OATSTANDING!

Oat Based Gluten Free Ale – 5.5 Gal - OG 1.052 – FG 1.012 – ABV 5.0% - IBU 25ish – SRM 3

We really wanted to make a true gluten free 'all grain' beer at KJ. We were stuck at the critical question of how do you make a gluten free beer that does not suck? Especially when the main component of any beer: barley is absolutely filled to the gills with it. Well, you find a way to replace it with something tasty and yet similar enough!

This is where the oats come in! Oats can be a critical component of many styles of beer. Oats add thickness, haze, mouthfeel and body to IPAs, stouts, ales, and other beer styles. Typically, they are not used on their own because of how gelatinous they can get in the mash. But using a combination of three different oats: Flaked Oats, Malted oats, and Golden Naked oats we get a balanced mixture that still flows properly when mashing.

Taste wise, an all-oat beer has a different grain vibe to that of a standard all grain beer. The oats are far grassier, taste fresher in a way. It is a distinct, and pleasant taste.

The next thing to consider when making a gluten free beer is the yeast. Most yeasts are NOT gluten free. It is almost guaranteed a liquid yeast will have been sitting in a wort mixture made from grain. We tend to have more luck getting gluten free dry yeast. For this recipe, we chose the just released "House Ale" from our pals over at Escarpment Labs. This is their first dry yeast, and it is gluten free!

The finished product named ~~Oatty McOatty Face~~ Oatstanding! Is a light, blonde pale ale with strong citrus hops notes from the Vic Secret and Mosaic hops. The fresh grassiness of the oats blends well with the fruit character of the hops. It is refreshing and crowd pleasing to all!

Gluten free notes: While every component in this recipe is gluten free. We can't guarantee there won't be gluten in the finished product. The mill we would use to grind this has seen its fair share of barley. The scoops that put the oats in the bag will have touched barley. There is certainly barley dust in the air at our store. All of this being said, if you are - or are making this for someone who is super sensitive to gluten we want you to be aware of these potential pitfalls when ordering.

Ingredients

Grains	**Amount (lbs)**
Oat Malt	7.0
Flaked Oats	3.0
Golden Naked Oats	2.0

Hops	**Amount (oz)**	**Hop Schedule**
Vic Secret	2	0
Mosaic	1	0
Vic Secret	2	Dry Hop 1-2 days before bottling
Mosaic	1	Dry Hop 1-2 days before bottling

Yeast

House Ale – Escarpment Labs	1 Package

Extras – *Sold Separately*

Calcium Chloride	3/4 teaspoon at mashing	Brings the dankest haze
Irish Moss	1 tsp w/ 15 minutes left in boil	
DME/Dextrose	150g at bottling for priming	

Important Tips on Brewing

- Be extra cautious when it comes to cleaning! Once you have stopped boiling your wort everything that gets in contact with the beer MUST be sanitary.
- The temperature of your mash is ABSOLUTELY CRITICAL. Not being in the 150-155f range can drastically affect your beer. Make sure you correct the temperature ASAP once all the grain has been added to the mash.
- Always let your beer ferment for 10 days! Do not disturb it, do not open the lid. It is absolutely natural for the airlock to stop bubbling after a few days, it is still fermenting though.
- Oxidization: Airspace is always something to consider. When undergoing primary fermentation airspace is needed so that the beer can bubble up and ferment vigoursley without leaking out of the container. The fermentation creates a layer of CO_2 that remains in the pail due to the airlock. Once primary fermentation is over, and the lid has been opened, the layer of CO_2 dissipates, and oxygen replaces it. At this point airspace can ruin your beer. When racking into carboys make sure they are filled to the top, or you blast CO_2 inside to prevent oxidization. Ask us for details on this!
- Before bottling, make sure you use a priming calculator (many can be found online) to verify the amount of sugar that needs to be added.

Specific Tips for this recipe:

- We found that our efficiency was way down when making this recipe. This has been accounted for in the recipe creation. Typically, our recipes are made at a 73% efficiency rate, this one is based on a 65% efficiency rate.
- Milling it finer is recommended. The oat malt seems to mill differently from most malt, same goes for the golden naked oats. If we're milling on-site, we will mill finer. We recommend you do the same at home.
- Rice hulls are a must, especially if you are using a mash tun and triply so if using a Brewzilla or Grainfather. There might be less utility in using them if doing the beer in the BIAB method – but we still recommend them.
    - *Rice hulls help with flow during the mashing and sparging process. They keep the wort moving through the grain without imparting any flavour or colour. Very useful! We personally use them for all of our 10 gallon or larger brews.*
- Smell wise, the beer definitely has a strange/different smell from normal when brewing. Don't worry too much about it! It will all work out in the end. After all RDWHYAHB (Relax Don't Worry Have Yourself a Home Brew).

Instructions

Mashing -> converting the grain into a fermentable liquid.

1) Bring 6-7 gallons of water in your brew pot to 155°F. This is our strike temperature. Turn off the heat to the pot.
2) If you are using standard Guelph tap water, add ¾ tsp of Calcium Chloride to the water. *This raised the calcium in the water which makes the beer far hazier.*
3) Wrap the muslin/nylon bag around the brew pot and slowly pour all the milled grains into the bag. Stir them in while adding to prevent clumps. The addition of grain should drop the temperature down to 150-155°F.
    a. This is when you would add rice hulls. Typically, half a pound is enough for a 5 gallon recipe. Add them in with the "grain".
4) We want to mash the grain at 153 °F for 60 minutes. It is very important to hold the temperature at 153°F. If the temperature rises above 155°F it hurts the fermentation, or if it dips below 149°F it can lead to a thinner tasting beer.
    a. The first 15-30 minutes are essential for the success of your brew. The temperature HAS TO BE IN THE RANGE OF 150-155°F. Sometimes adding the grain to the strike water does not lower the temperature enough, in this case add a little bit of cold water to bring the temperature down. Cover the pot with your lid and let it sit.
    b. Most brew pots will be able to maintain 153°F without adding heat for 20 minutes, we recommend checking the temperature every 15 minutes, and if it drops add more heat to bring it up. We recommend opening the lid and using a thermometer in the liquid.
5) After 60 minutes, bring the temperature of the mashing grain up to 170°F and hold for 10 minutes. This is our mash out.
6) Time to remove the grain. Lift the bag full of grain out of the brew pot. Let the liquid in the bag dribble into your wort. Once that is done, put the bag inside of a brewing pail, or another empty pot. There will be about 4 gallons of wort in the brew pot, we need to get it to 6 gallons before we can begin the next stage.
7) Run warm water through the grains in the bag, aim for 170°f – let it run through the grains and add to the brew pot. Add until you reach 6 gallons.
    a. PSA: It is natural to think that the grains need to be squeezed to get all of the liquid out of them, DO NOT DO THIS. Aggressively squeezing the grains will lead to tannin extraction and a doughy taste in your beer. Lightly pressing the bag is fine, but do not try to squeeze every last drop out.

Boiling -> Sterilizing the wort time.

1) Bring 6 gallons of your wort to a rolling boil, and let it boil for 5 minutes, this is called the hot break. Start a 60-minute timer. Keep the wort boiling (212°f) and uncovered.
2) With 15 minutes left in the timer, add your wort chiller if you have one, and if you do not, don't do anything.
3) When your timer goes off, turn off the heat, and add 2 ounces of Vic Secret and 1 ounce of Mosaic.
4) Now it's time to cool the beer down to 75°f (20-25°c) as quickly as possible.
    a. We love using a wort chiller for this, it can get the beer down to temperature in 20-30 minutes. Otherwise, you can immerse the brew pot in an ice bath or wait it out. The longer it takes, the greater the risk of infection

Fermentation -> Turning the wort into beer.

1) After the boil is done it is time to be extra careful in regard to sanitation. We recommend using a no-rinse sanitizer called Starsan. Mix ¼ tsp of it with water in a 500ml spray bottle. **Before we touch any part of the beer, we spray it with Starsan.**
2) Transfer the cooled wort into your fermenting pail or carboy. Run it though a strainer to catch any hop or grain residue. With all of the hop matter in this beer, it might take a while to strain through all the hops.
    a. It is also good time to take a hydrometer reading. It should be around 1.052 give or take a few points.
    b. If your gravity is not close to the target we recommend adding sugar to bring it back up. DME or Dextrose are commonly used, but because this is a gluten free beer, only use dextrose. Typically, 1kg of dextrose is enough for 18 points of gravity.
3) Make sure the wort has been cooled to at least 25c!!! Adding yeast at a higher temperature will likely kill it.
4) Once the beer is in the fermenter, pour in the package of House Ale yeast
5) Put the bung and airlock in the hole (make sure there is water filled up to the line in the airlock). If using a pail, make sure the lid is sealed tight. Put the pail in a room that is in the range of 18 - 22°c.
6) Fermentation should take between 10-14 days. There is lots to ferment here so expect it to go a little longer than most recipes.
7) DRY HOP ADDITIONS: We want to dry hop this beer with the Vic Secret and Mosaic about 1-2 days before you plan to bottle or keg the beer. This really expresses the hop aroma best.
    a. Aim to dry hop the beer when you know you will have time 1-2 days after to bottle or keg it. If the hops sit longer in the fermenter, then you will lose a lot of that delicious citrus aroma.
    b. When you are adding hops to your fermenter, you need to prevent excess oxygen getting into your fermenter. We recommend quickly removing the bung or airlock and adding the hops. And if it takes longer than 10-15 seconds then it would be a good idea to get more CO2 in there. If you have CO2 available, spray some from your tank into the fermenter. If you don't, then put a mixture of 100g of dextrose and boiled water in there. This will start a mini fermentation that will expel any oxygen that might have gotten into the vessel while dry hopping.
8) After the 1-2 days of dry hopping are complete, it is time to move to the bottling stage.
9) Lately, we have been of the opinion that secondary is an unnecessary step. Unless you are kegging, we recommend proceeding to the bottling stage. Clarification can occur in the bottle rather than in a carboy, and the risk of oxidization is greatly reduced.

Bottling -> We're getting close to Beer Time now.

1) Rack the now fermented beer into a bucket.
2) At the same time, mix the priming sugar with 300ml of boiling water and add to the beer. Stir it in VERY gently.
    a. Make sure to check out a priming calculator to verify the correct amount of sugar. Too much sugar and your beer will end up foamy, or even start blowing the caps off! Too little and the beer won't be fully carbonated.
3) Rack the beer into your bottles or growlers. Then, let them sit for 2-3 weeks at room temperature. Chill and enjoy!
4) *If you are kegging*, rack the beer into the keg and put CO2 on it right away. 2 days at 30 PSI, followed by a 10 PSI taste test. If it is not carbonated enough yet, another day at 20 PSI before returning to 10. There are faster methods of carbonating a keg including using a Quick Carb, or by shaking the keg while attached to CO2 (ask us for details on that method)