



OceanGrown Canada Ltd. 29 Niagara Street, Toronto Ontario M5V 1C2
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<http://www.oceangrowncanada.com>

Plant, Farm & Hydroponics Liquid Concentrate General Directions for Suggested Use: **Non-Toxic OceanSolution™ Mineralizer**

Our suggested dilution ratio is 100 parts clean water source (eg. rain, R.O., de-ionized, filtered or distilled etc) to 1 part OceanSolution™ for farm and hydroponics operations. OceanSolution™ can be used in most primary feeding regimes as well as number of supplemental applications. We strongly recommend the use of open pollination seeds for optimal results. Genetically engineered and hybrid seeds are often bred with increased demand for certain macro-elements (such as NPK) which will need to be added to meet the plant's demand. (ask about our other products).

Water and soil analysis would also be useful in determining dilution ratios and the frequency of application. Ultimately, as growers become more familiar with the needs of their crops, they are able to fine tune dilution ratios and application techniques. Since the Mineralizer and PH are balanced, the concern for burning plants is much less than traditional fertilizers. If you can soak your seeds before planting, do so, for 8-12 hours in the diluted solution mixture before planting. Plants may take in up to 50% of their nutrition from seed to the first few inches of growth. This is why it is so important to get the Mineralizer into the seed, as it has access right from the start.

HYDROPONICS (100:1) - suitable for all types of feeding operations and mediums.

- Most crops require feeding once a day, taking into account temperature and moisture
- Recycled solution can be used for up to one month (check dehydration and ppm)
- If necessary, small amounts of diluted concentrate can be added to the Mineralizer periodically.
- Extra NPK is probably necessary for most hybrid plants. Usually a 50-50 mix of O.S. and NPK.

SOIL (100:1) – important considerations are plant needs, drainage and nutrient depletion

- Sandy or well-drained soils may be fed more frequently: once a day to twice a week
- Loam or rich soils that retain significant moisture: twice a week to twice a month
- Clay to dense, clogged soils that trap water and nutrients: once or twice a year or more, pay attention to results.

HERBS (100:1) – as some herbs like it wet (some like it dry) arrange your beds accordingly

- Feeding can vary from 1-3 times a week to 1-2 times a day depending on the plant needs, climate conditions and soil/medium drainage.

PASTURES (100:1) – suggested application of 1 gallon of concentrate per acre, diluted: see general directions with respect to soil types. You can use ½ to 1 gallon or more per acre per application of concentrate. Sandy soils spray more diluted and more frequent, or you can mix with our humic acid to hold it in sandy soil.

As an animal Supplement (Not diluted)

Also you can use OceanSolution as a supplement spraying directly on their food or in their water, 1-2 oz of OceanSolution per animal per day for large animals like cattle.

ORCHARDS (100:1) – selective feeding of under-performing fruit trees: once or twice a month on well-drained soils; once or twice a year or more on clay/dense soils. 100 gallons of dilution per acre or for individual trees see next line. We also has success spraying small amounts of the concentrate directly on

the bark of trees, pay attention to results, do not saturate.

- Fruit trees growing in sandy soils can be fed more frequently. 2-1/2 – 5 gallons of dilution per tree for healthy trees.

- Sick trees without any leaves apply up to 10 gallons of dilute per tree, feeding the root area of the tree. Pay attention to results. Foliar feeding at 10 gallons of dilute per acre when fruit is forming is recommended. Apply 1-3 times per year.

WHEATGRASS/SPROUTS (100:1) – best grown without soil in temperatures around 69-75 degrees.

- Feeding will vary: 1-3 times per day making sure to keep moist, not soaked.

FLOWERS (100-200:1) – Follow same directions for soil types. Foliar spraying should be avoided with delicate flowers like orchids (use 200:1 for orchids). Feed the roots.

House Plants (125:1) – house plants water as usual and water with OceanSolution™ mixture every 2nd to 4th watering.

Below you will find our chart with recommended solute concentrations for specific crops. To use the chart you will need a TDS meter.

TDS refers to Total Dissolved Solids – i.e. parts per million of dissolved solids in the water. Your water and/or soil source may already be high in dissolved solids. This will influence the dilution ratio that you should be using. If your water is relatively pure (recommended) then you will be getting all the elements in the proportion of natural seawater. First measure your water source. Second measure your soil (add ½ cup soil in a jar and mix with ½ cup distilled or RO water). Stir take reading with TDS meter. Add up your total dissolved solids from your water source and soil. So if you water is 200 PPM and your soil is 200 PPM, that would be a total of 400 PPM. You then subtract this from your OceanSolution™ mixture, say 2000 PPM for wheat grass; you would then mix your OceanSolution™ to 1600 PPM to get your Total Dissolved Solids reading of 2000 PPM. You never want to create a mixture of more than what is on the chart in TOTAL from your water, soil and OceanSolution™ mixture! The chart below is only a rough guide.

Using the PPM chart and your TDS meter, prepare a solution in the lower end of the published range.

Feed your plants according to the directions given above for your soil type -- more frequently for sandy soils, and very infrequently for heavy clays.

Below is a picture of a TDS meter that you can purchase from us to take the guesswork out of mixing your solution.



| <u>Vegetables</u> | <u>Category</u> | <u>PPM</u> |
|-------------------|-----------------|------------|
| Artichoke | L | 560-1260 |
| Asparagus | L | 980-1260 |
| Bean (Common) | M | 1400-2800 |
| Beetroot | H | 1260-3500 |
| Broad Bean | M | 1260-1540 |
| Broccoli | H | 1960-2450 |
| Brussels Sprout | H | 1750-2100 |
| Cabbage | H | 1750-2100 |
| Capsicum | M | 1260-1540 |
| Carrots | M | 1120-1400 |
| Cauliflower | M | 1050-1400 |
| Celery | M | 1260-1680 |
| Cucumber | M | 1190-1750 |
| Eggplant | H | 1750-2450 |
| Endive | M | 1400-1680 |
| Fodder | M | 1260-1400 |
| Garlic | L | 980-1260 |
| Leek | L | 980-1260 |
| Lettuce | L | 560-840 |
| Marrow | M | 1260-1680 |
| Okra | H | 1400-1680 |
| Onions | L | 980-1260 |
| Pak-choi | M | 1050-1400 |
| Parsnip | L | 980-1260 |
| Pea | L | 980-1260 |
| Pepino | H | 1400-3500 |
| Potatoes | H | 1400-1750 |
| Pumpkin | M | 1260-1680 |
| Radish | M | 840-1540 |
| Spinach | M | 1260-1610 |
| Silverbeet | M | 1260-1610 |
| SweetCorn | M | 840-1680 |
| SweetPotato | H | 1400-1750 |
| Taro | H | 1750-2100 |
| Tomatoes | H | 1400-3500 |
| Turnip | M | 1260-1680 |
| Zucchini | M | 1260-1680 |

| <u>Fruit</u> | <u>Category</u> | <u>PPM</u> |
|---------------|-----------------|------------|
| Banana | M | 1260-1540 |
| Black Currant | L | 980-1260 |
| Blueberry | M | 1260-1400 |
| Melon | H | 1400-1750 |
| Passionfruit | M | 840-1680 |
| Paw-Paw | H | 1400-1680 |
| Pineapple | H | 1400-1680 |
| Red Currant | M | 980-1260 |
| Rhubarb | M | 840-1400 |
| Strawberries | M | 1260-1540 |
| Watermelon | M | 1260-1680 |

| <u>HERBS</u> | <u>Category</u> | <u>PPM</u> |
|---------------|-----------------|------------|
| Basil | L | 700-1120 |
| Chicory | H | 1400-1600 |
| Chives | M | 1260-1540 |
| Fennel | L | 700-980 |
| Lavender | L | 700-980 |
| Lemon Balm | L | 700-1120 |
| Marjoram | M | 1120-1400 |
| Mint | H | 1400-1680 |
| Mustard Cress | M | 840-1680 |
| Parsley | L | 560-1260 |
| Rosemary | L | 700-1120 |
| Sage | L | 700-1120 |
| Thyme | L | 560-1120 |
| Watercress | L | 280-1260 |

| <u>Flowers</u> | <u>Category</u> | <u>PPM</u> |
|-----------------|-----------------|------------|
| African Violets | L | 840-1050 |
| Anthurium | M | 1120-1400 |
| Antirrhinum | M | 1120-1400 |
| Aphelandra | M | 1260-1680 |
| Aster | M | 1260-1680 |
| Begonia | L | 980-1260 |
| Bromeliads | L | 560-840 |
| Caladium | M | 1120-1400 |
| Canna | M | 1260-1680 |
| Carnation | H | 1260-2450 |
| Chrysanthemum | H | 1400-1750 |
| Cymbidiums | L | 420-560 |
| Dahlia | M | 1050-1400 |
| Dieffenbachia | H | 1400-1680 |
| Dracaena | H | 1400-1680 |
| Ferns | M | 1120-1400 |
| Ficus | M | 1120-1680 |
| Freesia | M | 700-1400 |
| Impatiens | M | 1260-1400 |
| Gerbera | H | 1400-1750 |
| Gladiolus | H | 1400-1680 |
| Monstera | H | 1400-1680 |
| Palms | M | 1120-1400 |
| Roses | M | 1050-1750 |
| Stock | M | 1120-1400 |

| | | |
|-------------|---|-------|
| Wheat Grass | H | 2000+ |
|-------------|---|-------|

| | | |
|-------|----------|--------|
| L=LOW | M=MEDIUM | H=HIGH |
|-------|----------|--------|

Why Foliar Feed?

Foliar feeding, with OceanSolution can be an effective method of feeding a plant since 95% of a nutrient solution can be found in the smallest root within 60 minutes. Foliar spraying should be done in the evening or early morning when the plant's stomata (pores) are open. Only spray the bottom of the leaf. The top of the leaf has no pores.

Only feed the mouth of the plant, the roots and the bottom of the leaves.



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TDS meter.

Never use TDS meter in undiluted OceanSolution™ or sea-water.

You will short unit out and will void warranty.

Never submerge the whole unit in water, only the bottom 1 inch or so needs to touch the water.

Turn on, hold in water until you see a steady number.

If x 10 is flashing multiply by 10.

Add OceanSolution™, stir well measure again.

Keep adding OceanSolution™ or fresh water until desired reading.

The meter is for measuring up to 9,999 parts per million.

You will never need to mix a solution of more than 3,000 parts per million for most plants.

Most will be happy with 2,000 parts per million or less.

Use the chart as a guide only, you can fine tune by watching for results.

Happy growing.