

| Acid Types | Phosphoric | | Sulfuric | | | | Nitric | |
|-------------------------------|--|--------|----------|--------|--------|-------|--------|--------|
| | Amounts <i>For a 1:200 Injector</i> | 75.0% | 85.0% | 35.0% | 50.0% | 66.0% | 96.0% | 61.4% |
| fl. oz. per gallon (conc.) | 5.83 | 4.79 | 8.03 | 5.09 | 3.44 | 2.01 | 5.39 | 4.84 |
| ml per gallon (conc.) | 172.49 | 141.54 | 237.35 | 150.65 | 101.76 | 59.49 | 159.45 | 142.99 |

| Nutrients Added by Each Type of Acid | | | | | | | | |
|--------------------------------------|------------|------------|--------|--------|--------|--------|----------|----------|
| Nutrients Added: | Phosphorus | Phosphorus | Sulfur | Sulfur | Sulfur | Sulfur | Nitrogen | Nitrogen |
| Amount Added (ppm): | 85.34 | 85.34 | 45.39 | 45.39 | 45.39 | 45.39 | 39.39 | 39.39 |

Use the information above for modifying your fertility program.
Note: Optimal phosphorus levels are less than 25 ppm for the most crops, based on a constant liquid fertilization.

Notes on the use of acid to modify irrigation water pH and alkalinity

- ALWAYS ADD ACID TO WATER, NOT WATER TO ACID!
- Selection of which acid type to use should be based on the nutrient program being used, type of equipment available and degree of safety desired. All acids pose a health threat if they come in contact with skin. Relatively speaking, phosphoric is the safest, followed by sulfuric and finally nitric acid.
- Use caution when working with acids. Always wear proper face, hand and body protection.
- The acid must be injected with a separate injector or a twin headed injector. It should not be added to the fertilizer concentrate. The acids in the concentrated form can corrode metal pipes.
- Retest your irrigation water (at hose end) after starting acid injection and 3-4 weeks later to confirm the adjusted pH and alkalinity values. Sometimes higher pH's will result in the first week of acid additions because the acids tend to dissolve the built-up hard water deposits in pipes.

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