

# Ales and Beer

HOME BREW IN PRACTICE

*By* HUMFREY WAKEFIELD

The brewers of home-made wines are privileged people. They feel it every time they open a bottle of their own vintage. But there is one thing they miss, and that is the privilege of drinking freely, carelessly, thirstily, and above all, daily. A daily drink must be quick to make and to mature, its fermentation must be certain and its materials cheap. And it must be free from that sort of connoisseurship that leads to odious comparisons with classical vintages, and robs the amateur of his carefree approach.

Malt liquors satisfy all these conditions. At their simplest, they can be prepared within a couple of hours, fermented within a week, and drunk within a fortnight. And the finest compliment the maker will be paid is when old men say they have not tasted such a drink since they were youngsters.

In the April 1963 Budget, Mr. Reginald Maudling, the then Chancellor of the Exchequer (whose name shall remain blessed) removed the restrictions upon the home brewing of beer and ruled that henceforth no duty need be paid. So you are free to brew as much duty-free beer at home as you please. But NOT A DROP OF IT MUST BE SOLD, or you are breaking the law.

A home-brewed beer can hardly fail to be better than anything offered for sale over the bar, and it is incomparably cheaper. The foaming head of a good brew, and its amber or garnet lights, will rival any wine for the pleasures of the eye. If you are impatient and cannot wait for it to clear, no matter; it is only yeast you are drinking, and you would pay dearly for that at a chemist's. If you do not like the idea of long drinks, swilled down by the pint on hot days, then make yourself a short one. After all beer can be brewed without difficulty up to 10% alcohol content, that is, the strength of a Frenchman's vin ordinaire; and a wineglassful of this on a winter's day will do the work of tankards of your summer brew.

There is a flavour and a strength of beer for every occasion: with meals, or between meals, or in meals. Strong ale can be used on almost every occasion where a cooking recipe calls for wine, and on many others, such as cooking hams, stews, Welsh rarebits, and so on. To have at your command the whole splendid range of malt liquors you need only understand how to vary the three principal ingredients: fee malt, the herbs employed to give the dominant flavourings, and the sugar, which will decide the alcohol content.

## Malt

Malt serves the brewer in three ways; it provides a form of sugar that can be turned into alcohol by the yeast; it nourishes the yeast in the course of its work, and ensures that it does it well; and it likewise nourishes the man who drinks the brew, since it contains a fair amount of unfermentable solids, rich in food value, which survive in the finished drink to give it flavour and body. The hydrometer reading of a finished beer is proof of this: it will not, like a dry wine, fall to zero or below, but stick at between 2 (for a light ale) and 8 (for a heavy stout). In a wine this would normally indicate the presence of unfermented sugar. In a beer it is not sweetness but food that remains behind.

Malted barley grains, like coffee, can be roasted light or dark, and are sold as "Crystal" malt or "Patent Black." Crystal malt gives light and nutty flavours, and colours varying from pale amber to rich brown. Black malt brings a burnt and rather woody taste, and the liquor appears to be black, until you see the garnet-coloured lights in it.

There are several ways of getting the good out of the malted grain. You can "mash" the malt yourself., steeping it in water in a temperature of 130-150 degrees for not less than four hours before straining off the "wort" from the grain, and then boiling it up with hops, or whatever herb you choose. In this method you have the pleasure of handling a raw material no less mysterious than the grape, and you get on the whole a drink of cleaner flavour. Or you can save yourself the trouble (this is important if you are brewing for a daily drink), and buy the malt already extracted. This extract is simply dissolved by pouring over it the boiling infusion of herbs. Malt extract makes excellent light ales with a minimum of work. It also brings within the home-brewer's grasp really strong drinks of the Barley Wine and Audit Ale type, without the cost being in any way excessive. Such heavily malted drinks would be far too dear to form part of one's daily fare, were extraction done at home.

## Herbs

Whichever method you use for extracting the good from the malt, the result is the same: the more the malt, the more the body imparted to the finished drink. And the more the body the drink has, the more it will need some bitter herb added to it to counteract the heaviness and keep the palate clean. The vintner is not troubled in this way. Nothing need be added to grape juice, since it contains both acid and tannin which gives wine a natural astringency—but malt contains neither, and so has to have an astringent flavouring added by the brewer. From the beer-drinker's point of view this is an asset. The acidity of grape-wine may well be counteracted in warm countries by the richness of the food served with it. But with plain fare, and in a cold climate, an acid drink does not always lie easily on the stomach. It is not only the high food-value of stout that makes it a good drink for nursing mothers, but its lack of acidity.

You can use what herb you like, so long as it does what you want in the finished drink. The hop has earned first place as partner to malt, throughout its whole range of strengths and flavours, ever since it was brought to England three centuries ago. It is a good preservative. Its flavour when used in small amounts is delicate, fresh and subtle,

while in large quantities its bitterness is never disagreeable. Further, it is a gentle soporific. Sleep follows easily on hopped beer, and an age addicted to tranquillizers should welcome this.

Since no other herb by itself can command all the virtues of hop, experiments with other flavours should not be allowed to displace the hops altogether from your recipe. Spruce oil combines well with hops. It too is a good preservative, but unlike hop, it will tend to clear the head of drowsiness. This, combined with its remarkable cleanness of flavour, makes a drink that will challenge any conventional beer as a refresher. Spruce beer goes back a couple of centuries into English history, and deserves a revival. It is still drunk in Scandinavia, and in Greece even grape-wines are "resinated" as a matter of course, partly to preserve them, partly to give that fresh, resinous tang that is so welcome in a land where flavours are strong, fish plentifully eaten, and much garlic chewed.

Wormwood, the "mugwort" of old country brewers, provided the bitters in beer before the advent of hops. It can still be used to make a good drink, and is most conveniently found in "Heath and Heather's" or those from other suppliers. Here you find a nicely blended mixture including hops and wormwood, and though intended for a non-alcoholic drink, they are all the better used in a more powerful brew. This beer is a fine summertime quencher of thirst, something like a long Vermouth.

Liquorice is used in medicine for soothing rough throats. In beer it gives the illusion of having added body and sweetness, apart from its own peculiar pungency. In fact, it has done no more than coat the tongue. For this reason, those who like a clean taste should avoid liquorice. But it can be useful for taking the edge off a harsh stout, since you cannot (as in winemaking) sweeten a bitter brew with sugar. This will merely renew the fermentation, unless the yeast has been killed by pasteurization, or has already made all the alcohol it can manage. This latter condition is unlikely to be met with in brewing beer, though common enough in winemaking.

Like liquorice, nettle was traditionally used in stouts. An infusion of nettle is faintly salty, like a consomme, and if added to a beer it will certainly need plenty of hops, or the roughness of black malt to give it an "edge" and make it palatable. Salt has the effect of giving "roundness" of flavour, and should in any case be added in small quantities to a brew of beer. But as soon as the salty taste is perceptible, it comes as a disagreeable surprise, and the clean after-taste characteristic of good beer is lost.

The use of old-fashioned flavourings: ginger, dandelion, burdock or sarsaparilla, must be adapted to suit each brewer's taste. Once the principle of balancing bitter against sweet is understood, then there is no reason why these flavours should not make stimulating variations on the original theme of hops.

## **Sugar**

Malt by itself contains enough fermentable sugar to make an alcoholic drink. In fact German law refuses to recognize a malt liquor brewed with added sugar as "beer" at all. But the home brewer is not a purist. He cannot afford to be, with malt the price it is. By adding sugar he can make his beer much stronger than is normally sold over the bar; he can make it keep better; and he has a wide range of new flavours to play with, since each type of sugar will add its own particular fragrance.

Honey is the oldest form of sugar to be used in beer, and is still thought by some to be the best. Nowadays it is a luxury if added in any quantity, and the drink would rank rather as a hop-flavoured Mead. As in Mead-making, the honey should be boiled 10-15 minutes in part of the water going into the brew, to kill unwanted bacteria which would otherwise turn the beer sour.

Then there are the various types of cane-sugar. Of these, white sugar contributes nothing noticeable to the flavour of the drink. Demerara, though dearest, is best, especially for pale, light-bodied beers. Brown moist is cheapest, and makes a darker beer, heavier in body, but not necessarily more alcoholic, since it contains more unfermentable matter. Invert sugar, used commercially in English beers, ferments out quickest of all, and most completely. It makes a good, dry beer, with a slightly cider-like taste. Golden syrup for some reason takes much longer than the other sugars to clear, and tastes faintly of grapefruit. Black treacle or molasses are best kept for medicinal stouts. Its flavour is not clean on the tongue, and needs the roughness of black malt, and plenty of hops, to counteract it.

A whole range of beers can be produced by using malt extract and our table shows four excellent recipes for home brewers to produce beers of varying strength.

These are quite simple, and anyone can produce an excellent, strong beer fully as satisfying as any which can be purchased at "the local."

Five gallons is the most a man can lift conveniently. If women brew, they had better halve the quantities and make 2 ½ gallons at a time. Round figures are used. There is no need for precision, but a hydrometer is worth getting, to let you know what type and strength of beer to expect. Use tap-water. Galvanised wash-boilers are quite safe for boiling up the infusion of herbs; there is no acid formed at this stage, and so no risk of metal poisoning arises. Use Demerara or invert sugar for the lighter brews, brown for the heavier.

The Extract is easier to pour if left in a warm place overnight, and 2 lb. jars are more convenient than 14 lb. tins, but dearer. When pouring extract from a tin, wet the free hand with cold water. The ribbon of malt can then be coaxed back into the tin without sticking to the fingers.

Hops can, of course, be used alone in any of the recipes that suggest other herbs, at the rate of 4-8 oz. to the 5-gallon brew. Compressed hops come in 8-oz. packets which can easily be broken in half to save weighing. If loose hops are used, a good fistful may be taken to weigh about an ounce.

Baker's yeast may be used, but it needs more skimming, and takes longer to clear. Lager and Ale yeast cultures are best left for fancy brews.

The fermenting vessel should be large enough to hold the wort and allow for the "head," say 7-gallon size. It is best made of polythene or stoneware.

**Distinguish between stoneware and the old-fashioned red clay crocks which usually have a lead glaze and poison the fermenting brew. Lead glazes are thick and honey-coloured, whereas stoneware glazes are thin and colourless.**

Stoneware rings clearly when struck, while lead-glaze vessels, being earthenware, do not.

Beers, of course, can be made to any strength, and opposite we give in tabular form a series of recipes which will enable you to select your own. One word of warning,

it is better to aim at beers of strengths equivalent to those obtaining commercially rather than always producing high-gravity brews, which cause headaches when drunk in quantity, as most beers are.

### SUGGESTED RANGE OF HOME-BREWS USING MALT EXTRACT

Recipe	1	2	3	4
Alcohol	3%	5%	7%	9%
Gravity at Start	30	45	60	30
Gravity at Finish	2	0	5	9

Recipe	1	2	3	4
Gallons Water	5	5	5	5
lbs. sugar	3	4	5	6
lbs. Malt Extract	1	2	3	4
Herbs	1 oz.	2oz.	4-6 oz.	6-8 oz.
	Hops or Herbs	Hops 2oz. Spruce Extract	Hops	Hops
Price per pint	2 ½d.	3½d.	4½d.	6½d.
Days to clear	7	14	21	28
Keeps for	Weeks	Months	Months	Years

Use also in each case :

1 Pkt. Dried Yeast, 1 Pkt. Yeast Food,  
2 teaspoon salt, or water treatment as instructed.  
Juice of one lemon.

For Stout Boil up ½ lb. patent black malt grains and 4 oz. flaked barley with the hops, in Recipe 3 or 4.

### PREPARATION

Bring a convenient quantity of water to the boil, 3 gallons if you have a 4-gallon boiler. Add salt, then put in herbs and simmer for 45 minutes. When hops are used, some of the fragrance is lost in the steam. So keep a handful back till the last five minutes of

the infusion. Allow to cool for a few minutes. This gives the herbs time to settle and makes decanting easier.

Put the sugar and malt into the fermenting vessel. Strain the near-boiling infusion of herbs into the vessel, and stir well till all is dissolved with a hardwood stick.

Make up to five gallons with boiled water. Allow to cool. Dissolve yeast food (if used) and citric acid or lemon juice in a little of the brew, and stir in. Put the hydrometer in and note the gravity.

## **FERMENTING**

Sprinkle on the yeast. Tie a cloth or secure a sheet of polythene with elastic over the vessel to keep out the flies. The ideal temperature is 65-75 degrees F., that is, about the range of a room in summertime. Cooler temperatures mean slower fermentation. This is no advantage in beer-making: it merely holds up regular production, so find a warm corner for the brew, or else use some simple heater, in cold weather. A thick foam builds up on the surface within 24 hours; skim this off. It contains impurities which may make the beer slow to clear. Thereafter leave the brew in peace till the yeast has done its work.

With strong beers, however, it is advisable to add the sugar in two doses, or they occasionally "stick" at 1020 or so.

Strong beers take about a week to ferment out, weaker ones three days or so. The hydrometer will tell you the progress. But when the gravity gets low you cannot be sure at what point it is merely telling you about unfermentable solids left in suspension. Your aim is to decant the beer as soon as it is "flat," since the decanting while the ferment is still on can lead to burst bottles. Best then, to watch the surface of the brew. Towards the end of the ferment the bubbles collect in a ring at the centre. Then the surface, which is cloudy while the yeast is still active, begins to clear. This means that the yeast has no more sugar to work on, and is beginning to sink down. Then is the time to bottle.

## **BOTTLING**

Having made your home-brew you then come to the satisfying job of bottling it.

Should it be bottles, or tap-jars? One four-gallon tap-jar takes no longer to clean and sterilise than one bottle. It allows you to draw off your beer in half-pints, and that is useful when brewing strong. But the drink will be "draught" in character, however lively it may be, since all the gas is spent immediately in forming the head. A truly sparkling drink can only be made in screw-top bottles.

Apart from looking good, and lightening a heavy brew, the sparkle sends the alcohol to your head quicker. And a bottled drink will clear sooner, since the yeast has not so far to fall. But the labour of cleaning and sterilising is multiplied thirty-fold. It is a matter of choice.

This is the quickest way of cleaning: prepare a stock solution of potassium metabisulphite, by dissolving  $\frac{1}{4}$  lb. in a quart of hot water. Keep it handy in a stoppered flagon. Take all the stoppers out of your bottles, and set aside those with perished washers. Take off these washers. Stretch the new washers over the ends of all the stoppers. Then take each one in turn and insert a spike (say the outside prong of an old

fork) between the washer and the stopper. Then, by turning the stopper round and round, the washer can be worked down to its proper place.

Next take the bottles. Rinse each under the cold tap, emptying the water out by holding upside down and swirling round with a vigorous rotary movement. This forms a whirlpool inside, which allows the air to get in and the water to fly out. Take a jug and in it mix two ounces of your stock sulphite solution in a pint of water. Pour this sterilizing mixture through a polythene funnel from one bottle to the next. From the last bottle, pour it back into the jug, and drop all the stoppers in. Next give the stoppers and each bottle a quick rinse under the tap to remove any traces of sulphite.

Keep the remains of the sulphite solution handy for sterilizing the siphon before and after use. You will find the whole job is made much easier by fitting to the cold tap a length of hose-pipe equipped with a lever-spray nozzle. The bottles are now ready to fill.

### SIPHONING

You want to have the suction end of the siphon just above the sediment at the bottom of the fermenting vessel. The best way to do this is to have a length of glass tube ( $\frac{1}{4}$  in. bore) with a U-bend at one end, to bring the lower opening of the tube some  $\frac{3}{4}$  in. above the bottom of the U. This tube, with your polythene piping fitted at the other end can be pushed straight down into the vessel till the U-bend rests on the bottom. The opening will then be sucking up the brew just above the level of the sediment. A chemist will do this bit of glass-work. Failing that, you can buy a good adjustable siphon ready-made.

### PRIMING

Put the empty bottles in their crates, and fill each in turn from the siphon, up to the shoulder, and not beyond, or you may have trouble with foam when you come to unscrew the stopper. When all are filled, "prime" each one with one level teaspoonful of caster sugar. Use a funnel to get it down the neck cleanly, and tap the stem of the funnel each time, to make sure the whole dose goes down.

**This priming sugar starts a further slight fermentation, enough to give the mature drink a good sparkle. If more sugar than this is put in, you may lose the beer in foam, or burst the bottle.**

The same is true if you bottle it before the fermentation in the first place has finished. Wet the stoppers, to allow the washers to slip when you tighten them, screw down hard, and give each bottle a good shake to dissolve the sugar. Store upright in a cool dark place.

### TAP JARS

In this case it is advisable to fill to the shoulder only (this gives you four gallons) and put any surplus brew in bottles. The space left in the shoulder gives room for the gas pressure to build up. Otherwise, you risk blowing out the tap, or bursting the jar.

To prime, make a syrup by dissolving 2 lb. of caster sugar in one pint of boiling water. Allow to cool and keep stoppered up in a sterilized flagon. For a 4-gallon jar, take

3 oz. of this syrup and add to the brew in the jar while you are siphoning. This makes enough gas to drive about half the contents out under pressure. You may experiment with more, but it is hardly worth the risk, and with heavy beers it is as well to reduce the priming sugar to 1-1½ lb. to the pint, or you may even have a jar burst. It will depend on the strength of the jar, so we cannot hold ourselves responsible!

Once the jar is filled and primed, wet the rubber washer of the stopper, and screw down tight. The washer should be seen to flatten and bulge. See that the tap is hammered well home. When the gas pressure builds up the tap may leak a little. This usually stops after a few days as the corks take up the moisture and swell. If they go on leaking, the only cure is to change them. The cork shive is often hard to fit over the stem of a new tap. Soak it, but not the tap, overnight in your sterilizing solution. It should then be soft enough to coax up to the shoulder of the tap, where it must be before you try to drive the tap home. If it will not go, then rasp off a little of the taper round the shoulder of the tap. There is plenty of wood to spare at that point.

If the tap grows mould, and it is almost bound to, wash it off with a strong sulphite solution.

When the pressure fails, and no more beer can be drawn off, unscrew the stopper, reprime, and wait for the brew to clear. If you have only a gallon or less left in, better draw it off into pint bottles, and prime as usual. When the tap jar is empty, clean out with water, swill it around with sulphite solution, and refill, either with your next brew or with water. If left empty, the tap and corks will dry out and become unusable.

### **CORRECT MASHING**

Many people do not realise that when using malt, as distinct from malt extract, one of the most important factors in the production of good quality home-brewed beer is the correct "mashing," or extraction of maltose from the malt.

In this the temperature of the water plays a most important part. The operating temperature of the first fermentation should be between 130 degrees and 150 degrees F. It should never rise above 150 degrees F.

The amateur often has great difficulty in keeping to these temperatures but here is a very simple and effective method.

Use a two-gallon polythene bucket or boiler with lid. Bring just under two gallons of water to 150 degrees F., pour them in the bucket, and scatter in two pounds of crushed malt (the extraction is much greater from the ground malt).

Then insert a 50-watt glass immersion heater, put the lid on the bucket, cover with a blanket or thick cloth, and leave on overnight or for a period of eight hours. The temperature with these quantities and with this type of heater will remain between 130 and 150 degrees F., and the extraction is first-rate.

Such a heater will last for years and is quite inexpensive —7/6 or so—and it is quite unnecessary to go to the length of using costly thermostatically controlled heaters. Current consumption is negligible.

After the eight hours extraction the liquid should be strained off into a boiler and two ounces of hops added. Make the total liquid up to three or even four gallons and boil for an hour. Strain and add 2 lb. block invert sugar (all the breweries in this country use

"invert sugar, which is wholly fermentable) then allow the brew to cool to 75 degrees F. before adding a packet of concentrated brewing yeast.

Fermentation as a rule takes three to four days and the brew may be siphoned into bottles or jars.

It is just as well to let fermentation come to an end, and then prime each bottle or jar with a little sugar syrup. This gives a nice gentle secondary fermentation, gives sparkle and head to the brew, and avoids burst bottles.

This makes a really excellent brew.

# Beers

## ANDOVER ALE

*Ingredients:*

1 lb. malt extract  
1 oz. hops

1 gallon water  
Brewer's (or dried) yeast  
1 level teaspoon  
liquid gravy browning  
(caramel)

*Method:*

Boil all the ingredients except the yeast together for 90 minutes; add more water to restore the original volume. Strain, allow to cool until tepid, add yeast. Keep closely covered in a warm room for four days. Siphon off into strong bottles, avoiding disturbing the yeast deposit, pop half a lump of sugar into each bottle and tie down the corks with string. Keep in a really cool place. It should be ready to drink in a fortnight to three weeks, but improves with keeping.

## BLACK HOME BREW

To make a black home-brew of stout-like quality, use the Cheshire Home Brew recipe, but include 1 lb. of patent black malt and 1 lb. of crushed barley in place of the crystal malt. These specialised ingredients can be obtained from Semplex, of Birkenhead.

## BROWN ALE

*Ingredients:*

1 lb. bran  
2 oz. dried hops  
2 lb. Demerara sugar

Gravy browning  
Yeast  
3 gallons water

*Method:*

Put two gallons of water in a three-gallon boiler, and put third gallon by. Bring to boil. Add sugar, 2 oz. dried hops (buy Heath and Heather packeted hops from chemists), bran, and two teaspoonsful of gravy browning (the liquid variety—which is only caramel colouring). Boil gently for 1½ hours. Strain through muslin into crock and on to third gallon of cold water. Leave to cool until blood heat, then pour into three one-gallon jars, filling to shoulder only. Add brewer's yeast, if obtainable, or dried yeast, fit traps and leave for seven days (in room temperature of 65 degrees). Then siphon into half-gallon bottles (or smaller ones if these are not available), cork really tightly, tie down corks. The beer may be drunk after another week, but will not be really clear. To clarify, it should be kept at least three weeks after bottling in a cool place. And keep an eye on those corks! This is an excellent and really cheap ale, and may be made week by week to accumulate a quantity, each fresh brew being put on to part of the lees of the former one, and the surplus yeast thrown away or used for other purposes. If this system is to be followed it pays to obtain a small quantity of true brewer's yeast initially, and it can then be kept going for several months. This brown ale costs about 1/- a gallon.

## CANADIAN LAGER

This recipe, for a lager specially suited to the Canadian palate, is one advocated by Wine-Art Sales Ltd., of Box 2701, Vancouver 8, B.C.

- 1 six Imperial gallon primary fermentation vessel (plastic preferred),
- 1 five Imperial gallon plastic or glass carboy and fermentation lock,
- 1 five-foot syphon tube,
- 1 plastic sheet (1 yd. sq.) to cover primary vessel,
- 1 Specific Gravity or Brix hydrometer and testing jar,
- 1 stainless steel or enamel vessel, not less than 1 Imperial gallon,
- 1 wooden or stainless steel spoon,
- 1 bottle capper for crown caps,
- 5 dozen beer bottles, tall or stubby,
- 1 immersion-type thermometer.

*Ingredients:*

- 5 Imperial gallons of water

1 2 ½ lb. tin of light barley malt extract  
2 ozs. Branding or Ouster hops  
½ oz. Kent finishing hops  
4 lb. of Corn sugar (Dextrose)  
1 teaspoon citric acid  
2-3 teaspoons of salt  
½ teaspoon yeast energiser  
½ teaspoon special beer finings  
1 teaspoon heading liquid  
Lager beer yeast or ale yeast

note: The addition of one teaspoon of ascorbic acid at time of bottling will reduce the hazard of oxidation

*Method:*

Be sure to save two full cups of corn sugar for bottling; then make sure your yeast starter is ready to use. Boil as much of the water as possible. Naturally, this will depend on the size of the container you have, but not less than one gallon. Along with the water you should boil the malt extract, 2 oz. of hops (broken up and tied in cheesecloth), the salt and citric acid. Simmer very gently for 1-2 hours with a lid on to reduce evaporation. As you remove this from the heat, add the ½ oz. of Kent hops which can remain in the "wort" during the primary fermentation. Pour this hot wort over the corn sugar (minus the two cups, remember). Stir to dissolve the sugar and add the balance of the water to make up a total of five Imperial gallons.

Cover the "wort" with a sheet of plastic tied down and allow the mixture to cool to around 60 degrees F. This may take up to 12 hours, so don't hold your breath. The fermentation vessel should be in a place where the temperature will remain between 55 and 65 degrees F. When the "wort" is cool, take a Specific Gravity reading to make sure it is between 33 and 38. (The starting gravity should be 30 to 40, and the beer should finish at 0, i.e. 1.035 to 1.000). If it is not correct, you can adjust it by adding more sugar or water, depending on whether it is high or low.

Now add the active beer yeast and cover once again with the plastic sheet. After about four or five days of active ferment you can start checking the Specific Gravity to see how the ferment is progressing. It will probably take six to ten days to get down to between 5 to 10 (1.010) depending on the temperature. When it gets to this point, skim off the floating hops, add the yeast energiser, and siphon the wort into the carboy. Don't fill the carboy too full because you need room to add the "finings" at this point. Dissolve the half teaspoon of finings in one cup of very hot water (not boiling) and pour this on top of the beer in the carboy and stir in thoroughly with the handle end of your wooden spoon. The carboy should now be filled to within two or three inches of the fermentation lock which should be properly attached at this time.

Now that your beer is in the carboy with the fermentation lock attached and placed in a cool (55 to 65 degrees F.), place away from the light. It is safe even if you don't get to look at it for up to three weeks. Under normal circumstances, it will be clear and the

gravity down to zero (1.000) in about ten days. Don't worry about the extra time involved in making beer this way, inasmuch as your beer is ageing in the carboy and will be ready that much sooner after bottling. In any case, when these two things occur, i.e. the brew is reasonably clear and the gravity is down to 1,000, the time has come for bottling.

Now take those two cups of sugar saved from your 4 lb. Siphon off about two pints of beer into a clean saucepan, warm on the stove, and dissolve the two cups of sugar to make a beer sugar syrup. Be sure the saucepan is big enough because the mixture will foam all over the stove if it's not, and annoy your wife somewhat. When this is ready, siphon off the rest of the beer into your clean primary fermenter, being careful not to disturb the yeast sediment.

**Save your yeast.** At this time you can get your yeast back for your next brew by swirling the sediment in the bottom of the carboy and, using a small funnel, pour it into a clean beer bottle and cap immediately. Place this bottle in the crisper part of your refrigerator where it won't freeze. The next time you make beer you will not have to grow your yeast but merely take this bottle from the refrigerator, open it and add it to the "wort" when the wort is properly cooled. This yeast starter will be good in the refrigerator for approximately three to five weeks in the case of Lager yeast and two to three weeks for Ale yeast.

Now that we have the clear beer in the primary fermenter and the gravity is 1.000, stir in the syrup, making sure it is thoroughly distributed, but do not aerate the beer too much. At the same time you can be stirring in the teaspoonful of Heading Liquid. The gravity of this mixture should be approximately 1.005. We will assume that you have already prepared your five dozen bottles, that they are thoroughly clean and standing in a convenient place to be filled to within one inch of the cap. It does not matter if they are wet inside, in fact, it may make it easier to fill them by reducing the foaming. Cap them immediately and place in a temperature of 60 to 70 degrees F. for ten days and then chill and try the results of your labour.

For Ale use the same recipe with the addition of 1 oz. of gypsum, and Ale instead of Lager beer yeast.

## CHESHIRE HOME BREW

### *Ingredients:*

2 gallons water	1 oz. yeast or a packet of
2 lb. crystal matt	dried brewer's yeast
1-lb. tin of Golden Syrup	1 oz. hops
Teaspoonful of salt	

### *Method:*

Bring the two gallons of water in the boiler up to 150 F. Add the malt and maintain at a temperature of 140-150 F. for four hours. **It is most important that the temperature never exceeds 150 F.** Strain off, and this leaves you with the wort. Add the

hops and salt to the liquor and boil for an hour. Strain again and add the syrup. Allow to cool to 65 F. and add the yeast. Ferment at between 65 and 70 F. for four days. To a large two-gallon stone jar add a tablespoonful of sugar, and then siphon in your home brew. All sediment will sink under the level of the tap, if you are using the usual home-brew type of jar. Leave in the jar, which must be quite airtight, for a week to ten days. Your homebrew is then ready to drink, and should prove a really satisfying and nourishing drink.

### FROM DRIED MALT EXTRACT

Many home-brewers are now turning to the use of *dried* malt extract which is now on the market, and which is much more pleasant and convenient to handle than the sticky extract in jars.

It certainly makes an excellent brew, and readers may care to try these German recipes for its use.

It is important to use a good, sedimentary beer yeast, which will settle firmly and not rise throughout the wort, and it is best to make a starter for it a couple of days before you start brewing. These recipes are those advocated by the firm which supplies the Vierka XXXX beer yeast sold by Semplex.

In each of them, boil the dried malt and hops in the water for half an hour. Strain into two-gallon fermentation jar and fit an air lock.

Allow the liquor to cool to 70 degrees F. then add your yeast starter, and leave to ferment in a warm room for a week or eight days.

Siphon into a cask, jar with tap, or strong quart cider bottles. Make a priming syrup by dissolving 1 lb. of sugar in ½ pint of boiling water. To a 2-gallon container add 1 ½ oz. of this syrup, and to other containers and bottles proportionately, when siphoning the beer into them and this will impart a sparkle to the finished brew. With a cask or jar finings may be added at the same time. Bung down or cork securely, and after a fortnight to a month the beer will be ready to drink. Keeping it in a cool place will assist it to clear.

Here are the recipes:

**Light Lager:** 2 ½ lb. dried Malt Extract, 2 oz. hops, 2 gallons of water. Beer Yeast.

**Lager** (Pilsener style): 4 ½ lb. dried Malt Extract, 1 oz. Hops, 2 gallons water, Beer Yeast.

**Lager** (Munich style): 5 lb. dried Malt Extract, ½ oz. of Caramel, 1 oz. Hops, 2 gallons water, Beer Yeast.

**Dark Beer or Porter:** 6 ½ lb. dried Malt Extract, 1 oz. of Caramel, 2 gallons water, Beer Yeast,

**Ale:** 6 ½ lb. dried Malt Extract, 2 gallons water, 2 oz. Hops, Beer Yeast.

Written by John Nott, cook to the Duke of Bolton  
in 1726

### TO MAKE COCK ALE

Take a couple of young cocks, boil them almost to a jelly in water, and put them into four gallons of ale; put in also a pound of raisins of the sun stoned; infuse a pound of dates, mace and nutmegs, of each two ounces, in a quart of canary; put them to the ale; strain and squeeze out liquor, and put to it half a pint of new ale yeast. Let it work for a day; you may drink it the next but it is better the third day; you may make it weaker by mingling it with plain ale as you draw it, or you may put it into a firkin of ale. It is good against a consumption and to restore decayed nature.

### HOW TO START A GINGER BEER PLANT

Grow a Ginger Beer Plant with 2 oz. baker's yeast (buy it at a baker's where bread is baked on the premises). Put the yeast into a jar and add ½ pint water, 2 level teaspoons of sugar, and 2 level teaspoons of ground ginger.

Feed it each day for the next seven to ten days, add 1 teaspoon of sugar and 1 teaspoon of ground ginger. You will see your "plant" growing day by day.

Strain it Now strain the mixture through a piece of muslin or a very fine household sieve (keep the sediment) and add to the liquid the juice of 2 lemons, 1 lb. granulated sugar and 1 pint warm water. Stir until the sugar has dissolved, then make up to 1 gallon with cold water.

Bottle it. Put the ginger pop into bottles, filling to about three inches from the top, and leave for two hours, taking care not to put them on a stone floor, unless standing on a piece of wood, Then cork lightly. Keep for seven to ten days before drinking.

**WARNING: ON NO ACCOUNT USE SCREW STOPPERS.** (This is important, to avoid burst bottles).

And start again. The sediment you had left when you strained the mixture is divided into two and put into separate glass jars. And you're back in the brewing business again! But now you have two plants instead of one. If one plant is enough for you, give the other to a friend and give him the recipe. To your sediment add half a pint of cold water and carry on as before from "Feed it . . ."

### HOME-BREW

By Mr. G. W. Reeves, of Cottage-by-the-Willows, 5 Willow Grove, Malton Road, York:

#### *Ingredients:*

1 lb. pure malt extract	1 gallon water
1 lb. sugar	½ teaspoon salt
1 oz. hops	Yeast

*Method:*

Dissolve the malt extract, sugar and salt in the warmed water then add most of the hops and boil for ½ hour, adding the remainder of the hops five minutes before the end. Strain into a wide-necked jar so that it is filled to within 1 ½ inches of the top, and cover well.

When cool add the yeast which should be dried brewer's or lager type.

The ferment should be complete within a week. When quite sure the ferment is complete, rack off and add 2 oz. of sugar, stirring thoroughly.

Bottle in screw-top bottles, and in a few days the homebrew will be sparkling and ready to drink.

### **HONEY BEER**

*Ingredients:*

4 quarts water	4 oz. clear honey
1 oz. ground ginger	Juice of 3 lemons
1 lb. white sugar	Yeast
2 oz. lime juice	

*Method:*

Boil two quarts of water with the ginger for half an hour. Put in a pan with the sugar, lime juice, honey, lemon juice and the remaining two quarts of water (cold). When just at blood heat, i.e. when you can bear your finger in it comfortably, add the yeast, a general-purpose wine yeast or a level teaspoonful of granulated yeast. Let it remain, closely covered, in a warm place for 24 hours, then strain through muslin. Allow to settle for an hour or two, then bottle, but use strong bottles and keep an eye on the corks!

### **MILD BROWN ALE**

*Ingredients:*

5 oz. hops	2 level teaspoonsful granulated
8 gallons water	yeast
3 lb. brown sugar	

*Method:*

Boil the hops and water together slowly for about 40-50 minutes, strain over the sugar, and allow to cool. When tepid add the yeast. Turn into a pan or tub to ferment for four days (at 65 degrees, up to a week if temperature is lower), then bottle. Tie down corks. Can be drunk within a fortnight but may take a month really to clear.

## BARLEY WINE

(By P. Bryant)

### *Ingredients:*

1 $\frac{3}{4}$ lb. pale malted barley	1 level teaspoon ammonium sulphate
2 ozs. flaked rice or 4 ozs. polished barley	1 level teaspoon gypsum
1 oz. hops	$\frac{1}{2}$ teaspoon salt
1 lb. sugar	1 Campden tablet
1 level teaspoon citric acid	1 gallon water
	Champagne yeast

### *Method:*

Pick over and then put malted barley and adjunct through mincer to form the grist. Heat one gallon of water to 68 degrees C. in 12-pint saucepan on very low gas; add grist and maintain temperature at 62-68 degrees C. for two hours. Strain through kitchen sieve and then replace wort in saucepan, add hops and gypsum and boil for 40 minutes. Strain again, cool and take S.G., which should be around 48. Add 1 lb. sugar, Campden tablet, citric acid, ammonium sulphate, and champagne yeast, and commence fermenting in two-gallon polythene bucket with lid. Fermentation will be strong within 12 hours. Skim brown scum from surface each day and after two days siphon into gallon jar and fit fermentation lock. When clearing begins (which may be after six weeks) rack and refit lock. When clear, rack again, cork up, and store for six months, after which it may be bottled.

## MILK STOUT

### *Ingredients:*

2 lb. patent black malt	4 gallons water
6 oz. flaked barley	1 pkt. vitamin yeast food
2 lb. glucose (powdered)	1 oz. of hops
1 pkt. dried brewing yeast	1 teaspoonful of salt

### *Method:*

Bring the water in the boiler to 150 degrees F., add the malt and flaked barley. Keep at a steady 140-150 degrees F. for four hours. Great care should be taken that the temperature does not exceed 150 degrees F. during the whole of the four-hour period, for this is important in the extracting of the maltose, and is almost the most vital process in this particular type of brewing. Strain, discard the malt, and add the hops and salt. Boil for a further hour. Place 2 lb. of glucose in the crock, and pour over it the hot wort. Stir well. Leave until the temperature is 65 degrees F. then scatter on the yeast and yeast food,

and stir well in. Ferment in the usual way for 48 hours in a warm place, then siphon into bottles or jars. The brew is ready to drink in about a week. Flaked maize can also be used to great advantage in all home brews, in place of the flaked barley.

### **NETTLE BEER**

*Ingredients:*

2 gallons nettles	2 oz. hops
¼ oz. root ginger	4 oz. sarsaparilla
4 lb. malt	2 gallons water
1 level teaspoonful granulated yeast	1 ½ lb. sugar
	2 lemons

*Method:*

Choose young nettles. Wash and put into a saucepan with water, ginger, malt, hops and sarsaparilla. Bring to the boil and boil for ¼ hour. Put sugar into a large crock or bread pan and strain the liquor on to it; add the juice of the two lemons. Stir until the sugar has dissolved, and allow to cool to 70 degrees F., keeping pan covered, then stir in the yeast. Keep the crock, covered, in a warm room for three days, then strain the beer into bottles, cork, and tie down or wire the corks. Keep the beer in a cool place for a week before drinking—and keep an eye on the corks.! This makes an excellent summer drink and should be made in May.

### **SPRUCE BEER**

To make the beer the recipe is as follows:

Melt 2 lb. sugar, treacle, essence of malt, molasses, or honey, into a gallon of hot water, put in cask or fermentation vessel, add one gallon cold water and two tablespoonsful of the essence of spruce. When the must is tepid add ale yeast. Ferment for two days and bottle. It will be ready for use within one week.