2+ Pound Barley/Wheat Bread

**Preparatory & Background Info**

* Bread machine warms itself to 80-90o during the pre-bake process, so room temperature is irrelevant
* Equipment:
	+ Use a three quart batter bowl (light, works well for dry ingredients) and a 2 cup glass bowl (for liquid ingredients, which are microwaved to warm them)
	+ A medium whisk to mix ingredients; do dry first, then wet
	+ Use a scale, you end up with less to wash: a bowl each for wet & dry ingredients and a teaspoon measure that doesn’t need to be washed

**Ingredients:**

*Dry* (into 3 quart batter bowl) Total=16.5 oz

* + *14.5* oz bread (or regular) flour
	+ *3.6* oz barley flour & 1 oz buckwheat
	+ 2 scant tsp. ***NOT TABLESPOON*** Fleischmann instant dry yeast (*put in last inside the machine)Wet* (into 4 cup Pyrex beaker)
	+ *14.2* oz buttermilk (or 10 oz yogurt, 2.3 oz milk to thin to buttermilk consistency)
	+ *.5 oz*. oil (coconut or olive)
	+ *2.8 oz* maple syrup or molasses
	+ *.3 oz*. salt (dry, but mixed w/ wet)

Heat wet ingredients for a minute in microwave, heats to 1000 , cools down to 80o in pan

**Baking program, custom home mode (in Memory 3) in a Zojirushi Virtuoso:**
16 min: knead 25: 1st rise 15: 2nd rise 10: 3rd rise 75: bake

66 minutes until bake begins, set timer to score with lame

with Fleischmann’s Instant Yeast, possibly longer bake time, extra 5-10 minutes?

Post-start ops:

* Score the loaf with lame immediately and deeply at bake start (deduct 80 minutes from completion time on readout).

Procedure

1. Measure out dry ingredients (less the yeast) on scale into batter bowl, whisk together.
2. Measure out the wet in a 2 or 4 cup glass beaker and microwave for a minute.
3. Put the wet in the ZV pan first, then the dry. Make a recess in the top, add the yeast there.
4. Start the machine Memory 3

Cost

Maple Syrup: $11/32oz, 34¢/oz, 2.3oz=79¢

Olive Oil: $10.60/68oz, 16¢/oz,.45oz=7¢

Buttermilk: $1.25/32oz, 4¢/oz, 12.13oz=47¢

KingArthur Wheat Flour: $3.5/80oz, 4¢/oz, 53¢

Barley Flour: $60/50lb, 7.5¢/oz, 25¢

Yeast: $3/16oz, 19¢/oz,.3oz=6¢

**Total Cost: .79+.07+.47+.06 = $1.39**

## Making regular flour into bread flour by adding wheat gluten

Note: ordinary flour is 10% protein, bread flour is 13% protein. You can raise the protein in wheat flour adding vital wheat gluten, which is 75% protein. Because of that, you want to 4% VWG by weight to ordinary flour. Since 5 pounds is 2.27 Kg, or 2,270 grams, add (.04 x 2270) 91 grams of VWG to 5 pounds regular flour to make it bread flour