

## Organic Essential Oils The Reality

By Martin Watt

See also the article by Bernie Hephrun in 'articles by others'.

The term '**Organic**' is used to describe food, drink, cosmetics and other commodities. If an item is described as 'organic' by a supplier, it is being used to suggest a superior product. However, the term is misleading because it describes all living things. It is also applied to 'organic' chemistry.

If something is described as "**organically grown**" this has a completely different meaning, but just look at how many products (including essential oils) are sold as "organically grown". It would require an area of cultivated land as big as the whole of Europe to supply the volumes of products in the marketplace.

In the case of aromatherapy suppliers, there are hundreds of web sites using these misleading terms in order to fool their customers. There are others who claim all their oils are "organically grown" when that is impossible to achieve if they sell the full range of essential oils. There are others who buy the cheapest oils they can find and sell them at inflated prices as 'organic', 'wild grown', etc.

### How is "Organically grown" defined ?

It is not easy to be specific because each country tends to have its own definitions. The standards are mainly set by growers trade organisations and may be adopted by regulatory organisations both Governmental and NGOs. These standards can be good if adequately policed, or poor, leaving the door wide open for market abuse.

Crops and produce can be labelled as 'Organically grown' if they conform to the organisations standards and licensing system. However, some of the organisations offering certificates are just paper pushers and do not conduct adequate or any inspections of the grower - particularly the case with some European organisations.

The criteria which is crucial to organic farming is normally defined as an '**effective soil management regime**':

A first phase of **clearing the land** of unacceptable chemicals has to occur - this can take up to 5 years of normal weathering. Improvement of the soil during this period is allowed such as adding lime to reduce soil acidity, or adding green composting materials. Weeds can be destroyed using barrier methods such as plastic sheeting. When the required time has elapsed, some organisations will conduct their own tests to ensure no undesirable residues remain, while other certification organisations just accept a growers assurances!!

Once the land is considered 'clean', crops are planted. They can be treated with permitted fertilisers such as manure, green composts, or in some cases minerals. Some growers will only plant seeds produced from other organically licensed farms, but this is another claim to be wary of without proof.

**Crop rotation** is encouraged to allow soil fertility to be restored. This can include growing legumes to boost soil nitrogen entrapment. A rotation system may not apply to essential oil plants that stay in place for many years such as lavender, rosemary, tea tree etc. When the plants natural life has been completed or they become unproductive, new plants may be grown on the same spot. Trees can be classified as organically grown if they are wild, or plantation crops provided no artificial methods are used for weed control and pest control.

**Weed control** can be by manual or machine weeding, barrier sheeting, or by dense ground covering plants to suppress the weeds.

**Pests and disease control** can be by using pest resistant varieties and by using a predatory-encouraging ecology, E.g. Ladybirds and other natural predators, or by the application of 'approved' natural pesticides.

Even if all the above are complied with, it does not invariably mean that the plants are not contaminated. Incidents such as Chernobyl and Fukushima show just how far contaminants can travel. Most essential oils exported from the old Soviet republic had to undergo radiological contamination testing and be certified before being imported. Any aromatic plants grown downwind of chemical factories could well be contaminated, despite the growers being certified as only growing organically. There are many such scenarios around the world that put big question marks over the true nature of organic growth certificates.

### Is it the soil or the oil which is organically produced?

Whilst the plants may be grown in uncontaminated soil and therefore can be described as 'organically' grown, **the essential oil is a secondary product** resulting from physical and sometimes chemical processing. Therefore, you may have a Jasmin absolute where the flowers were genuinely organically grown, but subsequent chemical extraction techniques mean the end product certainly should not be classified as 'organically grown'. One therefore has to consider how the oil or extract is processed subsequent to the plants production.

Another good example is benzoin. The starting resin may be from wild trees. However, there is no such thing as benzoin **essential oil**. The resin is dissolved in a solvent which is normally a synthetic one. Therefore if you see benzoin sold as "benzoin oil OG" this is typical trade hype, or a seller who knows nothing about production.

Describing an oil as 'organic' without any specification is therefore just marketing hype.

### Is the Certificate valid ?

As previously pointed out, various organisations have their own definitions and such definitions need to be evaluated if they are to have any meaning. In recent years there has been a proliferation of various forms of 'certification' and these are usually rather vague. The fact that a certificate is demanded by buyers, often means the producer - or more likely middleman dealer - know they can obtain a higher price. This then raises the question of how genuine and checkable is the certificate and any organisation granting it.

An important part of this question of reliability of certification is that the large dealers in the essential oil trade have to tie up many millions of cash in stock. Therefore, they want to shift that stock as fast as they can. In order to do so, the claims made by their salesforce selling to small non-technically equipped suppliers, can be exaggerations or just lies.

When one considers the wide variety of plants which can produce oils and the method of extraction, the problem which invariably emerges is purity, consistency and the absence of biocides. **However, it has not escaped some growers and traders that to label an oil as 'organic' will help to sell it - and often at a higher price.**

Once the raw plant material is processed by steam distillation or solvent extraction, the chemical compounds may change. New compounds are formed as a result - some minor, some major. **An essential oil is a result of processing.** Hydrolysis and oxidation occurs during the process and components which may not be normally be found in the plant can be produced. Due to these changes one has to consider whether any essential oils should really be classified as "natural" even though the starting materials may have been produced in regulated growing conditions.

**Wild is another term which has several meanings.** It usually means that the plants are left to grow without pesticides or fertilisers. Cross fertilisation means that the new plants have a 'natural variation' with resultant chemical variation making therapeutic uses unreliable. The plant material is gathered periodically and the oil distilled. If they are trees these may be destroyed completely such as happened with Sandalwood, or their health compromised such as can happen with over exploitation of resin bearing trees such as the Olibanums.

Some Governments have made attempts to get reputable certification authorities established. However, in reality, many of these so called "approved" organisations tend to be paper pushers and nothing more.

### Which oils can be certified as 'Organically grown' ?

As a general rule trees that are wild and not subject to treatments can be considered as "organically grown" or "wild grown". Herbaceous plants such as Rosemary grown on uncultivated hills in Tunisia and other areas can be genuine, but once even that oil has got into the International essential oil traders hands it can be "touched-up". Therefore **traceability is the key** but that is often a difficult task.

Oils produced by farmers in poor countries may be genuinely termed 'organically grown' simply because they cannot afford pesticides, fertilisers, etc. However, it should not be forgotten that there are cases known of big pesticide companies dumping stocks of banned pesticides on such countries. These can then be used by illiterate farmers who are unaware of their dangers.

**Literacy is a huge issue over the classification of plants grown in under-developed countries.** Frequently the peasant farmers cannot read or write and any documentation required by overseas customers will be filled in by the middlemen traders. Even the UK Soil Association was accepting such documentation on essential oils originating in such countries. **Documentation supplied purely on the word of the oil suppliers!!**

### What are the criteria needed to evaluate an oil?

The quality of essential oils can vary considerably. There are variations due to several factors - botanical, geographical, climate, etc. The production and distribution varies according to the agricultural regime, distillation methods, specification, etc. However, even the term 'quality' is open to interpretation. What may be the correct quality for the food flavouring trade, may be very different to what is required by the fine fragrance trade. It must never be forgotten that aromatherapy is only a minute part of the International trade in oils and they do not as a rule set the standards.

The larger traders in essential oils tend to have every batch of oil analysed by specialists in the trade. This is because prices are set on the basis of long-established trade criteria of quality. When ton lots of oils are being sold and bought, big money is involved and the buyers do not want to get caught out with a low grade oil sold as top grade. Once you go lower down the supply chain things get much murkier as far as analysis is concerned. The fact an oil is **claimed** to have been analysed means little. There are grades of analysis the same as grades of oil. Most aromatherapy suppliers cannot afford batch analysis of their oils. The tendency is to have a few oils from a potential new supplier analysed to see what they are like. However, that analysis is likely to be the cheapest they can get and it **does not necessarily detect if an oil is adulterated**. The vast majority of aromatherapy type suppliers will simply accept what their suppliers tell them about an oil. Indeed many of them know little more than they have read in the trades popular books (I call them novels).

Some of the reputable middle-men traders in essential oils will not apply the 'organic' or 'organically grown' labels to what they sell because they have been in the trade so long they know these terms are rarely trustworthy. They will sell oils to aromatherapy suppliers without such descriptions who then add their own OG labels. The market is flooded with such traders. Often this

lie is proliferated because the suppliers know that their customers will not purchase perfectly good oils unless fancy marketing terms are used. Therefore, often the blame is with customer demands in turn due to inaccurate information in the trades education systems.

You must beware of those who claim their oils are pesticide free. Routine analysis of essential oils does NOT detect pesticide residues. Only very large wholesale traders can afford such testing and this is rare.

### **A few examples of trade hype taken from another article.**

"We grow all our own plants and distil them".

Classic sales hype that one. Since when did sandalwood trees grow in France, or Ylang trees grow in the USA, or Ravensara 'wild' grown in France? I have seen this all on the literature from certain essential oil suppliers.

"We don't grow them all ourselves, but we inspect all the people that grow the plants for us."  
I have a simple answer to that, **hogwash!**

"All our oils come only from organically grown or wild plants".

In the majority of cases this is hype. The International essential oil trade is a massive agricultural business. There is no sound evidence that organically grown essential oils are any better than those grown on a commercial scale. Indeed, in many cases they will not be of such good olfactory quality if they have been stewed in old copper stills 'on the farm'. If you want to support organic growers that is a fine thing to do, but please try and get some evidence that you are not just throwing your money into a con artists pocket.

Another good indication of an intention to mislead, is a web site packed with impressive looking conservation and organic growers logos. This always sets alarm bells ringing in my head. Particularly when you can't work out what the heck they mean.

The next one is not so much how to spot a con, as how to spot someone who does not have a clue about what they are selling. It is suppliers who sell lily of the valley, apple blossom, strawberry, musk, etc. and in their literature describe them as 'essential oils'. Many of you will of course know that these are all synthetic.

### **Conclusion:**

The situation for an individual buyer is extremely confusing. The best means is the analytical profile of an essential oil, but this is principally concerned with purity rather than the growth methods of the plants. It is up to the individual buyer to examine the parameters that are given to an oil and never ever rely on those who say "I trust my supplier". A few are excellent, but hundreds who seem good are not.

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