



Mead and Mead making (No 2)

S. W. ANDREWS

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INTRODUCTORY NOTE

Apart from wishing to provide interest and pleasure for Beekeepers, the National Honey Show has the serious aim of raising the standards of production of honey and all other bee-produce.

With this objective in view, leading authorities have been invited to write for our Schedules on a number of subjects and their work is here available for more general distribution. We wish to thank all our contributors, they are leading exponents of their skills, we have, however, to make it clear that the advice which they give is their own individual method, we feel sure that they would be the first to encourage new alternative ways of preparation with a view to continual advancement and progress within the Craft.

Hon. General Secretary

NATIONAL HONEY SHOW

Mead and Meadmaking

By S. W. ANDREWS'

It is fairly safe to say that mead is the oldest known fermented drink, Meads were drunk in India 4000 years ago and Plato and Plutarch refer to mead as the drink of their ancestors before wine was invented. The Ancient Greeks enjoyed a mead called Melitites whilst Nectar-the fabulous drink of the Greek gods was a form of mead. The Romans offered libations of mead to their Gods of love and fertility, and indeed we owe the origin of the word honey moon to the fact that, for one lunar month after their marriage, the Gothic man and his wife supped meads and ate honey cakes and other delicacies made from honey, in the belief that this would make the union more prolific. This may have had some bearing on the fact that in those days large families were very common.

In the early days, the beeswax from the honey comb was required in great quantities for the making of candles. These candles were used not only in the churches but also in the home and of course honey was the only form of sweetening, so that beekeeping in those early days played a very important part in the economics of the country of that time.

It was only natural therefore, that honey should be used to make the only alcoholic drink known to man at that time. Before the wax could be used for candle making it had to be washed, this washing produced a weak solution of honey water which would ferment quite naturally without any other addition, as the honey would contain a great number of yeast cells; in any case the airborne yeasts would very quickly inoculate the honey water. One can almost imagine the jubilation of the first beekeeper to discover that his fermented honey water had such stimulating properties.

When wines were imported from the continent, mead in common with other country wines which were made in the home fell by the wayside, and gradually the art of making them was lost, that is to the many, but not to the few, for there have always been beekeepers and wherever you find two or three beekeepers you will also find a meadmaker. This may be due partly to economics. If one has to purchase honey on the open market, a gallon of mead can be fairly expensive, that is if one uses pure English honey, and make no mistake about it, English honey is the finest in the world.

You can of course use the cheaper imported honey to make your mead, but the flavour will suffer accordingly. In any case a gallon of mead will fill six bottles, so that even if you use only the best honey your mead will cost no more than wine made from grape concentrate.

It is within the meadmakers capacity to make several types of mead. each one quite different to its fellow. The variation is produced by the quantity of honey used, the residual sweetness, the addition of spices and by the addition of fruit juices.

Dry meads should contain less alcohol than the sweeter dessert types. **For a dry table wine** an alcohol content of between 10% v/v (volume in volume) and

13% v/v is sufficient, whilst the sweet meads should contain not less than 14% v/v.

Honey will ferment very well for a time, nevertheless to obtain a good gravity drop it is necessary to coax it a little. Temperature is important, for the initial fermentation 70° F. is about right, afterwards the temperature should be about 65° F. The acidity must be adjusted, although there is some acid in honey there is not sufficient to ensure a well balanced product.

There are several wild yeasts to be found in honey, they belong chiefly to the genus *Zygosaccharomyces*, but if these yeasts are allowed to carry out the fermentation, the acidity of the mead will be much higher than if the must is first sterilised. and is then inoculated with a selected wine yeast. The wild yeasts will produce as much as 1.2 gms of acetic acid per litre, whereas the Sacc. **Epiloidous** (a selected wine yeast) will produce only 0.6 gm. per litre.

- Author of "All about mead", Mr. Andrews is the third generation of his family to keep bees, he has made mead from their honey for 29 years and has served both the National Association of Wine and Beer Makers, and the Hertfordshire Beekeepers as President.

As the acetic acid content of the mead increases, so will the attendant esters (a compound of an acid with an alcohol). This will lead to the formation of undesirable volatile substances and flavours during the maturing process.

Honey may also contain acetobacter (cells responsible for converting alcohol to acetic acid), so it is important to sterilise the must either by boiling or by the use of sulphite. If the honey and water are boiled, remember that overboiling will certainly spoil the flavour.

The colour of the mead will depend to a large extent upon the colour of the honey used. Light meads usually oxidize and darken a little during the maturing stage, this is particularly true of meads that are stored in casks.

Generally speaking, light honey is used in the making of dry mead, and the medium or dark honey is more suited to the medium or sweet meads. Dark honey usually has a much stronger flavour than light honey, this flavour can be much too strong in a dry mead, but it can be quite pleasant in a mead that has a residual sweetness and a higher alcohol content. Heather honey will make a very good sweet mead.

In order to appreciate the qualities of mead, it may be of interest to know something about the chemical analysis of honey. The approximate amounts are as follows:

77% Dextrose, laevulose and sucrose
17 % to 18 % water
The remaining 5% includes-

Dextrin 0.5%

Minerals 0.2% made up of salts of iron, Phosphorus. Lime. Potassium, Sulphur and Manganese.

Also present in minute quantities are protein, Pollen. Amino acids. Citric acid, Formic acid, Malic acid, Flavouring components, Oils, Gums Albumin. Waxes, Fats, Yeasts, enzymes and Vitamins.

The protein and vitamins are associated with the pollen content. There is very little yeast nutrient present in honey. It is therefore very important to add some to ensure an efficient performance by the yeast cells.

A good recognised formula for yeast nutrient is as follows: Tartaric Acid-80 grains Potassium Phosphate-30 grains Ammonium Sulphate-60 grains Citric Acid-55 grains Magnesium Sulphate-8 grains

This formula can be made up by any retail pharmacist. It is used in the proportion of 1 level teaspoonful to the gallon and is added to the honey and water with the yeast. It is possible to buy yeast nutrient in tablet form, in this case one table is sufficient for a gallon.

Honey may also be deficient in tannin, this can be added in the form of grape tannin in dilution, or 1 cupful of fairly strong tea to the gallon.

GENERAL RECIPE

Before referring to the various types of mead which can be made, a general method of procedure may be helpful.

Bring the honey and water to the boil. Skim the froth from the top and allow to cool. Add the acid and yeast nutrient, inoculate with a good yeast culture which has been previously reactivated, put into a jar, fit an air lock and ferment in a warm place. When fermenting in a jar it is important not to fill the jar for the initial fermentation otherwise a lot of liquor will be lost through effervescence. A good plan is to fill the jar 7/8ths full and put the remainder of the liquor into another container and stand the two together. After the initial or vigorous fermentation has subsided, marry the two lots of liquor into the gallon jar. When the fermentation has ceased, rack the mead into a clean jar and store in a cool place.

TYPES OF MEAD

MEAD. This is a dry mead. It is a very good mead to use for the table and is delightful if chilled and served with fish. It may be used whenever the occasion calls for a dry white wine. The initial gravity should be about 90 that is to say about 3 ¼ lbs. of honey to a gallon of water.

SACK MEAD. This is a sweet mead which can be drunk with the dessert. It is also a good social wine, that is to say a wine which can be offered on all social occasions. It is fairly safe to say that this is the most popular mead and can carry a much stronger flavour than the dry mead. This type will require 4 to 4 ½lbs of honey according to how much sugar residue is required in the finished mead. These quantities are to a gallon of water.

METHEGLIN. This is a dry mead to which spices have been added. The spices can be boiled with the honey and water, or they can be suspended in the mead during the fermentation period, the latter method is preferable as the flavour can be more easily controlled, it should be served chilled.

The spices used in the making of metheglin consist of the following:

Rosemary, Ginger, Corriander, Aniseed, lemon and orange peel. Mace, Nutmeg, Cinnamon, Juniper, E'lderflower and cloves. *ONLY A VERY SMALL AMOUNT IS REQUIRED FOR A GALLON.*

SACK METHEGLIN. This is a sweetened version of Metheglin. It should be medium sweet. This mead is suitable for all social occasions.

CYSER. This mead is made from pure apple juice and honey. The honey is used to sweeten the apple juice to the desired gravity, this should be about 100. It is difficult to say how much honey is required as the initial gravity of the apple juice varies considerably. The finished mead should be medium to dry. The alcohol content should be between 13% and 14% v/v.

Cyser can be served as an aperitif and should be chilled before serving.

PYMENT. Pyment is made from pure grape juice and honey, again, the initial gravity of the grape juice is difficult to estimate and the quantities of honey will vary accordingly. The desired gravity should be about 100.

This is a sweet mead and therefore requires a good alcohol content. It is suitable for all social occasions. Pyment may also be made as a dry mead, in this case the initial gravity should be about 85 deg.

HIPPOCRAS. This mead is made by adding the spices referred to earlier under pyment.

MELOMEL. Any fruit juice, other than apple or grape, which is sweetened with honey and fermented, is called Melomel. Melomel should be medium to dry and can be served as an aperitif, it should be slightly chilled before use. Wine recipes may be used, the honey substituted for sugar.

SPARKLING MEAD. There are several ways of making a sparkling mead, the most reliable way requires a great deal of expertise; an easy way is as follows: First of all make dry mead using a good light honey, use 2 ½ to 3 lb. of honey to the gallon of water and use a champagne yeast. Ferment the mead to dryness and allow to clear. Boil ½ lb. of honey with 3 oz. of water. Allow to cool. Put 1 oz. of honey water into each bottle and fill to within approximately 1 ½ in. from the bottom of the cork with mead. This measurement is after the cork has been driven home and should be estimated when filling. Stout-walled champagne bottles should be used; there is a very real danger that ordinary wine bottles will burst under the pressure of C O₂ gas which will be produced and they should never be used. After filling the bottles they should be stood corked loosely in a warm place for one or two days to encourage fermentation to recommence. When this becomes apparent the bottles should be corked firmly, the corks should be wired and the bottles stored on their side in the cellar at a temperature of about 58° to 60° F. Sparkling mead should be stored for at least 6 months in bottle before use.

SWEET MEAD. This may be improved by the addition of a little hops. The method is as follows: Bring the honey to the boil in 6 pints of water, skim the froth from the top and allow to cool. Boil ¼ oz. hops in 2 pints of water for 10 minutes, strain and add the liquor to the honey and water.

SHOW MEAD. If one is making mead for show purposes the only permissible additives are acid and yeast nutrient.

All the usual methods and principles of winemaking have to be observed with mead making. Strict cleanliness must be observed at all times. Remember that the best mead will be made by using the best honey. Never let your mead stand on its lees, and store for at least 3 years before drinking it.

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The National Honey Show presents annually a three day show of the best of the products of the honeybee, with additional classes for kindred interests and skills, including school bee-keeping, a lecture programme and a display of the latest and finest bee-keeping equipment on the market today.

It attracts entries and beekeepers from all over these Isles, and a number of leading organisations hold meetings during the Show.