European Environmental Bureau

EEB COMMENTS for the EUEB MEETING April 2006

Concerning Revision of EUROPEAN ECOLABEL

Criteria for SOIL IMPROVERS and GROWING MEDIA

By Doreen Fedrigo and Penelope Vincent-Sweet, 30 March 2006

EEB is deeply uneasy and disappointed with the general management of the discussion on the revision process for the criteria for soil improvers and growing media ecolabel, and continues to have serious concerns about some of the criteria.

The ad-hoc working group discussions on the revision to the criteria did not address key changes that have been made to the criteria. Much of the discussions focused on whether or not peat should be allowed to be used and other aspects were not addressed sufficiently. The result of the AHWG process is:

- the development of new criteria in a fragmented way;
- criteria that are incoherent with the original aims of the ecolabels; and
- aims that have been changed, with insufficient consideration and discussion of the changes in these aims.

The EEB therefore calls on all Competent Bodies to delay the vote until the implications in the changes in the current draft of the criteria have been properly discussed and assessed.

Key points:

1. **The evolution of the revisions throughout the AHWG process have greatly altered the ecolabel, without appropriate discussion on fundamental changes** – **in particular**, **<u>the change in aims</u>**, the lack of minimum organic content for growing media, and the lack of credible criteria for mineral co-formulants (for both soil improvers and growing media). Despite quite extensive dialogue with the lead CB, the justifications have not been satisfactory and the clarifications document sent out on the 17 March 2006 does not clarify the points that follow.

2. **The revision process has delivered an ecolabel for growing media with a different aim from the current ecolabel**. The criteria for the current ecolabel for soil improvers and growing media promotes two aims:

    - '*the use and/or re-use of organic matter derived from the collection and/or processing of waste material and therefore contributing to a minimisation of solid waste at the final disposal (e.g. at landfill); and*
    - *the reduction of environmental damage or risks from heavy metals and other hazardous compounds in soil improvers and growing media'*.

    The revised criteria for Growing Media (ONLY) has a reworded second aim, to promote:

    - *'minimisation of environmental impact in retrieval and production of non-renewable materials'*

    This aim change was never discussed and accepted in AHWG meetings or by the EUEB. The change in aim for GM has significant implications for the focus of the criteria – shifting it from the recycling of waste, in particular organic waste, to a more vague environmental focus, with no evidence that this can deliver greater environmental benefits. **EEB strongly believes that the focus on cycling of materials and reduction of risks from hazardous substances continue to be the most important environmental aspects for Growing**

Media. It is unacceptable that the change in wording on aims results in an undermining of the preference for organic, waste-based products, and a suppression of the reduction of hazardous substances aim.

3. **The minerals criterion in SI and GM is particularly disturbing to the EEB.** The criteria on minerals was not given appropriate discussion through the AHWG process, particularly as the LCA analysis was developed in the latter stages of the process (see Annex for further discussion on the LCA). The problems with the current criteria on minerals are three-fold:

   a) **The suppression of the minimum organic matter content allows a shift *away* from organic material-based GM which is not environmentally justified on an LCA basis.** The original objective of introducing criteria on minerals was supposed to clarify the use of 'sand, clay, etc' as co-formulants – not to allow minerals as an alternative mono-material basis for growing media. As the criteria are currently written, a company producing growing media of 100% non-organic content could be granted the ecolabel.

   b) **The inclusion of mineral co-formulants should only be allowed on the basis of best environmental performance <u>between</u> mineral components.** The LCA analysis to date does not allow sufficient comparison between different mineral co-formulants. Sand, clay and soil LCAs were not part of the assessment. Only two co-formulants (perlite and stonewool) were chosen for deeper LCA analysis because they were most widely used in growing media, and later because of their performance in relation to other organic co-formulants. **No comparison of like for like** was made for non-organic to non-organic mineral co-formulants.'

   c. **The LCA results were not used to create criteria that allowed selection of the best environmental performing mineral co-formulants.** This approach does not follow-up the statement in background document 2 (Point 3.4) that says 'additional criteria for these products (raw and processed minerals) should be developed in order to promote the *best in class*. Criteria could cover both production (mining, process emissions) and after use (product recovery/re-use).Notwithstanding, even the assessments that were undertaken resulted in no specific criteria being set. **<u>Best in class</u> is not reflected in the current criterion on minerals (article 1.3).**

We therefore restate our recommendations that the minimal organic matter content for GM be set and the minerals criteria be rephrased to:

- The minerals criteria (1.3) should be renamed to *mineral co-formulants*
- Include 'locally available and sustainably sourced sand, clay or soil' but delete the original term 'etc.';
- Retain the new criteria in 1.3 on extraction, to apply as general sustainability criteria;

In the next revision - introduce other sourcing/impact criteria for mineral co-formulants, including for example recycled content, sourcing and significant lifecycle impacts indicators.

4. **An additional, negative knock-on effect of the absence of minimum organic content and possibly allowing 100% mineral-based GM is that this will end up generating more waste to disposal - an effect that goes against the original aim of the ecolabel** (the diversion of waste, such as biowaste, from disposal to recycling). Higher levels of mineral content can result in a product that cannot be composted or spread on land after-use, requiring specific recycling systems for the product, or the disposal of the volumes that cannot be recycled. Not only does this reduce the market (increasing the competition) for composted products and therefore reduce the drivers to attract biowaste from landfills, but it also *increases the waste being disposed of* (the 50% non recycled mineral material). **This creates the perverse situation that the ecolabel potentially increases total waste**

disposal rather than reducing it. This is not acceptable to EEB as it runs counter to the waste minimisation aim of the ecolabel.

It is also not clear how applicants would prove that the materials had been recycled, and appears to assume that recycling systems will be equivalent to those already developed in the Netherlands.

Specific criteria:

In addition to the above points, EEB does not support the current presentation of some specific criteria:

- Article 1.2 (for SI and GM): Maximum concentrations of heavy metals in the waste should relate to the final sludge product and not to the sludges *before treatment*. The ecolabel applies to the final product, therefore the wording needs to be clear that the heavy metals content considerations start from the end-point of the sanitisation or stabilisation process.
- Article 1.2 (for SI and GM): Wording on the stabilisation and sanitisation of sludges is not clear enough for this to be adhered to by companies awarded the label. In any case, sludges will generally be composted which is a stabilisation and sanitisation process.
- Article 2 (for GM): Limitation of hazardous substances should also relate to the *final product*, and not just the growing medium constituents. Also, it is not clear why there are question marks in the text under the Table of elements and their limit values.
- Article 3 (for SI): Wording on the physical contaminants is misleading, presenting the 2mm mesh size in relation to the final product and not to the contaminants, as is the true case.
- Article 5a (for SI): The organic content is still low. EEB has already suggested that this be raised to 35% or 40%. The present criteria with 20% organic matter on dry weight and 25% dry matter would theoretically allow a product with only 5% organic matter to receive the ecolabel. This does not support the waste minimisation aim of the ecolabel.

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Annex

Minerals in growing media – specific concerns on the assessment of environmental impacts

The EEB strongly recommends that the ecolabel ONLY allow mineral co-formulants or materials other than sand, clay and soil if proper criteria can be developed. So far there has not been sufficient data and discussion to do this, namely:

- Background document phase 1 dated February 2005 (see 'Production' page 14) considers various organic and mineral co-formulants. It states that additives such as clay, sand, wood fibre and coir are mixed, admittedly with peat, to make growing media. Also, composts and rice hulls are always derived from waste. Both of these materials are used as constituents in growing media.

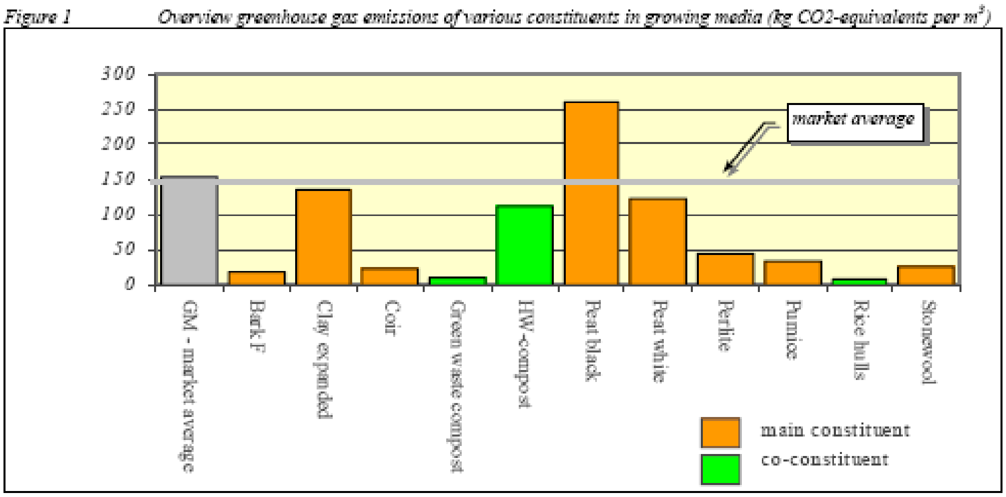
  The section on lifecycle assessments (pg 26) of the document states that LCAs are available for (composted) bark; coco (dust, coir, chips, blocks); composted organic matter (green waste, household green waste collection); expanded clay granules; various types of peat; perlite/vermiculite; pumice; rice hulls; stonewool; wood fibre; and various additives such as sand, clay and fertilizers. Also, some general outcomes of the LCAs showed: a positive environmental profile for some waste derived materials and minerals; and various realistic formulations of growing media having an environmental profile considerably better than market average.

  Despite the fact that materials such as clay, sand, wood fibre and coir are used in the market, these materials were not chosen for deeper LCA analysis. Additionally, despite the fact that there were several positive profiled waste-derived minerals from some of the LCA outcomes, these results were not analysed further or used to develop criteria reflecting best in class. Stonewool and perlite were analysed in more depth because they have the most market share (see paragraph 1 of bullet point 3 below). A telephone conversation between the lead CB and EEB further revealed that stonewool and perlite were chosen because they seemed to require the most energy in their manufacture and as they were 'worst in group', if the LCA was favourable for these materials the others in the class would be acceptable. **EEB does not believe that enough analysis was undertaken on other mineral co-formulants, like for like, to ensure the selection of best in class for the ecolabel. The revised minerals criterion for growing media does not reflect the concept of 'best in class' or even better than market average.**

- The second background document dated May 2005 (see 'LCA-results' on page 8) included a graph on greenhouse gas emissions of various constituents in growing media. Figure 3.3.1 takes as a market average a product that contains more than 80% peat. It also includes the emissions from black peat. The inclusion of these two constituents (particularly black peat) rendered the scale of the emissions table too large to distinguish clearly between the other closer grouped constituents (bark fibre, coir, green waste compost, perlite, rice hulls and stonewool).

  It is EEB's view that further analysis which more systematically identified the levels of environmental impacts, between like for like (e.g. waste-derived materials according to organic or non-organic, and minerals) is needed to establish a clearer picture of better than market average and best in class. Some of the constituents in Figure 3.3.1 are waste-derived organics and others are (presumably virgin) minerals, so their environmental impacts will be influenced by different factors that could possibly be addressed by more appropriate criteria for the ecolabel.

Figure 1 *Overview greenhouse gas emissions of various constituents in growing media (kg CO2-equivalents per m³)*

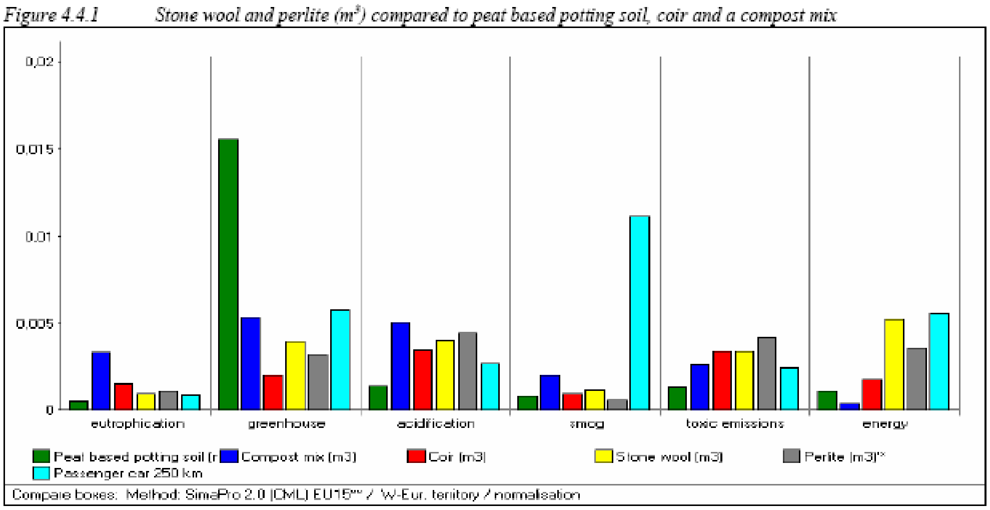


- The 3rd background document dated September 2005 (see 'Scope' on page 11) states that mineral wool (EEB presumes this to actually mean stonewool) and perlite are the most widely used non organic growing media, after organic growing media. They are used both as a mono material and as a co-constituent. Because of market share and data availability, these two materials were chosen for deeper LCA analysis (again ignoring the best in class original intention communicated by the consultants).

  Figure 4.4.1 compares stonewool and perlite against peat-based potting soil, coir and a compost mix on various environmental impacts. The report states that *'Figure 4.4.1 indicates that the environmental profiles of stone wool and perlite are more or less in line with the profiles of waste materials: variations fall within the margins of uncertainty that should be taken into account in this type of analyses. Only energy consumption is clearly higher. This does however not lead to higher emissions of greenhouse gases.'*

  Again, a peat-based product was included in the analysis, affecting the scale of the total table. Also, organic materials were again compared with non-organic, so comparability between minerals was reduced when attempting to analyse the impacts of non-organic minerals. However, notwithstanding these points the table shows that compost performs better than stonewool and perlite on toxic emissions and energy (up to a factor of 10 for energy); and coir's performance is better against stonewool and perlite in greenhouse gas emissions, acidification, smog (for stonewool only), toxic emissions (for perlite only) and energy (so, for 4 to 5 of the 6 impacts detailed). **Lack of data availability for non-peat materials, such as wood fibre or bark (one of the clearly identified alternatives to peat), were cited by the lead CB as a reason for not including them in the LCA analysis. Therefore we assume the LCA comparison above are incomplete and should not be used to promote minerals based growing media as equivalent to organics based.**

Figure 4.4.1 Stone wool and perlite (m^3) compared to peat based potting soil, coir and a compost mix



- The assumptions used for the performance of compost was questioned by the AHWG given the results of the above Figure. When the results for compost performance as shown in Figure 4.4.1 were reassessed, considerable differences (reducing environmental impact) were identified (see table below). Most notably, the methane revision was reduced by a factor of 12 and ammonia (NH_3) by a factor of 4. Therefore, the results for compost in relation to greenhouse gas, acidification and eutrophication (at least) in Figure 4.4.1 are doubtful, and the environmental performance for compost would be improved in comparison to perlite and stonewool. **Again, EEB thinks that the analysis was not systematically developed enough to help identify best in class or better than market average, or to develop minerals-related criteria that reflect the two original aims of the ecolabel.**

Table 3.1 LCA data used in the 3rd Background Document vs review results (all data per tonne of waste)

per tonne waste	*3rd Background Document*	*Reassessed data NL*	*Literature*
compost output (kg)	352	400	?
Process emissions			
NH_3 (g)	200	27	11.4 - 1,130
methane (g)	2,400	195	11 - 5,068
N_2O (g)	96	101	0.75 - 152
H_2S (g)	0	0	285