |
|  | M4B11A5\_C1\_GHIRO | 4B1.1.A.5. Water Q1 | Specify other water source |
|  | M4B11A5\_C3 | 4B1.1.A.5. Water Q2 | Has your largest plot been leveled with a laser leveling machine?  1 - Yes  2 - No  99 - Don't know |
|  | M4B11A5\_C4 | 4B1.1.A.5. Water Q3 | Are you using a water pipe/tube to measure the water level?  1 - Yes  2 - No  99 - Don't know |
|  | M4B11A5\_C5 | 4B1.1.A.5. Water Q4 | In the last Winter-Spring season, how many times did your largest plot dry? |
|  | M4B11A6\_C1 | 4B1.1.A.6. Post-harvest Q1 | When did you start harvesting rice?  1 - When 70-80% of the grains per panicle were straw-yellow colored.  2 - When 80-90% of the grains per panicle were straw-yellow colored  3 - When 90-100% of the grains per panicle were straw-yellow colored |
|  | M4B11A6\_C21 | 4B1.1.A.6. Post-harvest Q2 | Harvesting method - Using a combine harvester?  1 - Yes  2 - No |
|  | M4B11A6\_C22 | 4B1.1.A.6. Post-harvest Q2 | Harvesting method - Using a straw baler?  1 - Yes  2 - No |
|  | M4B11A6\_C23 | 4B1.1.A.6. Post-harvest Q2 | Harvesting method - Manual labor?  1 - Yes  2 - No |
|  | M4B11A6\_C24 | 4B1.1.A.6. Post-harvest Q2 | Harvesting method - Other methods?  1 - Yes  2 - No |
|  | M4B11A6\_C24\_GHIRO | 4B1.1.A.6. Post-harvest Q2 | Specify another harvesting method |
|  | M4B11A6\_C3 | 4B1.1.A.6. Post-harvest Q3 | For how long have you been using this harvesting method? (YEARS) |
|  | M4B11A6\_C4 | 4B1.1.A.6. Post-harvest Q4 | Which method did you use to dry your rice?  1 - Field drying  2 - Sun drying on the road or home ground  3 - Sun drying using a mat or pavement  4 - Heated air drying (batch dryer)  5 - Low-temperature drying (In-store dryer)  6 - Solar drying or Solar bubble dryer  7 - I dry by machine, but I don't know the technology  8 - No drying sold fresh rice  9 - Other (Specify) |
|  | M4B11A6\_C4\_GHIRO | 4B1.1.A.6. Post-harvest Q4 | Specify the other drying method |
|  | M4B11A6\_C5 | 4B1.1.A.6. Post-harvest Q5 | How long have you been using this drying method? (YEARS) |
|  | M4B11A6\_C6 | 4B1.1.A.6. Post-harvest Q6 | How did you store your rice?  1 - No storage, sold fresh rice  2 - Storage shed in bags;  3 - In storage shed loose (bulk);  4 - Hermetic storage (Cocoon or Super Bag)  5 - Other |
|  | M4B11A6\_C7 | 4B1.1.A.6. Post-harvest Q7 | How did you check the moisture content of your rice?  1 - I don’t check the moisture content  2 - I checked by hand  3 - I used a machine  4 - The buyer checks the moisture content |
|  | M4B11A7\_C11 | 4B1.1.A.7. NRM methods Q1 | Have you applied [One Must Do, Five Reduction (1M5R)] during the last Winter-Spring (Dong-Xuan) season?  1 - Yes  2 - No  99 - Don’t know |
|  | M4B11A7\_C12 | 4B1.1.A.7. NRM methods Q1 | Have you applied [Alternate Wetting and Drying (AWD)] during the last Winter-Spring (Dong-Xuan) season?  1 - Yes  2 - No  99 - Don’t know |
|  | M4B11A7\_C13 | 4B1.1.A.7. NRM methods Q1 | Have you applied [Three Reductions, Three gains (3R3G)] during the last Winter-Spring (Dong-Xuan) season?  1 - Yes  2 - No  99 - Don’t know |
|  | M4B11A7\_C14 | 4B1.1.A.7. NRM methods Q1 | Have you applied [System of Rice Intensification (SRI)] during the last Winter-Spring (Dong-Xuan) season?  1 - Yes  2 - No  99 - Don’t know |

# SPIA\_M4B11A1 – Adaptive rice-based systems

| **No.** | **Variables** | **Question code in** 4B1.1.1.A1 | **Description** |
| --- | --- | --- | --- |
|  | M4B111A\_MA | Q.2 | Advice from authorities on:  1. Not cultivating rice in a particular season  2. Shifting from rice to another crop  3. Change in rice sowing/transplanting dates  4. Rice varieties to sow  5. Shifting to shorter-duration rice varieties  6. Changes in plot irrigation schedule |
|  | M4B111\_C2 | Q.2 | In the last 12 months, have you received advice from authorities with regard to [advice mentioned in M4B111A\_MA]  1 - Yes  2 - No |
|  | M4B111\_C3 | Q.3 | Have you applied this advice on at least one plot? |
|  | M4B111\_C41 | Q.4 Dong Xuan Season | Have you applied this advice on Winter-Spring (Dong-Xuan) Season? |
|  | M4B111\_C42 | Q.4 He Thu Season | Have you applied this advice on Summer-Autumn (He-Thu) Season? |
|  | M4B111\_C43 | 1 Q.4 Thu Dong Season | Have you applied this advice on Autumn-Winter (Thu Đông) Season? |
|  | M4B111\_C44 | Q.4 Mua Season | Have you applied this advice on Wet season (Mua)? |
|  | M4B111\_C5 | Q.5 | Following the advice of "Shifting from rice to another crop", which product did you produce instead of rice?  1. Shrimp  2. Fruit crops  3. Lotus or buffalo nut crop  4. Growing fish in cages  5. Vegetable  6. Other |

# SPIA\_M4B11A3 *-* Pesticides

| **No.** | **Variables** | **Question code in** 4B1.1.A.3. Pesticides | **Description** |
| --- | --- | --- | --- |
|  | STT | ID | ID of the pesticide application |
|  | M4B11A3\_C3 | Q3 | For application [ID], for which object(s) are you using this plant protection drug?  (Multiple choice – code of object) |
|  | M4B11A3\_C41 | Q4 | The purpose of application - Prevention?  1 - Yes  2 - No |
|  | M4B11A3\_C42 | Q4 | The purpose of application - Treatment?  1 - Yes  2 - No |
|  | M4B11A3\_C43 | Q4 | The purpose of application - Nutrient?  1 - Yes  2 - No |
|  | M4B11A3\_C499 | Q4 | The purpose of application - Don't know?  1 - Yes  2 - No |
|  | M4B11A3\_C5 | Q5 | At which rice stage did you apply this chemical?   |  |  | | --- | --- | | 0 - Stage 0  1 - Between 0 and 1  2 - Stage 1  3 - Between 1 and 2  4 - Stage 2  5 - Between 2 and 3  6 - Stage 3  7 - Between 3 and 4  8 - Stage 4  9 - Between 4 and 5 | 10 - Stage 5  11 - Between 5 and 6  12 - Stage 6  13 - Between 6 and 7  14 - Stage 7  15 - Between 7 and 8  16 - Stage 8  17 - Between 8 and 9  18 - Stage 9 | |
|  | M4B11A3\_C6 | Q6 | How many drugs did you use in the application [ID]? |
|  | M4B11A3\_C8 |  | The deleted question following GSO’s suggestion |

# SPIA\_M4B11A4 *-* Fertilizer

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Variables** | **Question code in** 4B1.1.A.4. Fertilizer | **Description** |
|  | STT | ID | Application ID |
|  | M4B11A4\_C2 | Q2 | During the last Winter-Spring season, what type of fertilizers did you apply?  1 - Nitrogen  2 - Phosphate  3 - Kali  4 - NPK  5 - DAP  6 - Other (Specify) |
|  | M4B11A4\_C2\_GHIRO | Q2 | Specify another type of fertilizer |
|  | M4B11A4\_C3N | Q3 | Fertilizer formula for N component |
|  | M4B11A4\_C3P | Q3 | Fertilizer formula for P component |
|  | M4B11A4\_C3K | Q3 | Fertilizer formula for K component |
|  | M4B11A4\_C4A | Q4 | How many kg did you apply per unit of land? |
|  | M4B11A4\_C4B | Q4 | Code of area unit  1 - In m2  2 - Sào Bắc Bộ (360m2)  3 - Sào Trung Bộ (500m2)  4 - Sào Nam Bộ or Công Nhà nước (1000m2)  5 - Công Tầm Cắt or Công Lớn (~ 1300m2)  99 - Don't know |
|  | M4B11A4\_C5 | Q5 | At which rice stage did you apply this fertilizer?   |  |  | | --- | --- | | 0 - Stage 0  1 - Between 0 and 1  2 - Stage 1  3 - Between 1 and 2  4 - Stage 2  5 - Between 2 and 3  6 - Stage 3  7 - Between 3 and 4  8 - Stage 4  9 - Between 4 and 5 | 10 - Stage 5  11 - Between 5 and 6  12 - Stage 6  13 - Between 6 and 7  14 - Stage 7  15 - Between 7 and 8  16 - Stage 8  17 - Between 8 and 9  18 - Stage 9 | |

# SPIA\_M4B11A5 *-* Water

| **No.** | **Variables** | **Question code in** 4B1.1.A.5. Water | **Description** |
| --- | --- | --- | --- |
|  | STT | ID | Drydown ID |
|  | M4B11A5\_C6 | Q5 | For dry event [Drydown ID], at what stage/between stages were the rice plants?   |  |  | | --- | --- | | 0 - Stage 0  1 - Between 0 and 1  2 - Stage 2  3 - Between 1 and 2  4 - Stage 2  5 - Between 2 and 3  6 - Stage 3  7 - Between 3 and 4  8 - Stage 4  9 - Between 4 and 5 | 10 - Stage 5  11 - Between 5 and 6  12 - Stage 6  13 - Between 6 and 7  14 - Stage 7  15 - Between 7 and 8  16 - Stage 8  17 - Between 8 and 9  18 - Stage 9 | |
|  | M4B11A5\_C7 | Q6 | For dry event [Drydown ID], how many days was the plot dry? |
|  | M4B11A5\_C8 | Q7 | On dry event [Drydown ID], what reason below caused the soil to dry?  1 - I actively drained the water out  2 - Cooperative/irrigation company drained out the water  3 - Cooperative/irrigation company stopped pumping the water  4 - Cooperative pumped but I did not receive enough water  5 - Mound land  6 - Sunny, hot weather  7 - Other  99 - Don't know |
|  | M4B11A5\_C9 | Q8 | On dry event [Drydown ID], how much did your feet sink when you stepped on the soil (in cm) at the driest time of your plot? |

# SPIA\_M4B12A - Cassava

| **No.** | **Variables** | **Question code in SPIA modules** | **Description** |
| --- | --- | --- | --- |
|  | M4B12A1\_C0A | 4B1.2. A.1. Cassava Use and Marketing Q0 | Type of cassava products sold - Fresh root?  1 - Yes  2 - No |
|  | M4B12A1\_C0B | 4B1.2. A.1. Cassava Use and Marketing Q0 | Type of cassava products sold - Flour?  1 - Yes  2 - No |
|  | M4B12A1\_C0C | 4B1.2. A.1. Cassava Use and Marketing Q0 | Type of cassava products sold - Dried chips?  1 - Yes  2 - No |
|  | M4B12A1\_C0D | 4B1.2. A.1. Cassava Use and Marketing Q0 | Type of cassava products sold - Do not sell?  1 - Yes  2 - No |
|  | M4B12A2\_C1 | 4B1.2.A.2. Cassava plot roster Q1 | Is this household selected for cassava crop sampling?  1 - Yes  2 - No |
|  | M4B12A2\_C1A | 4B1.2.A.2. Cassava plot roster Q1 | Why is this household not selected for crop sampling?  1. This EA has collected samples from 5 households already.  2. Cassava was harvested already and not planted for the new season.  3. Other (Specify)…........................ |
|  | M4B12A2\_C1A\_GHIRO | 4B1.2.A.2. Cassava plot roster Q1 | Specify the other reason for not selecting this household |
|  | M4B12A3\_TENTR | 4B1.2.A.3. Cassava crop sampling Q1 | Name of plot selected for crop sampling |
|  | M4B12A3\_C2 | 4B1.2.A.3. Cassava crop sampling Q2 | ID of plot selected for crop sampling |
|  | M4B12A3\_C3 | 4B1.2.A.3. Cassava crop sampling Q3 | Number of varieties of cassava were planted on the selected plot |
|  | M4B12A3\_C4 | 4B1.2.A.3. Cassava crop sampling Q4 | Name of the main variety planted on the selected plot |
|  | M4B12A3\_C5 | 4B1.2.A.3. Cassava crop sampling Q5 | What type of cassava is the main variety planted on selected plot?  1 - Traditional  2 - Improved  99 - Don't know |
|  | M4B12A3\_C6 | 4B1.2.A.3. Cassava crop sampling Q6 | The source of the main seeds planted on selected plot  1 - Research Institutes/ Universities  2 - Agricultural Extension services  3 - Processing factories/traders  4 - Farmer Group/Seed Club/Cooperatives  5 - Private stores/dealers  6 - Obtained from a relative/friend  7 - Other (Specify) |
|  | M4B12A3\_C6\_GHIRO | 4B1.2.A.3. Cassava crop sampling Q6 | Specify another source of the main seeds planted on selected plot |
|  | M4B12A3\_C7 | 4B1.2.A.3. Cassava crop sampling Q7 | For how many years have you been reusing the planting material for this variety?  0 - If tubers are newly purchased |
|  | M4B12A3\_C8 | 4B1.2.A.3. Cassava crop sampling Q8 | Is selected plot irrigated?  1 - Yes  2 - No |
|  | M4B12A3\_C91 | 4B1.2.A.3. Cassava crop sampling Q9 | Is this main variety High-yielding (roots)?  1 - Yes  2 - No |
|  | M4B12A3\_C92 | 4B1.2.A.3. Cassava crop sampling Q9 | Is this main variety Resistant to cassava mosaic disease (CMD)?  1 - Yes  2 - No |
|  | M4B12A3\_C93 | 4B1.2.A.3. Cassava crop sampling Q9 | Is this main variety High starch content?  1 - Yes  2 - No |
|  | M4B12A3\_C94 | 4B1.2.A.3. Cassava crop sampling Q9 | Is this main variety Early maturity?  1 - Yes  2 - No |
|  | M4B12A3\_C95 | 4B1.2.A.3. Cassava crop sampling Q9 | Is this main variety Resistant to drought?  1 - Yes  2 - No |
|  | M4B12A3\_C10D | 4B1.2.A.3. Cassava crop sampling Q10 | DATE OF CROP SAMPLING (DAY) |
|  | M4B12A3\_C10M | 4B1.2.A.3. Cassava crop sampling Q10 | DATE OF CROP SAMPLING (MONTH) |
|  | M4B12A3\_C11 | 4B1.2.A.3. Cassava crop sampling Q11 | CASSAVA SAMPLE BARCODE |
|  | M4B12A4\_C1 | 4B1.2.A.4 Cassava Plot boundaries Q1 | Is this household selected for cassava plot boundaries?  1 - Yes  2 - No |
|  | M4B12A4\_KD | 4B1.2.A.4 Cassava Plot boundaries Q1 | GPS Longitude |
|  | M4B12A4\_VD | 4B1.2.A.4 Cassava Plot boundaries Q1 | GPS Latitude |

# SPIA\_M4B12A\_GPSTR – GPS boundary of the plot selected.

| **No.** | **Variables** | **Question code**  **In SPIA module** | **Description** |
| --- | --- | --- | --- |
|  | IDTR | Plot ID | ID of the selected plot |
|  | STT | GPS Point ID | ID of the GPS point taken |
|  | KINHDO |  | Longitude |
|  | VIDO |  | Latitude |

# SPIA\_M4B12A\_TR - Cassava plot roster

| **No.** | **Variables** | **Question code**  **in** Cassava plot roster | **Description** |
| --- | --- | --- | --- |
|  | STT | Plot code | PLOT CODE |
|  | M4B12A2\_C2 | Q2 | Plot Name |
|  | M4B12A2\_C3 | Q3 | What is the cultivated area of the plot, in sq. meters? |
|  | M4B12A2\_C4 | Q4 | Was cassava in this plot planted more than 1 month?  1 - Yes  2 - No |
|  | M4B12A2\_C5 | Q5 | RANDOM SELECTION REPORTS THE PLOT ID IN THE NEXT SECTION |

# SPIA\_M4B12A1 - Cassava Use and Marketing

| **No.** | **Variables** | **Question code**  **In 4B1.2. A.1. Cassava Use and Marketing** | **Description** |
| --- | --- | --- | --- |
|  | M4B12A1\_MA | Q0 | Types of cassava products sold  1 - Fresh root  2 - Flour  3 - Dried chips |
|  | M4B12A1\_C1 | Q1 | To whom did you mainly sell this [Cassava product]?  1 - Local traders at the cassava plot  2 - Local traders at the market (i.e., weighing points)  3 - Starch/Ethanol processing factory  4 - Directly to consumers  5 - Other (Specify) |
|  | M4B12A1\_C1\_GHIRO | Q1 | Specify other buyer of cassava product |
|  | M4B12A1\_C2 | Q2 | Do you know the name of the factory that received your [Cassava product]?  Name of factory, 99 IF Don't know |
|  | M4B12A1\_C3 | Q3 | Do you know the commune in which the factory that received your [Cassava product] is located?  Commune ID, 99 IF Don't know |
|  | M4B12A1\_C4 | Q4 | For how many years have you been selling to this buyer? |
|  | M4B12A1\_C5 | Q5 | In total, how much did you pay for processing [Cassava product] (in thousand VND)? |
|  | M4B12A1\_C6 | Q6 | In total, how much did you receive from selling this [Cassava product] (in thousand VND)? |

# SPIA\_M4B12B - Potato

| **No.** | **Variables** | **Question code**  **In** 4B1.2.B. Potato | **Description** |
| --- | --- | --- | --- |
|  | M4B12B\_C1 | Q1 | What is the name of the main variety planted? |
|  | M4B12B\_C2 | Q2 | What is the source of the main variety planted?  1 - Research Institutes/ Universities  2 - Agricultural Extension services  3 - Processing factories/traders  4 - Farmer Group/Seed Club/Cooperatives  5 - Private stores/dealers  6 - Obtained from a relative/friend  7 - Other (Specify) |
|  | M4B12B\_C2\_GHIRO | Q2 | Specify another source of the main variety planted |
|  | M4B12B\_C3 | Q3 | For how many years have you been reusing the planting material for this variety? |

# SPIA\_M4B13A - Coffee Irrigation

| **No.** | **Variables** | **Question code**  **In** 4B1.3.A. Coffee Irrigation | **Description** |
| --- | --- | --- | --- |
|  | M4B13A\_C1 | Q1 | In the last dry season, which irrigation method did you use to irrigate your coffee?  1 - Root Irrigation  2 - Sprinkler Irrigation  3 - Sprinkler Irrigation at Root  4 - Drip Irrigation  5 - Other  99 - Don't know |
|  | M4B13A\_C2 | Q2 | In the last dry season, how many rounds of irrigation did you use?  99 - Don’t know |
|  | M4B13A\_C3 | Q3 | In each irrigation round, how many liters did you use per plant?  99 - Don’t know |
|  | M4B13A\_C4 | Q4 | How do you know that the water volume allocated to each plant is [Q3 answer] liters?  1 - I use a flow meter in the water pipeline  2 - I use a sink dug around coffee roots  3 - I know the time it takes to reach this amount  4 - Do not know with precision  5 - Other |

# SPIA\_M4B51A - Tilapia

| **No.** | **Variables** | **Question code**  **In 4B5.1.A. Tilapia** | **Description** |
| --- | --- | --- | --- |
|  | M4B51A\_C1 | Q1 | In what year did you start producing tilapia for the first time? |
|  | M4B51A\_C2 | Q2 | Has your household been involved in fish farming every year since?  1 - Yes  2 - No |
|  | M4B51A\_C3 | Q3 | How many years has your household NOT been involved in fish farming since then? |
|  | M4B51A\_C4 | Q4 | Did you purchase tilapia fingerlings in the last 12 months?  1 - Yes  2 - No |
|  | M4B51A\_C5 | Q5 | How many pond facilities did your household stock in the last 12 months? |
|  | M4B51A\_C12M | Q12 | What month and year did you purchase fingerlings? (MONTH) |
|  | M4B51A\_C12Y | Q12 | What month and year did you purchase fingerlings? (YEAR) |
|  | M4B51A\_C131 | Q13 | The source of the fingerlings - Your own farm?  1 - Yes  2 - No |
|  | M4B51A\_C132 | Q13 | The source of the fingerlings - Neighbor or relative?  1 - Yes  2 - No |
|  | M4B51A\_C133 | Q13 | The source of the fingerlings - Farmers’ Group?  1 - Yes  2 - No |
|  | M4B51A\_C134 | Q13 | The source of the fingerlings - Government hatchery?  1 - Yes  2 - No |
|  | M4B51A\_C135 | Q13 | The source of the fingerlings - Private hatchery  1 - Yes  2 - No |
|  | M4B51A\_C136 | Q13 | The source of the fingerlings - Local dealer (commission agent)?  1 - Yes  2 - No |
|  | M4B51A\_C137 | Q13 | The source of the fingerlings - NGO?  1 - Yes  2 - No |
|  | M4B51A\_C138 | Q13 | The source of the fingerlings - Other?  1 - Yes  2 - No |
|  | M4B51A\_C138\_GHIRO | Q13 | Specify another source of the fingerlings |
|  | M4B51A\_C14 | Q14 | Do you know the name of the hatchery that sold these fingerlings?  Name of the hatchery, 99 IF don’t know |
|  | M4B51A\_C15 | Q15 | Do you know the commune in which this hatchery is located?  Commune ID, 99 IF don’t know |
|  | M4B51A\_C16 | Q16 | Approximately how far is the distance between your household and the hatchery (in Km)  999 - Don’t know |
|  | M4B51A\_C17 | Q17 | For how many years have you purchased tilapia fingerlings from this provider? |
|  | M4B51A\_C18 | Q18 | What is the name of the tilapia strain that you purchased?  999 - Don’t know |
|  | M4B51A\_C19 | Q19 | How many fingerlings (fish) were stocked? |
|  | M4B51A\_C20 | Q20 | How many fingerlings were monosex male tilapia? |
|  | M4B51A\_C21 | Q21 | How many cm was the average length per fingerling at stocking? |
|  | M4B51A\_C22 | Q22 | What was the total price paid for these fingerlings? (thousand VND) |
|  | M4B51A\_C23A | Q23a | Have you completely harvested the fish?  1 - Yes  2 - Have been gradually harvesting  3 - Not harvested yet |
|  | M4B51A\_C23M | Q23 | When did you completely harvest the fish? (MONTH) |
|  | M4B51A\_C23Y | Q23 | When did you completely harvest the fish? (YEAR) |
|  | M4B51A\_C24 | Q24 | In what form was the tilapia sold?  1 - Fresh  2 - Dried  3 - Processed  4 - Other (Specify) |
|  | M4B51A\_C25 | Q25 | To whom did you mainly sell to?  1 - Traders  2 - Rural consumers  3 - Urban consumers  4 - Processing factory  5 - Other (Specify) |

# SPIA\_M4B51A\_CS – Tilapia Pond Facilities and Experience

| **No.** | **Variables** | **Question code**  **In** 4B5.1.A. Tilapia | **Description** |
| --- | --- | --- | --- |
|  | STT | ID | Pond ID |
|  | M4B51A\_C6 | Q6 | Pond facility type  1 - Pond  2 - Cage  3 - Channel/Field  3 - Other |
|  | M4B51A\_C7 | Q7 | What is the size of the facility? (m2) |
|  | M4B51A\_C8 | Q8 | What is the average water depth for this facility (in meters)? |
|  | M4B51A\_C9 | Q9 | What is the source of pond water?  1 - Surface (river, lake, creek, stream)  2 - Groundwater (tube well, well, …)  3 - Irrigation canal  4 - Dam  5 - Other (specify) |
|  | M4B51A\_C9\_GHIRO | Q9 | Specify other source(s) of pond water |
|  | M4B51A\_C10 | Q10 | Which species do you currently stock in the facility?  1 - No fish species currently stocked  2 - Tilapia and other species  3 - Tilapia only  4 - Other species only |
|  | M4B51A\_C11 | Q11 | Do you practice integrated agriculture/aquaculture, such as tilapia-rice, on this pond?  1 - Yes  2 - No |