

Appendix to Alpine Roots, March 2017.

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Choosing a Potting Compost

There are basically three types of potting compost widely available - John Innes (supposedly loam-based), peat based types and the newcomers on the block, the peat-free (or peat-reduced) alternatives to peat. Alpines and bulbs can, with care, be grown in any of these types but loam-based types are usually the more successful. There are several reasons for this - they are more similar to the natural substrates that alpines & bulbs often grow in, they keep their structure better over long time periods and watering is easier to manage. Many bulbs need a dry dormant period and if grown in an organic based medium this can be difficult to re-wet after dormancy. Organic mediums also have a tendency to dry out suddenly which can easily catch you out. They also shrink and subside more drastically so a plant potted with compost to the brim to start may well find itself several inches down the pot after a few months! This slumping also reduces the amount of air in the compost and we all know what alpines think about that. So most of us prefer to use a soil-based medium and have usually turned to a John Innes type.

But in recent years, the composition and quality of John Innes composts has changed substantially. Less and less loam is included, the organic content has come to dominate and what little loam there is often very fine and sandy. Worse, every manufacturer seems to have a different formula for their offering and worse still, every batch can be different. Consistency is thus a huge problem. This means that every year when we repot our plant collections we are running in effect a big

experiment - each year the compost is different and we have no idea how it is going to perform. We have to learn afresh how to handle that compost, how to water it, how our plants will grow in it. And just as you get the hang of it, it is time to repot and the next batch of compost is completely different! You have to start learning all over again every year. One truly bad batch could theoretically kill off entire priceless plant

The search for a decent John Innes

It was with all this in mind that we have struggled to find a decent, reliable John Innes compost. I know John Massey at Ashwood Nurseries still makes a true-to-formula John Innes compost but it is only available at the nursery and Ashwoods is a long way from Somerset!

We have tried pretty much all the common brands (J. Arthur Bowers, Levingtons, etc) and all were found wanting. We tried Keith Singleton John Innes compost for the first time this year after seeing it recommended in various places. My first impression was that the weight of the bag suggested there was not a lot of loam in it and on opening, it appeared quite peaty. I did a basic "shake test" (put a large handful in a container, add water, shake vigorously and let it all settle. The loam & grit fall to the bottom while peat or other organic materials usually float). It was obvious after settling that it was largely organic material. I *estimated* from the test that the formula could be something like 60 to 70% peat (and other organic materials), maybe 10% loam and 20% grit. Subsequently I wrote to Keith Singleton and asked what their formula actually is. Their reply was: "We use the traditional recipe: 70 parts steam sterilised loam, 30 parts sphagnum peat, 20 parts sharp washed sand. One exception: we use Q4 instead of JI Base which is too unpredictable if the hoof & horn is a fine

grit. Our Loam is stacked top spit loam with its turf and is layered with added organic horse manure so it is way more fibrous than commonly available. We get our loam locally and from sources that have not grown crop for at least 5 years. Hence the more fibrous content in your test"

So although their John Innes is true to the original formula, the loam element has been made "way more fibrous" than usual by the addition of horse manure, which explains the results of my shake test. Adding horse manure has always been a part of traditionally made John Innes, but the exact nature and quantity of manure added will obviously affect the final result. It appears Keith Singleton add quite a lot. The result is a compost which seems to be of very good quality but in which the major ingredients are organic in nature. The amount of loam (i.e. the actual mineral elements such as clay, without the organic parts) as revealed by the shake test is quite low. I want to stress that this compost does seem to be of very high quality and I am not criticising it, but it turned out not to be what I was really looking for. However with nothing else available my plants have all been potted using the Keith Singleton John Innes this year. I am getting a large number of Sciarid flies emerging from it. Otherwise, so far the plants are growing Ok but watering is a challenge as it dries out unpredictably. I believe that if any compost claims to be "loam based" it *should* mean that the major ingredient is loam (unadulterated with added organics) and this is what I have been searching for. John Innes composts have traditionally been loam based, and while there has always been a degree of added organics, it used to be the case that the proper loam element was the major part. You could see it when you opened the bag - the overall appearance looked like *soil*.

Does "John Innes" mean anything anymore? I recently tried a Levingtons John Innes and did shake test on this too. It was obvious after settling that it was more than 90% peat (or just possibly some other organic material that floated). The amount of loam was so tiny that it barely covered the bottom of the container, to less than 1mm depth - I had to use a hand lens to check there was any there at all! I don't know how they have the nerve to call this John Innes compost. When I checked their website I was shocked to discover that they said "'John Innes compost is predominantly **peat based**'!! (see www.lovethegarden.com/products/growing/levington-john-innesno2compost) At least they are being honest - but if John Innes is no longer a loam-based compost then the term "John Innes" has becomes kind of meaningless. Being loam based was what made it different from other composts. If it is now acknowledged that this is no longer true, then we might as well stop using the name "John Innes". It has no defined meaning and simply confuses people.

Mix your own compost?

The answer perhaps then is to mix one's own compost. But here you run into the same problem the manufacturers have - finding suitable ingredients, especially loam. I have bought "topsoil" in the hope of getting a basic loam that could be mixed with other ingredients. But the problem with most top soils that are available is that they are far too fine - almost like dust, and so very difficult to get to drain well no matter how much grit is added. These very fine, sandy soils are pretty much all that is available to compost manufacturers these days and that is why they have to add so much organic material to them if they want to produce something that plants may have a chance in. The source of this soil is usually the washings off of field grown vegetables. So often, this is what you find

a in a bag of "topsoil". Just as often you find something that seems suspiciously peaty and does not look like *soil* at all! This is why I was interested when Mike Morton pointed out the loam sold for repairing cricket wickets. It appeared to be real loam with a good clay content. We recently took delivery of some (specifically "Boughton Mendip Cricket Loam"). It appeared on opening the bag exactly as the marketing photos show it, like small granules of clay. We checked the pH and it was exactly as claimed at pH 6.5. I think it shows great promise and look forward to experimenting with it.

Peat-Free composts

As for non-John Innes type composts, if you want to use these, there are similar problems. The pressure to remove or reduce peat and replace it with other materials has led to many problems. By nature, most of these materials vary a lot. So even if you managed to buy a bag of compost that seems to be good, the next time you buy the very same brand it could be awful. Lack of consistency is a major problem for any compost that has composted green waste and the like added. Also, garden centres want to be able to offer the classic "3 bags for £10" deal and to meet this price point, the compost manufacturers vary the exact composition of their mix for nearly every batch, so they can use whatever material happens to be cheapest at that time to enable them to meet the price point. These kind of factors mean that any tests done by say "Which?" magazine or the RHS are kind of meaningless - they can only tell you how *that particular batch* of compost they used in their trial performed. That's why a brand can come out top of the test one year but bottom the next. Being forced to list the ingredients and quantities of each on the bag would be a good step forward but the manufacturers strongly resist this idea. What a surprise!

I have read in the RHS Garden magazine on more than one occasion that these modern composts based on recycled materials etc "are getting better all the time" and strongly encouraging us to use them. The experience of most of us seems to be that this is simply not true - there are all kinds of issues that have simply not yet been solved, consistency being amongst the most important. The only compost - if you want an organic one, not a soil based one - that I have tried that seems any good and quite consistent from batch to batch is the new Sylvagrow range marketed by Melcourt. These (say Melcourt) are "a mix of composted fine bark, wood fibre (bi-products of sustainably managed British forests) and coir (from a single, known source)." The products supplied to the public are exactly the same as supplied to commercial growers and so have a fixed specification which is openly available on the Melcourt website. There is no doubt these are excellent composts and I can recommend them both by repute and by my experience using them. Just one issue to watch with them is that the fertiliser levels included are quite modest and so anything grown in them needs feeding not long after potting (Melcourt say they have a 6 week supply of fertiliser included - this may be true, but the *level* is pretty low).

Conclusion

From a growers point of view it seems there is a real crisis in the compost industry. They are almost unable to supply us with a decent, quality compost that performs well, is reliable and consistent from batch to batch and which, when you buy it, you know exactly what you are getting and how it will perform. Commercial growers would not put up with this. Why should we amateurs have to?

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