# MySQL Database Table Documentation

## farmer

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| **Column Name** | **Data Type** | **Description** |
| start\_date | DATE NOT NULL | Date at which data was collected |
| farmer\_id | INT(AUTO\_INCREMENT) | Primary key, unique identifier. |
| first\_name | VARCHAR(100) | Farmer's first name. |
| last\_name | VARCHAR(100) | Farmer's last name. |
| nationality | VARCHAR(50) | Nationality of the farmer. |
| sex | CHAR(1) | Gender of the farmer. |
| dob | DATE | Date of birth. |
| id\_type | VARCHAR(50) | Type of identification document. |
| id\_number | VARCHAR(100) | Identification number. |
| id\_doc\_number | VARCHAR(50) | Additional document identifier. |
| id\_image\_url | VARCHAR(255) | Link to the ID image. |
| farmer\_image\_url | VARCHAR(255) | Link to the farmer image |
| marital\_status | ENUM | Marital status (e.g., Single, Married). |
| contact\_number | VARCHAR(20) | Primary contact number. |
| mobile\_money\_number | VARCHAR(20) | Mobile money account number. |
| is\_mobile\_money\_same | BOOLEAN | Indicates if mobile money number is same as contact number (default TRUE). |
| association | VARCHAR(100) | Affiliation or cooperative association. |
| location | VARCHAR(100) | Location or address of the farmer. |
| global\_gap\_certified | ENUM ('Yes','No but interested','No and not interested') | Certification status for Global GAP. |
| usda\_organic\_certified | ENUM ('Yes','No but interested','No and not interested') | Certification status for USDA Organic. |

## farm

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| **Column Name** | **Data Type** | **Description** |
| farm\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id`. |
| farm\_number | INT | Unique farm number. |
| acreage | DECIMAL(10,2) | Acreage of farm |
| farm\_location | VARCHAR(100) | Description of the farm's location. |
| geo\_coordinates | POINT | Central geographic coordinates of the farm. |
| geo\_boundaries | POLYGON | Polygon describing the farm boundaries. |
| longitude | DECIMAL(10,7) | Longitude coordinates of farm |
| latitude | DECIMAL(10,7) | Latitude coordinates of farm |
| road\_accessibility | ENUM ('accessible', 'difficult', 'not accessible') | Accessibility level (e.g., accessible, difficult). |

## intercropping\_data

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| **Column Name** | **Data Type** | **Description** |
| crop\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id`. |
| intercropped\_crops | TEXT | List of intercrops (e.g., Okra, Cocoa). |

## dependents

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| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| dependent\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id`. |
| age\_range | VARCHAR(20) | Age range of dependents (e.g., 0-5). |
| num\_dependents | INT | Number of dependents. |

## farm\_inputs

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| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| input\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id`. |
| input\_type | VARCHAR(50) | Type of input (e.g., Fertilizer). |
| details | VARCHAR(255) | Specific details about the input. |

## impact\_assessment

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| **Column Name** | **Data Type** | **Description** |
| assessment\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farm\_id`. |
| disability | BOOLEAN | Indicates if the farmer has a disability. |
| farming\_income\_type | ENUM ('Primary', 'Secondary') | Farming's role in income (e.g., Primary). |
| primary\_income\_source | VARCHAR(255) | Description of income source if farming is secondary. |
| post\_harvest\_loss\_percent | INT | Post-harvest losses due to spoilage, crops being uneaten, etc. |
| relies\_on\_rainfall | ENUM(Yes, No) | Indicates reliance on rainfall. |
| other\_irrigation\_methods | TEXT | Description of other irrigation methods. |

## main\_crop\_data

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| **Column Name** | **Data Type** | **Description** |
| crop\_data\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id` |
| farm\_id | INT | Foreign key referencing `farm.farm\_id`. |
| crop\_name | VARCHAR(50) | Name of the main crop. |
| variety | VARCHAR(100) | Variety of crop |
| flowering\_image\_url | VARCHAR(255) | Link to flowering stage image. |
| avg\_fruit\_set\_percentage | DECIMAL(5,2) | Average fruit set percentage of sampled trees |
| avg\_fruit\_count | INT | Average fruit count of sampled trees |
| initial\_planting\_year | YEAR | Year trees were planted on each farm |
| tree\_spacing | VARCHAR(50) | Tree spacing in feet or meters (e.g. 10x10 m, 6x6 ft) |
| tree\_flower\_percentage | INT | Aggregated percentage of total flowers on each tree |
| predicted\_harvest\_time | VARCHAR(255) | Predicted harvest timing |

## harvesting

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| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| harvesting\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farmer\_id | INT | Foreign key referencing `farmer.farmer\_id`. |
| collected\_or\_harvested | ENUM(collected, harvested) | Indicates if the crop was collected/harvested. |
| harvesting\_process | VARCHAR(100) | Description of the process (e.g., Hand-picking). |
| harvest\_responsibility | VARCHAR(100) | Party responsible for harvesting. |
| laborers\_count | INT | Number of laborers involved. |

## tree\_data

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| **Column Name** | **Data Type** | **Description** |
| tree\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farm\_id | INT | Foreign key referencing `farm.farm\_id`. |
| picture\_date | DATE | Date at which tree photo was taken. |
| tree\_number | INT | Unique identifier for the tree. |
| tree\_geopoint | POINT | Geographical point of the tree. |
| picture\_1\_url | VARCHAR(255) | URL for the first picture of the tree. |
| picture\_2\_url | VARCHAR(255) | URL for the second picture of the tree. |
| picture\_3\_url | VARCHAR(255) | URL for the third picture of the tree. |
| picture\_4\_url | VARCHAR(255) | URL for the fourth picture of the tree. |
| picture\_5\_url | VARCHAR(255) | URL for the fifth picture of the tree. |
| picture\_6\_url | VARCHAR(255) | URL for the sixth picture of the tree. |
| picture\_7\_url | VARCHAR(255) | URL for the seventh picture of the tree. |
| picture\_8\_url | VARCHAR(255) | URL for the eighth picture of the tree. |
| fruit\_count | INT | Number of fruits counted by object detection model |

## Yield and Revenue

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| **Column Name** | **Data Type** | **Description** |
| yield\_id | INT (AUTO\_INCREMENT) | Primary key, unique identifier. |
| farm\_id | INT | Foreign key referencing `farm.farm\_id`. |
| yield\_date | DATE | Date yield was recorded |
| season | ENUM(Major, Minor) | Season for which yield was recorded |
| initial\_yield\_mt | DECIMAL(10,2) | Initial yield before losses were incurred (MT) |
| total\_yield\_mt | DECIMAL(10,2) | Total yield of farm after losses (MT) |
| loss\_percentage | DECIMAL(10,2) | Percentage loss recorded before total yield |
| tonnage\_sold | DECIMAL(10,2) | Tonnage of crop sold out of total yield (MT) |
| percentage\_sold | DECIMAL(10,2) | Percentage of tonnage sold out of total yield |
| total\_production\_cost\_ghs | DECIMAL(10,2) | Total production cost in GHS for total acreage |
| price\_per\_kilo\_ghs | INT | Price per kilogram of crop |
| revenue\_from\_sales\_ghs | DECIMAL(10,2) | Revenue from tonnage sold (GHS) |
| income\_lost\_ghs | DECIMAL(10,2) | Income lost from losses |