industry to increase is interesting, but not contradictory to the statement that it has not declined in total production. The fact that an industry does not increase its production can scarcely be advanced as evidence of its endangered existence. If Louisiana oystermen are making better utilization of producing grounds and expanding onto abundant undeveloped grounds, as Dr. Chipman states, then it would seem that fears for the future are needless. Since he has this view, objections to my less sanguine statement that there is no evidence of production decline are inconsistent and contradictory.

It is quite true, as Chipman points out, that serious mortalities have occurred from time to time. Mortalities of oysters and other animals, catastrophic and otherwise, are well known phenomena on the Gulf Coast and such information has been published 45 years and more, but it is an exaggeration to say that mortality "threatens the very existence" of Louisiana's oyster industry. There is no evidence of decline in production of the Louisiana oyster industry. Unfortunately, however, the condition of the oyster industry in Texas is more serious, and Chipman's fears would be more appropriate there. In 1904 Texas produced 199,000 barrels of oysters. In the fiscal year 1947–48 only 23,000 barrels were produced, a decline of 88%, which has not yet been stemmed. Louisiana is the only Gulf state in which oyster production has not declined.

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Thiamin or Thiamine?

Periodically I am asked whether vitamin B_1 should be referred to as "thiamin" or "thiamine." The following history may be of interest to some readers.

I suggested "thiamin" in 1937 in response to a request from the Council on Pharmacy and Chemistry of the American Medical Association. This was adopted (see *J. Amer. med. Ass.* 1937, 109, 952). The name so appeared in this journal and in other publications of the AMA for two or three years, including the 1940 edition of "New and Non-Official Remedies."

Under date of July 3, 1939, E. Fullerton Cook, chairman of the Committee of Revision of the Pharmacopoeia of the United States, wrote me a letter which included the following paragraph:

> You may wonder why the Pharmacopoeia has suggested the use of this title, when "Thiamin Chloride" had already been widely used. The Pharmacopoeial group recognized that Thiamine Hydrochloride had, essentially, the characteristics of an alkaloid, and the use of the final "e" and "Hydrochloride" rather than "chloride" when the hydrochloride radical is attached, is in strict accordance with our rules for nomenclature. Of course we would add "Thiamin Chloride" as a synonym, at Dr. Nelson's suggestion.

The spelling "thiamine" was adopted for the second U. S. Pharmacopoeia XI Supplement and has since been accepted by *Chemical Abstracts, Journal of Biological Chemistry, Journal of the American Medical Association* (including the 1948 edition of "New and Non-Official Remedies"), and other publications.

"Thiamine" must now be accepted as the approved spelling.

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Freezing Laboratory Materials for Plant Science

The routine practices of drying plant materials for taxonomic and morphological studies, or preserving them in various chemical solutions, have many disadvantages. Neither method is adequate for color preservation. The formaldehyde vapor method, which preserves well, has a disadvantage in that some people are sensitive to formaldehyde. When an early frost line threatened in the fall of 1947 I collected flowers, packaged them in lined paper bags of the type sold for food processing, and placed them in a commercial deep freeze locker. This procedure proved so successful that I made extensive collections the following summer. By merely packaging specimens while they are fresh, and transferring them to the deep freeze, one can readily provide a wide range of material for subsequent classroom needs.

Some flowers and plant materials lend themselves more successfully than others to this treatment but even the most delicate, such as *Impatiens pallida* Nutt., retain enough color and form to be useful for the duration of a two-hour laboratory period. Even if the color alters upon prolonged exposure to room temperature, the form of the flower remains intact. Keeping such material covered in culture chambers until it is needed helps maintain the natural form. Other plants emerge in a remarkably fresh condition, with scarcely any alteration, even after several hours. Some of the flowers which have given especially good results are: *Phleum pratense* L. and other species of grass, *Eriocaulon septangulare* L., *Phytolacca decandra* L., *Polygonum pennsylvanicum* L., *Chenopodium album* L., *Potentilla fruticosa* L., *Cassia marilandica* L., *Sambucus canadensis* L., *Plantago major* L. and *P. lanceolata* L., *Ligustrum vulgare* L., *Asclepias syriaca* L., *Clethra alnifolia* L., *Kalmia latifolia* L. and cultivated species of *Azalea* and *Rhododendron*, *Euonymus japonica* L., *Daucus carota* L., *Tilia americana* L., *Achillea millefolium* L. and other species of Compositae.

Other plant materials that have been particularly useful for subsequent studies during the year include the hips of *Rosa rugosa* Thunb. These have been successfully used for lycopene extraction, structural studies of the chromoplasts, and for vitamin C analysis using the method recommended by Tuba *et al.* (TUBA, JULES, HUNTER, G., and OSBORNE, J. A., *Canad. J. Res.*, 1946, 24, 182). Even after many months of storage, an excellent reaction for ascorbic acid granules in the cells may be obtained.

The freezing method seems to offer a valuable means for having available a wide range of seasonal materials at all times.

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