

STARCHY ADJUNCTS IN HOMEBREWING

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WHY USE ADJUNCTS?

Authenticity in certain styles

- **witbeer**
- **American pils**
- **historically economically driven, usually tax**
e.g. dry and oatmeal stouts

For special character

β -glucans and proteins - barley, oats

head retention, haze - wheat

lighter body - rice, cornstarch

distinct flavour - maize, rye, buckwheat,

basmati... - and you can toast the grain

For melanoidin formation in the cereal mash

For the heck of it

Because your family's grown it for 100 years

Because you tried some in a restaurant

Because no-one's ever tried it before

EXTRACT BREWING

**No longer so bleak, you can get:
wheat & rye malt extract
sorghum extract**

There's always sugars to investigate

**A mini-mash doesn't have to work super-well
50/50 with malt, batch sparge, add your syrup
to it**

**Steeping oats just might work - soluble fibre is
dextrins and β -glucans**

GELATINIZATION TEMPERATURE

Most adjuncts need higher temperature than malt

**Cornstarch and wheat flour can go in infusion
mash**

**Cornmeal has to hydrate before temperature even
matters, needs cooking.**

ADJUNCTS IN INFUSION MASH SIMPLE

Flakes - brewer's flakes from LHBS

barley, corn, rice, rye, oats, wheat

- other flaked cereals

**rolled oats (1- or 5-minute), flaked spelt,
kamut, barley,**

- other pre-cooked grains

torrefied, micronized

Shredded Wheat Puffed Wheat (toasted) Puffed Rice

Nutrition Facts

Per 2 Biscuit (47 g)



| Amount | Cereal | With 1/2 cup skim milk |
|--------------------------------|---------------|------------------------|
| Calories | 170 | 210 |
| | % Daily Value | |
| Fat 1 g* | 2 % | 2 % |
| Saturated 0.2 g + Trans 0 g | 1 % | 2 % |
| Cholesterol 0 mg | 0 % | 1 % |
| Sodium 0 mg | 0 % | 2 % |
| Potassium 190 mg | 5 % | 11 % |
| Carbohydrate 38 g | 13 % | 15 % |
| Fibre 6 g | 24 % | 24 % |
| Sugars 0 g | | |
| Protein 5 g | | |

Ingredients

100% WHOLE GRAIN WHEAT. BHT IS ADDED TO PACKAGE MATERIAL TO HELP MAINTAIN PRODUCT FRESHNESS. (D020D)

Contains: WHEAT



Product formulations may change. For current nutrition facts and ingredient line information check product packaging.

—QUAKER® CEREAL—

PUFFED WHEAT

★★★★★ 4.9 (9) [Write a review](#)

id puffed it into a great source of irresistible, mouth-watering flavor that's berries or whatever you please.

WHERE TO BUY

COMPARE PRODUCTS



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, packaging and promotions may change. For current information, refer to packaging on store shelves.

Ingredients

PUFFED WHEAT, FERROUS SULFATE (A SOURCE OF IRON), NIACINAMIDE*, CITRIC ACID, THIAMIN MONONITRATE*, RIBOFLAVIN*, FOLIC ACID*, *ONE OF THE B VITAMINS

—QUAKER® CEREAL—

PUFFED RICE

★★★★★ 4.8 (24) [Write a review](#)

Quaker packs in rich, robust crunch for a breakfast delight. Puffed Rice cereal has the wholesome flavor you love, with the taste you want. Puff it up with juicy berries or anything that pleases you.

* Fat free and sodium free

WHERE TO BUY

COMPARE PRODUCTS



[Nutrition Info](#)

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Nutrition Facts

Serving Size 1 Cup (14 g)

Amount per serving

Ingredients

PUFFED RICE, FERROUS SULFATE (A SOURCE OF IRON), NIACINAMIDE*, CITRIC ACID, THIAMIN MONONITRATE*, RIBOFLAVIN*, FOLIC ACID*, *ONE OF THE B VITAMINS

MinitTM Rice

Bulghur wheat

Popcorn - use air popper

Tortilla chips not looking good - try masa tortillas

ADJUNCTS IN INFUSION MASH

PRETTY SIMPLE

Things that are easy to boil:

potatoes, sweet potatoes, other roots

**wild rice - get the good wood-smoked stuff, but
save a buck by buying broken rice**

**Get the technology: a rice cooker - scorch-proof
cereal cooking**

Rice, of course - but red rice? basmati?

Buckwheat or kasha

Millet

**This won't give Maillard flavours, but sometimes
that's the goal**

ADJUNCTS IN INFUSION MASH HARD-CORE

**Unmalted grains are really hard-core.
Can just about crush with a Corona mill**

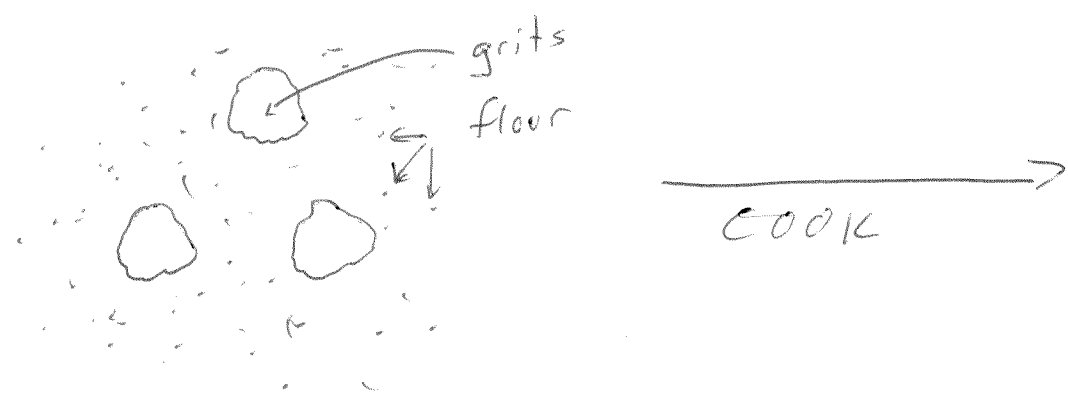
Lots of grits available

- cornmeal**
- semolina, cracked wheat, fereek**
- buckwheat or kasha (close enough)**
- whatever the bulk bin has**

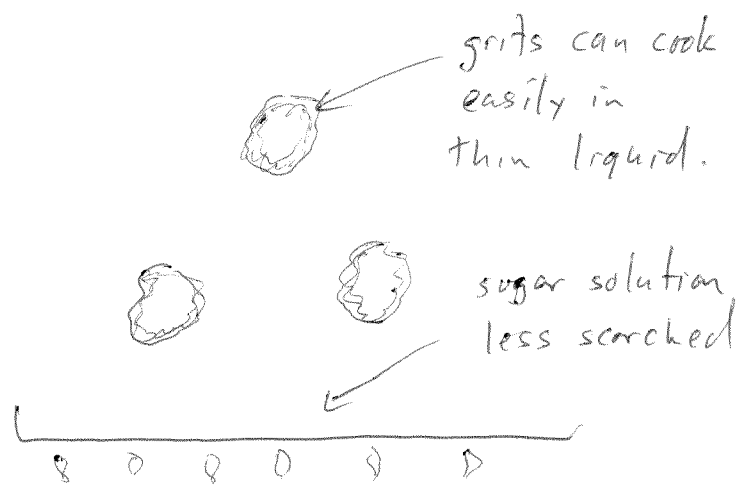
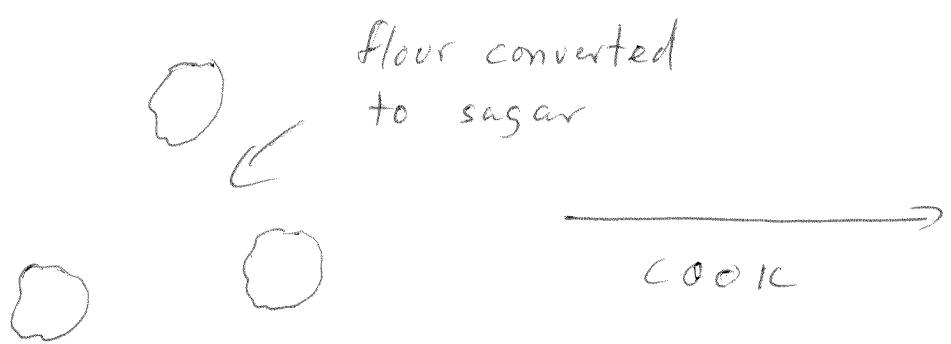
**Fereek is worth investigating: underripe wheat
dried over a straw fire**

THE CEREAL MASH

Boiling grits:



After saccharification rest:



**Use 3-4 L water per kg grain - a lot boils off
20-50% barley malt**

Rest at conversion temperature 5-10 min.

Bring to boil, stir constantly

Expect 20-30 minutes before grain will gel up

**If you're clever, combine mashes and land at
conversion temperature**

**Keep gloves and goggles handy, and wear long
sleeves**

Have a spoon that scrapes the bottom well.

Heavy bottomed pot helps a lot

Make mash schedule make sense

- it's already complicated enough**
- you probably want the extra goodies**
e.g. β -glucans in stout