

# **Island Grown Farm Nutrient Management Plan**

The nutrient management plan for Island Grown Farm relies on diversified strategies to ensure that nutrient excesses are minimized, leaching and runoff of nutrients is prevented, and on-site water resources and adjacent waterbodies are buffered from nutrient contamination. These strategies are:

## **1. Composting operation and storage management protocols**

- Compost generated on site is sited atop a 1-foot-deep layer of woodchips as a barrier to prevent leaching of compost nutrients into groundwater
- Compost piles are kept covered. Active (i.e. in-process compost) piles are covered with semi-permeable tarps, to allow active compost to maintain adequate hydration and aeration to facilitate appropriate decomposition rates while preventing excessive moisture, pile surface runoff and/or leaching; Finished compost piles are covered with impermeable tarps until compost is distributed to farm fields.

## **2. Soil amendment nutrient analysis and application budgeting**

- Field application rates of compost and additional soil amendments are to be calculated based on crop nutrient requirements and compost nutrient analysis, so as to ensure that all nutrient inputs are required and consumed by crops, preventing excesses that may contaminate water resources.

## **3. Landscape-based interventions for nutrient capture**

- Landscape features serve to a) direct and sink stormwater runoff up-gradient from concentrated nutrient areas, to prevent soluble nutrient accumulation and leachate and b) slow and filter water from areas where compost is stored and applied, to bind potential excess in vegetation and prevent runoff / leaching and protect groundwater and adjacent water bodies and wetlands.
- Landscape features include:
  - Vegetated swales for catching runoff before it enters composting area; Prevent over-saturation and leachate generation. All densely vegetated with native, deep rooted plants and shrubs for improved filtration capacity and nutrient uptake.
  - Down-grade vegetated berm between compost storage and adjacent southern waterbodies.
  - Restored perennial vegetated filtration buffers (native meadows) serve to filter nutrient runoff from field applications, protect adjacent water resources, provide native wildlife habitat and forage.
  - Hedgerows and field borders - alleys of native herbaceous and woody vegetated filter strips between cultivation blocks, bind excess nutrients, prevent leaching, attract and support native wildlife.

#### **4. Water testing protocol**

Testing of groundwater samples from two (2) on-site test wells is conducted periodically to monitor groundwater nutrient levels. The differences in results between Test Well A (Upgrade) and Test Well B (Downgrade) will indicate if nutrient excesses are being generated on-site, where Test Well A is considered a baseline (water nutrient levels that are otherwise naturally occurring or generated by off-site inputs), as it's placement is upgrade of all on-site composting, nutrient application areas, and other farm activities, and Test Well B is considered a sample of groundwater nutrient levels as impacted by on-site activities. Water test results are analyzed to ensure acceptable groundwater nutrient levels, monitor for any significant changes, and inform future management modifications should they be deemed necessary.