

Nutrient and Irrigation Management Plan

300 stakehill road baldivis 6171.W.A.

1. Purpose.

This nutrient and irrigation management plan has been prepared to document the management practices that will be implemented to ensure the sustainable use of water, soil, and nutrient resources on the property. The purpose of this plan is to demonstrate that irrigation, soil improvement, nutrient application, and general land management will be undertaken in an environmentally responsible manner while supporting the operation of a small-scale hobby farm. The plan outlines the principles and management practices to be adopted to promote healthy soil, efficient water use, and sustainable crop production while minimizing the potential for nutrient loss, soil erosion, runoff, and impacts on the surrounding environment. Where soil amendments or fertilizers are required, they will be applied only as necessary, in accordance with soil conditions and the manufacturer's instructions. This plan also establishes a framework for ongoing monitoring and review of irrigation and nutrient management practices to ensure that the property continues to be managed responsibly and that environmental impacts are minimized.

2. Scope.

2.1 This nutrient and irrigation management plan applies to all activities undertaken on the hobby farm. The plan provides a framework for sustainable management of irrigation, soil fertility, nutrient application, vegetable production, and environmental protection across the property. The plan applies to all current and future vegetable growing areas and establishes the management practices that will be followed to maintain healthy soils, conserve water, and minimize environmental impacts associated with the operation of the hobby farm.

2.2, objectives.

- A. Promote environmentally responsible management of the hobby farm.
- b. Maximize water use efficiency through a drip irrigation system.
- c. Maintain and improve soil fertility by building soil organic matter and encouraging healthy biological activity.
- d. Minimize nutrient loss, runoff, soil erosion, and unnecessary water use.
- e. Protect surrounding land and groundwater through responsible farming practices.
- f. Give preference to organic soil improvement methods wherever practical.
- g. Minimize the use of synthetic fertilizers and pesticides.
- h. Support long-term sustainable vegetable production through good soil and water management.

2.3, irrigation management.

2.3.1. Water source- The vegetable area will be irrigated from on-site water storage tanks.

2.3.2, irrigation system - A drip irrigation system will deliver water directly to the root zone of crops. Sprinkler irrigation will not be used.

2.3.3, irrigation scheduling- Irrigation timing will be adjusted according to seasonal conditions, crop growth stages, and soil moisture requirements. Vegetables will be mostly watered in early mornings to minimise the evaporation or waste of the water.

The system will be inspected regularly to ensure efficient operation and to minimize water losses.

2.4, soil and nutrient management.

2.4.1 Soil management objective-

Maintain healthy, fertile, and biologically active soil using sustainable practices.

2.4.2-Organic soil improvement- Soil fertility will be maintained primarily through the use of compost, well-composted animal manure, and other natural soil conditioners.

2.4.3- Crop residue management- After each growing season, suitable crop residues that are free from significant pests or disease may be Mulched and incorporated back into the soil using a rotary hoe to recycle organic matter and contribute to natural nutrient cycling.

2.4.4- Fertiliser management- Where additional nutrients are required, suitable fertilizers intended for home and hobby garden use may be applied, but only when necessary and according to soil test results and the manufacturer's instructions.

2.4.5-Pest and disease management- Pest and disease management will follow Integrated Pest Management principles, emphasizing prevention through good soil management, regular crop inspections, removal of diseased plant material, and good farm hygiene. Natural pest control methods such as neem oil or other suitable low impact products will be preferred where appropriate. If further treatment is necessary, suitable garden-use pest control products may be used only when required and in accordance with the manufacturer's instructions.

2.4.6- Environmental protection- All activities will be undertaken to minimize impacts on the surrounding environment.

2.4.7- Drip irrigation will be used to reduce water consumption and runoff. Organic matter will be incorporated into the soil to improve soil structure. Fertilizers and pest management products will be managed responsibly to reduce the risk of contamination of surrounding land and groundwater. Monitoring and review. The management practices outlined in this plan will be reviewed periodically and updated where necessary to ensure ongoing sustainable operation of the hobby farm and protection of the environment.

3. Property Description-

3.1, Property Overview- The property is located at 300 stakehill road Baldivis, Western Australia, and is currently used as a semi rural property. This plan supports the proposed small-scale hobby vegetable production use.

3.2, existing land use- The current use of the property includes horse grazing, horse stabling,

and associated rural activities.

3.3, proposed land use- The proposed land use includes the establishment of a small-scale hobby vegetable growing area on part of the property.

3.4, purpose of proposed change- The proposed change will diversify the existing use of the property by incorporating a small hobby vegetable growing area while maintaining the property's semi rural function.

4.site characteristics

4.1, site overview- The area proposed for hobby vegetable production has been selected to support sustainable land management while maintaining the rural character of the property.

4.2, landform- The growing area is generally suitable for small-scale cultivation, allowing efficient irrigation management and soil improvement with minimal erosion risk.

4.3, soil characteristics- The soil is predominantly free draining and suitable for vegetable production when managed appropriately. Soil health will be improved by incorporating compost, well-composted animal manure, and suitable organic matter. Where practical, healthy crop residues may be mulched and incorporated back into the soil using a rotary hoe.

4.4, water resources-The property is supplied with irrigation water from onsite storage tanks. Water resources will be managed efficiently to support crop production while minimizing unnecessary water use.

4.5 environmental considerations-

The proposed growing area will be managed to minimize impacts on surrounding land, including efficient water use and responsible soil management to reduce the risk of runoff and soil degradation.

5. Irrigation management-

5.1 The irrigation system has been designed to efficiently use water to support the sustainable operation of the hobby farm.

5.2 water source- The property is supplied by groundwater from the onsite bore, which is pumped mainly to replenish the household water storage tank. During the same pumping operation, the irrigation storage tanks will be also filled, so the bore supports both domestic and irrigation needs efficiently.

5.3 irrigation water storage. Water will be collected from the bore is stored in dedicated on-site tanks before being used for irrigation, allowing irrigation to be carried out when needed without frequent bore operation.

5.4, drip irrigation system- All vegetable crops will be irrigated using a drip irrigation system delivering water directly to the root zone to reduce evaporation and runoff. No sprinkler irrigation will be used.

5.5, water use efficiency- All reasonable efforts will be made to use collected water efficiently through drip irrigation and sound soil moisture management.

5.6 irrigation scheduling- Irrigation will be undertaken when required, considering seasonal conditions, crop growth stages and soil moisture levels to avoid unnecessary watering.

5.7 irrigation scheduling- Irrigation will be undertaken according to seasonal conditions, crop growth stages, and soil moisture needs. Where practical, irrigation will be carried out during early morning to minimize evaporation, improve water use efficiency, and allow moisture to penetrate the root zone effectively. Irrigation frequency and duration will be adjusted to suit the specific needs of each crop, prevailing weather conditions, and observed soil moisture levels. Over-watering will be avoided to minimize runoff and nutrient loss.

5.8 system inspection and maintenance- The irrigation system will be regularly inspected and maintained to ensure efficient operation and long-term reliability. This includes checking the groundwater supply connection, storage tanks, pump, filters, valves, pipelines, fittings, and drip lines for leaks, blockages, wear, or faults. Any defects will be repaired or replaced promptly to minimize water loss. A suitably sized, energy-efficient pump will be installed adjacent to the water storage tanks to ensure consistent water pressure throughout the drip system. Pipe sizes and lengths will be designed appropriately to maintain even water distribution across the growing area. All reasonable efforts will be made to minimize water loss through regular maintenance, timely repairs, and efficient operation. Routine monitoring will support efficient water use, protect soil structure, and support the long-term sustainable management of the hobby farm.

6 Soil and nutrient program-

6.1, the soil and nutrient program will be guided by responsible land stewardship and practical management methods.

6.2, nutrient planning will match crop needs and growing conditions to avoid excess application.

6.3, application practices will use even distribution methods and timing that aligns with active plant growth.

6.4, responsible product selection will be followed, using products appropriate for home and hobby garden use.

6.5, environmental protection measures will minimise nutrient loss and protect surrounding land and groundwater.

6.6, performance assessment will observe crop performance each season to inform nutrient management.

6.7, record keeping where practical will note significant nutrient applications to guide future decisions.

6.8, continuous improvement means this plan will be reviewed periodically and updated as farming practices evolve to keep nutrient management effective and sustainable.

7, Pest and Disease Management

7.1, management approach aims to maintain healthy crops with minimal reliance on synthetic pesticides.

7.2, prevention and monitoring through regular inspection of vegetable crops.

7.3, preferred management practices will favor natural low impact options like neem oil.

7.4, responsible use of plant protection products only if low impact methods are insufficient and in line with instructions.

7.5, hygiene and biosecurity to keep equipment and growing areas clean, removing diseased plant material.

7.6, review and continuous improvement to adjust practices based on seasonal observations. And that keeps the focus on monitoring, prevention, and responsible intervention.

8. Site managing and reporting -

I will maintain appropriate records to demonstrate that irrigation and nutrient management practices are implemented in accordance with the Nutrient and Irrigation Management Plan. This includes recording irrigation dates, duration, and estimated water use, fertilizer application dates, product types, rates, and treated areas, rainfall observations, maintenance or repairs to the irrigation system, results of any soil or water testing undertaken, and any incidents or changes in management practices. Records will be kept in either an electronic spreadsheet or a hard copy record book, stored at the property, and updated following each relevant activity. The management plan will be reviewed annually or whenever there are significant changes to land use, irrigation practices, or nutrient application methods. If monitoring identifies issues that may affect water quality or environmental performance, appropriate corrective actions will be implemented and documented.

9. where requirement for the 1.2 acres will be around 6000–7000 kiloliter. It may be significant low because the drip system will be in effect. Ground water will be collected and used for the irrigation.

10. Contingency plan-

The objective is to protect the environment and manage any unexpected events that affect the hobby farm. Potential risks include heavy rainfall, severe weather, irrigation system leaks, and accidental over-application of organic products. Management actions include avoiding irrigation and soil treatments before or during heavy rain, inspecting the irrigation system regularly and fixing leaks quickly, and keeping the use of garden treatment products to a minimum. Since the site is a small area with sandy soil, the risk of standing water is low. Still, any issues that do arise will be addressed after significant rainfall. This contingency plan will be reviewed annually or after any significant event.

11. Declaration and commitment-

I am committed to implementing this Nutrient and Irrigation Management Plan for the approved hobby farm area, using water efficiently, and minimising the use of manufactured garden products, while keeping records and making them available to the local council if requested. Irrigation will be supplied from an on-site water storage tank and distributed through a drip irrigation system designed to deliver water directly to the root zone. The irrigation system will be regularly inspected and maintained to avoid water loss through leaks or unnecessary use. Where practical, preference will be given to organic composts, mulches, and soil improvement practices. If additional garden treatment products are required, they will only be used when

necessary and in accordance with manufacturer's directions, applying the minimum effective rate. I declare that the information contained in this plan is true and accurate to the best of my knowledge. I am committed to implementing the management measures described in this plan.

Prepared by, Property owner,

Gurtej Singh

17-07-2026