TABLE: **Location**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| locationID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| ProvinceORTerritory | CHAR | 25 |  |  |  |  | ‘Ontario’ | Province or territory where farms can be |
| DistrictORCity | CHAR | 25 |  |  |  |  | ‘Toronto’ | District or city where farms can be |

TABLE: **growingZone**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| growingZoneID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| locationID | NUMBER | 38 |  | FK | Y | 1-(1039-1) | 1234 |  |
| chillHours | NUMBER | 4,2 |  |  |  | 1.00-99.99 | 12.50 | Required number of chill hours at a growing zone |
| waterAvailability | CHAR | 10 |  |  |  |  | ‘low’ | Availability is indicated as ‘low’, ‘moderate’, or ‘high’. |
| soilQuality | CHAR | 10 |  |  |  |  | ‘low’ | Quality is indicated as ‘low’, ‘mid’, or ‘high’ |

TABLE: **Farmer**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| farmerID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| lastName | VARCHAR2 | 50 |  |  | Y |  | ‘Bob’ |  |
| firstName | VARCHAR2 | 50 |  |  |  |  | ‘Brown’ |  |
| phoneNumber | NUMBER | 10 |  |  |  | 1000000000-9999999999 | 9055551212 |  |

TABLE: **Species**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| speciesID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| speciesName | VARCHAR2 | 25 |  |  | Y |  | ‘Sorghum bicolor’ |  |
| requiredChillHours | NUMBER | 4,2 |  |  |  | 1.00-99.99 | 12.50 | Required number of chill hours for a species of crop |
| requiredWaterAvailability | CHAR | 10 |  |  |  |  | ‘low’ | Availability for the crop is indicated as ‘low’, ‘moderate’, or ‘high’. |
| requiredSoilQuality | CHAR | 10 |  |  |  |  | ‘low’ | Quality for the crop is indicated as ‘low’, ‘mid’, or ‘high’ |

TABLE: **Farm**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| farmID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| growingZoneID | NUMBER | 38 |  | FK | Y | 1-(1039-1) | 1234 |  |
| farmerID | NUMBER | 38 |  | FK | Y | 1-(1039-1) | 1234 |  |
| ProductiveSurface | NUMBER | 7 |  |  |  | 1-9999999 | 1234 | The productive surface of the farm in m2 where crops can be grown |

TABLE: **Crop**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| cropID | NUMBER | 38 |  | PK | Y | 1-(1039-1) | 1234 |  |
| speciesID | NUMBER | 38 |  | FK | Y | 1-(1039-1) | 1234 |  |
| cropName | VARCHAR2 | 25 |  |  | Y |  | ‘Millet’ |  |

TABLE: **Farm\_Crop\_Bridge**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **Data Type** | **Size, Precision** | **Default** | **PK/FK** | **Required** | **Range** | **Sample Data** | **Notes** |
| farmID | NUMBER | 38 |  | PK, FK | Y | 1-(1039-1) | 1234 |  |
| cropID | NUMBER | 38 |  | PK, FK | Y | 1-(1039-1) | 1234 |  |
| targetYield | NUMBER | 5,2 |  |  |  | 1-999.99 | 25.50 | The target yield for a particular crop at a particular farm in tonnes |
| costPerSurf | NUMBER | 7,2 |  |  |  | 1-99999.99 | 10500.25 | The cost in $ of sowing a particular crop at a particular farm in a ‘surf’(session) |
| revenuePerSurf | NUMBER | 7,2 |  |  |  | 1-99999.99 | 10500.25 | The revenue in $ from harvesting a particular crop at a particular farm in a ‘surf’(session) |
| yieldPerSurf | NUMBER | 5,2 |  |  |  | 1-999.99 | 25.50 | The yield in tonnes for a particular crop at a particular farm in a ‘surf’(session) |