DORMANCY TERMINOLOGY

The points raised in my previous letter (HortScience 21:1096, Oct. 1986) have been discussed with Greg Lang and his colleagues in correspondence and at the XXII International Horticultural Congress (Aug. 1986) in Davis, Calif.

To get us around the impasse of using the suggested loan blends to express these concepts, I have proposed using the Greek word *stasis* in place of “dormancy” as a base. *The American Heritage Dictionary* defines “*stasis*” as “slowing, stoppage, standstill; a balance among various forces.” The adjectival form “static” is defined as “motionless, at rest, quiescent.”

To limit the concept of standstill to “no visible growth of a meristem”, it is possible to coin the term “meristasis”, the prefix means “division”. However, for the sake of simplicity, it is permissible to say that in terms of usage within the fields of plant physiology and horticulture, “*stasis*” and “meristasis” are identical terms and may be used interchangeably.

“*Stasis*” has several advantages over “dormancy” as a term to describe these phenomena:

1) It is a new term for plant physiology and horticulture and can be defined more precisely according to selected criteria. We do not have to redefine an old word. “*Stasis*” thus avoids the complications entailed with other or previous definitions associated with “dormancy.”

2) It accepts readily a variety of Greek prefixes and is therefore flexible. It may be modified at (considered) will as our understanding changes and increases.

3) As a term it is relatively neutral and avoids the anthropomorphic connotations associated with the Latin stem *dorm-*, which means “sleep”, and with the English word “rest”. (Perhaps we should have been using the term “hibernation” instead of “rest” all along.)

4) It is relatively unused as a term. In human physiology, “*stasis*” means a “stagnation in blood flow”. There seems to be, however, one usage in postharvest horticulture of the stem, “homeostasis”, for which I can find no definition.

Using the term in the scheme of Lang et al., one has the following:

**Diagram**

![Diagram of dormancy terminology](image)

In these three terms, the relationship between the stem and prefix is defined by the prepositions “from” (locative) and “by” (causative) to indicate the source of control of these processes. In the case of “*meristasis*”, the relationship is defined by the preposition “of” (genitive).

I have a purely formal objection to the use of the prefix “*eco-*. Whereas *end-*, *para-*, and *meri-*, are prepositions in Greek, “*eco-*” is a noun. I would suggest consideration of the prepositional prefix “*exo-*” in its stead (with apologies to Carl Sagan, of course) to produce this scheme:

**Diagram**

![Diagram of dormancy terminology](image)

Since the controlling forces are indeed environmental, there may be a compelling reason to retain the “*eco-*” prefix. In this case, symmetry of word class could be established by coining the term “phytostasis” to dominate “endostasis” and “parastasis”.

Finally, I understand that Lang and his colleague’s criterion for prefix selection—that is, the point of control of stasis within the affected structure. However, to me “endostasis” as a term, though correct from this standpoint, suggests a rather small-scale phenomenon. A term that more clearly captures the enormity of the phenomenon we have herefore called “rest” is perhaps “*phenostasis*”, which calls to mind an association with phenoology. If other forms of internally controlled stasis are found, perhaps this would be an acceptable subform of endostasis.

Acceptance of a new terminology for stasis phenomena will only come over time if the terms fill a real need, and this must be the ultimate criterion for term selection. I hope my linguistic excursions have advanced the day of acceptance to a certain degree by clarifying the formal options available—and restrictions imposed—in the development of this new scientific terminology.

**Personal Recollections**

There were two typographic errors in Denney’s letter published in the Oct. 1986 issue of *HortScience* 21:1096; 1) the first sentence should begin, “A unified terminology for dormancy phenomena...”; and 2) Denney’s name was misspelled.

MacDaniels and Boynton: Some Personal Recollections

The report of Laurence H. MacDaniels’ death by Isbell and Gortzig (*HortScience* 22:178–179, Feb. 1987) is detailed and very well done. Most of us old-timers never realized all the great things MacDaniels was doing and had done. What a man!

I direct this item especially to Cornell Univ. graduates of the 1920s to 1950s, although there no doubt are many other interested acquaintances. You Cornellians will clearly recall MacDaniels in pomology, or “Dr. Mac” as we called him, and Damon Boynton, who passed away on 24 Aug. 1986 (see “Reported Deaths”, page 339 of this issue of *HortScience*).

When Dr. Mac passed his 94th birthday (21 Oct. 1982), I wrote him, asking for a recent photograph of himself. Herewith is the photograph of Dr. Mac in his home study with Boynton, who retired in 1964 as dean of Cornell’s graduate school and professor of pomology. Dr. Mac indicated to me that he was keeping up with research literature and happenings over at the pomology department. His letters also showed a continuing interest in apple cultivars and breeding programs over the world.

You graduates no doubt remember Dr. Mac’s “breakfast” course, which always drew a big class and covered a careful analysis of many fruit varieties. His subtropical and tropical fruits course was equally well-attended and I found it quite valuable on taking up work in the tropics in the 1940s and here again in Florida in the 1980s. Do you remember those great fall picnics we used to have on the shores of Cayuga Lake when Dr. Mac afterward sang cowboy songs and played...