21 Biotechnology Law Report 435
Number 5 (October 2002)
© Mary Ann Liebert, Inc.

Brief Technical Notes

Utility Plant Patents: A Practical Introduction

BARBARA E. JOHNSON*

THE PRACTICAL SCOPE OF THIS ARTICLE is to identify when and why to file a utility plant patent application.

INTRODUCTION

As important as plant patents are, with their focus on ornamental appearance (not to mention the heart-stoppingly beautiful photographs!), they are limited in their ability to protect plants whose innovations are represented more by utility than appearance. A good example of a utility plant patent is the recently issued U.S. No. 6,320,104, entitled "Multileaf Lettuce." This patent, based on a regular utility patent application, is a traditional utility patent—not a plant patent. For the purpose of this article, it and others like it will be referred to as "utility plant patents."

U.S. No. 6,320,104 is directed to a multileaf lettuce having the characteristic of forming, at the ready-to-harvest stage, at least one and one-half times as many lettuce leaves per plant as plants having the same leaf morphology but not containing the characteristic. In the lettuce-growing world, the utility and commercial desirability of such an innovation is readily apparent. However, apart from literally counting leaves in order to establish a difference, it would be difficult to portray such a lettuce in a plant patent photograph, particularly because the inventive leaf number is a relatively increased quantity compared with other plants of the same morphology, not an absolute lettuce leaf number. The relatively greater leaf formation of the patented multileaf lettuce is therefore beneficially protected in the utility plant patent rather than a plant patent.

Claim 1 of 6,320,104 reads, "A lettuce seed designated RZ 97.41561 having NCIMB number 40877. As is typical of a utility plant patent, claim 2 reads, "A lettuce plant or its parts produced by the seed of claim 1. Utility plant patents are routinely supported by Budapest Treaty-type biological deposits. In this instance, the multileaf characteristic is what imparts the patentability to the biological material which replicates the multileaf characteristic, so the multileaf characteristic itself is unnecessary in the claims and the biological material—the seeds, and the lettuces produced therefrom—are claimed instead.

SHOULD I APPLY FOR A UTILITY PLANT PATENT INSTEAD OF A PLANT PATENT?

Q: Is my plant-related invention a candidate for a utility plant patent?

A: Reconsider all the Wands factors (*In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (CAFC 1988)). Do you already have working examples, so that direction and guidance can be given as to the practice of the invention, taking into account the nature of the invention, the state of the prior art, the level of skill in the art, and the level of predictability in the invention? Can you answer all those questions affirmatively throughout the entire scope of invention you intend to claim? And do all these things relate to a novel, nonobvious, and useful plant? Then by all means file a utility plant patent application.

*Barbara E. Johnson is with The Webb Law Firm, Pittsburgh, Pennsylvania.

Q: How can the novel and useful plant be reproduced without destroying or degrading the invention?

A: As everyone knows, plants can be reproduced via sexual or asexual means, the latter including tissue culture (propagation from the callus or the plant tissue derived from the meristem). Depending on the novel, useful feature of the inventive plant, replication of the invention may well require a particular means of reproduction. If your plant is to be reproduced from seeds, claim the seeds, and deposit appropriate quantities of the seeds with a Budapest Treaty or other recognized biological depository. If the plant must be propagated using tissue culture, do not claim the seeds: claim the mother plant, and deposit callus specimens. Naturally, make sure that tissue culture propagation, in the inventive case, does not induce phenotypic variation by appropriate testing. Depositories such as the American Type Culture Collection are familiar now with both seed and callus deposits and can direct you as to particulars such as quantities needed

Q: May I file a utility plant patent application for plants developed according to traditional cross-breeding or only for genetically engineered plants?

A: A utility plant patent application may be directed to plants resulting from either traditional cross-breeding or for genetic engineering, as long as the plants are novel, nonobvious, and reproducible and have utility which is specific, substantial, and credible. In the example cited above, U.S. 6,320,104, the claimed lettuce/seeds were developed according to traditional hybridization techniques, which were described in the patent specification. For genetically engineered plants, it is best to disclose the underlying biology that applies, including, but not limited to, gene sequences changes, if any; evidence of protein deletions or modifications; or changes in the activity of expressed proteins. Nonobviousness requirements are no different for utility plant patents than for any other patentable subject matter, but as a practical matter, if there are unusual and desirable novel morphological innovations in a plant, nonobviousness can usually be assumed. Specific sample claims and analysis are provided by Examiner Gary Benzion, Ph.D., Acting Supervisory Patent Examiner, United States Patent and Trademark Office Art Unit 1638, in his slide presentation, "Enablement and Written Description Issues in Utility Plant Applications," which at this writing may be viewed or downloaded from the Web at http://www.uspto.gov/web/patents/biochempharm/documents/upa.pps. Examiner Benzion recommends providing, in the patent specifications for genetically engineered plants, complete or partial DNA structure and protein structure for genetically engineered plants, as well as correlations of the structural changes to the functional changes and concomitant descriptions of the resulting physical properties.

Happy Utility Plant Patenting!