# VEGETABLE NMP CHECKLIST

# MINIMUM REQUIREMENTS FOR NUTRIENT MANAGEMENT PLAN (NMP) REPORTS

**BACKGROUND:** Minimum requirements for NMP reports provide assurance to the client (producer) and the public that all expectations regarding nutrient management as per the Agricultural Environmental Management Code of Practice are being met. This checklist is supplemental to the training required to develop NMPs and serves only as a guide in the preparation and review of plans. The requirements should not restrict the ability to customize the NMP for the client's needs, nor should the requirements restrict the ability to add information beyond the core components of an NMP. The NMP report should allow the client to easily implement their NMP and document the information which has led to the NMP recommendations.

### **1. COVER PAGE**

The cover page identifies the farm name, owner, contact information, and the date that the plan was completed. Individuals preparing a nutrient management plan should include their name and contact information on this page.

#### 2. EMERGENCY PROCEDURES DOCUMENT

The emergency procedures in the event of an emergency spill of liquid or solid nutrient sources. It also includes important phone numbers, such as Emergency Management British Columbia (EMBC), and is intended to be filled out with other relevant phone number, such as equipment operators, electricians, the fire department, and neighbours.

#### **3. APPLICATION SCHEDULE SUMMARY**

The parts of this summary include:

 Nutrient source – This would mainly be synthetic fertilizers, composts, and manures. However, it should include other materials used to supply nitrogen and phosphorus for crops, as per the definition of in the Agricultural Environmental Management Code of Practice. The state of the nutrient (solid, liquid) should be included.



- Application timing The month or season of application should be included in the application schedule summary. Timing that references crop production stages (e.g., before bloom, during harvest, after harvest) may be referenced in addition to a season or month.
- Application rate The amount of nutrients applied per unit area (e.g., lb/ac, L/ha), ensuring the units are practical and relevant.
- Application method The specific way in which nutrients are delivered to the soil or plants, such as through broadcasting, side-dressing, or fertigation.

## **3. FARM DESCRIPTION**

The farm description pages primarily describe the location, structures, crop production, and land features that are located on the farm and are involved in nutrient generation, application, transportation, and storage. This includes:

- Address of the farm, ownership status, and number of employees
- A statement or map that states whether or not the farm is in a vulnerable aquifer recharge area, phosphorus affected area, and/or a high-precipitation area
- A farmstead and crop production area description that describes:
  - The total farm area
  - The total area that is managed for crop production
  - The total area that is able to be spread with fertilizer, manure, or other nutrient sources. This would be the total area that is managed for crop production minus areas that are setbacks from watercourses, buffer strips, etc. If this does not significantly alter the area for crop production, instead include a statement to note this detail
- Description of the nutrient handling and storage systems, which includes:
  - Dimensions of any storage structures
  - Description of loading sites
  - Period and locations of any temporary manure storage sites
- A crop production summary that briefly describes current crop production practices used on the farm (e.g., planting date/year, plant/row spacing, average yield, harvest date, sawdust mulch, cover crop, heat/frost protection)
- A summary of irrigation practices. Identify fields that receive irrigation, including the method of application
- A nutrient application summary that describes the application methods and equipment used on the farm (e.g., granular, fertigation, compost, manure)
- Farm maps that primarily show the various farm features, setbacks, and boundaries located on the farm and are involved in nutrient generation, application, and storage (maps, or map elements may be combined as long as each item is contained somewhere in the map section of an NMP)
  - Property map
    - An overview of the entire property with a scale that allows for the identification of any structures, and water courses
  - Building map



- A current view of the farm that identifies where any fertilizer or agricultural-byproduct storage is located (this should include permanent storage structures, temporary manure storage, and outdoor agricultural composting piles)
- Corresponding setbacks to drinking water sources, water courses, and property boundaries should be included
- o Field map
  - Identifies and outlines each field
  - Describes each field with a field ID (such as a name or number)
  - The size of each field is noted, preferably in a table
  - Waterbodies and locations where setbacks are required for fields that receive nutrient applications
- Soil and surface feature map
  - Shows the soils and general slope direction of each field
  - Includes a table that has the soil name, texture, drainage class
- Application notes and setback for any nutrient setbacks (minimum required setbacks, and any recommended additional setbacks) and application risks

### **4. NUTRIENT INVENTORY**

This part of the plan will report the origin and destination of all nutrients that are generated on or imported to the farm. As part of the nutrient inventory, the following items should be included:

- Annual nutrient generation: The amount of fertilizer, compost, and other soil amendments that are generated on-farm annually
- Annual nutrient imports and exports: The total annual amount of fertilizers, compost, and other nutrient sources that will be imported and/or exported (including material type, product name, and formulation)
- Annual nutrient use: The total amount of nutrients that will be land applied

### **5. FIELD SUMMARIES**

Field summaries describe the nutrient balances of each field receiving nutrients on the farm. The BC Nutrient Management Calculator can assist in determining nutrient balances for each field, but determining application timing and application method is the responsibility of the planner. Items included in each field summary are:

- For each field, the crop(s) and target yield
- Nutrient sources, their recommended rate and timing of application
- For each field, the planned agronomic balances of N, P<sub>2</sub>O<sub>5</sub>, and K<sub>2</sub>O. The agronomic N balances should have a target of zero (within a reasonable margin)
- For each field, the planned crop removal balances of N,  $P_2O_5$  and  $K_2O$
- Notes which outline adjustments to book-values used in the development of recommendations

### 6. PLAN RECOMMENDATIONS

The purpose of this section is to guide the producer or consultant on actions that will assist in



performing further testing and maintaining records. Plan recommendations should include:

- Tentative dates for follow-up soil nutrient testing or completing a follow-up Nutrient Management Plan
- Additional strategies to meet agronomic objectives, including nutrient recommendations for secondary nutrients and micronutrients
- Guidance to meet regulatory requirements, including record keeping

## 7. DISCLAIMER

The plan writer notes that they are not responsible for deviations from the plan, the best available information was used, and the responsibility for meeting regulatory requirements is the producers.

### 8. APPENDICES

- All laboratory test reports to support the values used in nutrient balance calculations should be included (e.g., soil analysis, compost analysis, manure analysis, plant tissue analysis)
- External resources, such as soil information or production guidance should be included

