

**Product Analysis:**

Several research and demonstration trials have been conducted in Alaska using Alaska Fish Bone Fertilizer as a fertilizer source. This material was provided by Mr. Bob Greig, **Alaska Sea-Ag** of Palmer. Mr. Greig is a local potato producer and cooperater in the aforementioned studies. Since 1991, bonemeal samples have been analyzed at the University of Alaska Fairbanks Agriculture and Forestry Experiment Station analytical laboratory located near Palmer, Alaska. The analyses included total nitrogen by micro-Kjeldahl, total phosphorus, potassium, calcium, magnesium, sodium, zinc, copper, manganese, iron, boron, and sulfur by nitric/perchloric digest, and dry matter determined at 105° C (Gavlak et.al., 1994, *Plant, Soil, and Water Reference Methods for the Western Region*, Western Region Extension Publication No. 125). The analytical results indicated that white cod bonemeals were reasonably consistent in nutrient content as shown below:

Elements		Range	Elements		Range
N	%	4.6 - 6.3	Na	%	0.6 - 1.0
P	%	7.5 - 10.5	Zn	ppm	54 - 82
K	%	0.2 - 0.7	Mn	ppm	30 - 67
Ca	%	14 - 25	Fe	ppm	49 - 289
Mg	%	0.3 - 0.4	B	ppm	2 - 11
S	%	0.6 - 0.8	DM	%	90 - 96

(This analysis was conducted on white cod bonemeal. Analysis figures vary depending on the fish used and the location the fish were caught.)

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**Typical soil amendment directions for one 20' by 20' (400 sq. ft. garden space):**

- Apply 20 lbs lime to plot and rake in.
- Apply 10 lbs AFBF jug + Eden to plot and thoroughly rake or till into soil.
- Apply Jubilate per directions at planting.
- Apply OND per directions.
- Kelp, per the directions mix 1 tsp in 1 gallon water and spray. Foliar feed every 10 calendar days.

**Special tools:**

Garden sprayer for foliar feeding - Don't skip this part; it is really important, even if there is lots of rain. It's counter-intuitive, but when there is lots of rain it can leech nutrients from the soil, and foliar feeding and OND drench become very important. That said, don't boost the amounts recommended; think parts per million or you can burn the plant.