Letter to the Editor

Sir:

The recent letter to the editor submitted by K.G. Berger provides facts concerning palm oil that are somewhat misleading (1). The first so-called fact was the statement "palm oil is not a highly saturated fat." By practically any criteria commonly used by the nutrition community this statement is not correct. Common usage refers to animal fats as saturated and, in fact, the saturated fat contents of both lard and tallow are less than that of palm oil.

As pointed out in the review by Mattson, the saturated fatty acids that cause increases in serum cholesterol levels are those with a chain length greater than 10 and less than 18, i.e., C12, C14 and C16 (2). By that criteria, lard and tallow contain about 24 and 28% saturated fatty acids, respectively, and palm oil has a level of about 45%.

Berger also points out the confusion among the lauric acid oils and palm oil, which is true, as the lauric oils have about 70% saturated fatty acids. Nevertheless, palm oil would still have to be classed as a highly saturated fat even if it is less so than the lauric oils.

Berger (1) is correct in saying there are few human feeding studies using palm, but he attempts to connect one such study on palm oil to the currently popular "Mediterranean diet" theory (3). This connection appears unwarranted as monounsaturated oils such as olive popularized in such diets are quite low (11%) in saturated fatty acids.

There is one human feeding study on palm oil where it was compared to soybean oil, corn oil and lightly hydrogenated and winterized soybean oil (4). In this study, the three latter oils all showed a reduction in total serum cholesterol, LDL cholesterol and triglycerides in comparison to palm, with none of them affecting the level of HDL cholesterol. This study, incidentally, also showed the observed experimental serum cholesterol reductions to be statistically equivalent to the levels predicted by the Keys-Anderson-Grande equations (5). These were 10-week studies using normal subjects consuming a typical average American diet.

In summary, palm oil is by any P/S ratio criteria a highly saturated fat and thus would not be one of the dietary fats normally recommended for dietary reduction of serum cholesterol. It also would not appear to fit into the class of monounsaturated fats being studied by advocates of the "Mediterranean diet" because of its high saturated fatty acid content and relatively low P/S ratio.

David R. Erickson
Director, Technical Services
American Soybean Association

REFERENCES

1. Berger, K.G., *J. Am. Oil Chem. Soc. 63*:1200 (1986).
2. Mattson, F.H., in *Dietary Fats and Health*, AOCS Monograph 10, Champaign, IL, 1983, pp. 679-680.
3. Grundy, S.M., *New England J. Med. 314*:745 (1986).
4. Laine, D.C., C.M. Snodgrass, E.A. Dawson, M.A Ener, K. Kuba and I.D. Frantz Jr., *American J. Clin. Nutr. 35*:683 (1982).
5. Anderson, J.R., D.R. Jacobs Jr., N. Foster, Y. Hall, D. Moss, L. Mojonnier and H. Blackburn, *Prev. Med. 8*:525 (1979).