EXPAND LABELING OPTIONS TO BENEFIT U.S. EXPORTS
A Proposal to Amend the Federal Fair Packaging and Labeling Act (FPLA)\textsuperscript{1}

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To facilitate the expansion of exports by U.S. manufactures, the National Institute of Standards and Technology (NIST) recommends the following updates (Appendices A and B) to the Fair Packaging and Labeling Act (FPLA) to create a new package labeling option. The FPLA requires packaged goods to bear essential information that informs consumers about the product, including how much commodity is contained within the package.

This proposal has been developed in response to U.S. manufacturer and consumer requests\textsuperscript{2, 3} and is supported by the National Conference on Weights and Measures (NCWM), the Procter and Gamble Company (P&G), the Art and Creative Materials Institute, and others. U.S. manufacturers must use the Dual Unit format, where both U.S. customary and metric system\textsuperscript{4} units are displayed (Figure 1, Product A and B), and are prohibited by Federal law from declaring the net quantity using only the Metric option, while their foreign competitors have the advantage of this simpler format (Figure 1, Product C).

This proposal overcomes this disadvantage by adding a new Metric option, while preserving the Dual Unit option, and maintaining the ability of U.S. consumers to make value comparisons. Updating the FPLA will:

- Align State and Federal laws, reducing regulatory complexity for businesses. Currently, State laws permit the proposed Metric option while the Federal FPLA prohibits the option;
- Expand opportunities to grow U.S. exports and enable one product label for all markets; and
- Enable the Metric option for U.S. packers.

\textsuperscript{1} This document is available free of charge from: https://doi.org/10.6028/NIST.OWMWP.06-13-2018.
\textsuperscript{2} 2002 and 2004 Metric Forums, U.S. Department of Commerce Conference, Washington, DC.
\textsuperscript{4} U.S. Customary unit examples: Ounce, pound, fluid ounce, pint, gallon, pint, inch, and foot. Metric System unit examples: Gram, liter, and meter.
Frequently Asked Questions (FAQs)

These Frequently Asked Questions (FAQs) explore the challenges and opportunities related to amending the FPLA. This Federal law prohibits the majority of U.S. consumer product manufacturers from using the export-friendly Metric labeling option, and limits their ability to respond to marketplace demands and consumer preferences.

What is the Purpose of the FPLA? The FPLA was enacted in 1967 to prevent misleading or deceptive packaging practices and to ensure accurate labeling information that enables consumers to make value comparisons. The legislation requires the NIST Office of Weights and Measures (OWM) to promote uniformity in State and Federal labeling regulations for consumer commodities to the greatest extent practicable.

How has the FPLA Been Amended in the Past? Originally, the FPLA required packages to be labeled with only U.S. Customary units. In 1992, Congress amended the FPLA to require package labels to use the Dual Unit option that simultaneously display U.S. Customary and metric units (Figure 1, Products A and B). This change has provided U.S. consumers with retail purchasing experiences using the metric system for over 25 years.

Figure 1 - Amendment expands U.S. Manufacturer options and gains alignment with State labeling laws.

5 In 1960 the metric system was renamed to the International System of Units (SI) by the General Conference on Weights and Measures. In the U.S. it is interpreted or modified by the Secretary of Commerce. See U.S. Weights and Measures Law - United States Code - Title 15, Chapter 6, Subchapter II Metric Conversion and NIST SP 814 - Metric System of Measurement; Interpretation of the International System of Units for the United States or subsequent revisions, available at http://www.nist.gov/metric.

How Does the Metric Option Benefit U.S. Manufacturers?

- Manufacturers gain flexibility to choose the best labeling format for their products: dual units (current) or metric units alone (proposed).
- Nothing changes for manufacturers whose products are designated for domestic sales. The Dual Unit option will continue.
- The new Metric option is 100% voluntary in accordance with the Metric Conversion Act (1975).
- Operational savings from consolidating inventories that are currently segregated for domestic (Dual Unit option) and international (Metric option) markets.
- Simplifying measurement units maximizes valuable label “real estate,” which permits packers to provide consumers with other product information.
- The proposed Metric option minimizes potential legal fines when converted label measurement units overstate quantity values.

What are the Benefits for U.S. Consumers?

- Manufacturers will decide to use the new Metric option only when their customers are ready.
- Nothing changes for many products sold domestically.
- Proposed option is clear and easy to use.
- Value comparisons are simple, especially when using unit pricing information provided on store shelf labeling or e-commerce websites.

What Products does the FPLA Regulate?

Of the two types of packaged products, 1) consumer packages sold in retail stores and 2) non-consumer packages sold in the wholesale or business to business marketplace, the FPLA applies to consumer products, such as foods, drugs, and cosmetics. The FPLA does not apply to non-consumer packages.

While the majority of consumer product categories are regulated by the Food and Drug Administration (FDA), others are regulated by the Federal Trade Commission (FTC). The FPLA does not apply to meat, poultry, and agricultural seed regulated by the Department of Agriculture (USDA); pesticides regulated by the Environmental Protection Agency (EPA); or to alcohol, beer, wine, and tobacco products regulated by the FDA or the Department of Treasury.

Is the Metric Option Not Available to some U.S. Manufacturers?

U.S. manufacturers of consumer products subject to the FPLA are currently denied the opportunity of using the Metric option to compete with foreign packers. This proposal is an effort to provide the Metric option for all U.S. packers.

U.S. non-consumer product manufacturers have used the Metric option for more than 50 years, most commonly used on exported products sold in other countries. For nearly 25 years, the Metric
option has also been available to those U.S. firms packing consumer-product that fall outside the FPLA’s scope. Examples of Metric option products include wine and distilled spirits, film, videotape, audiotape, imaging and audio media, as well as some agricultural seed packages.

**How can Incongruent Federal and State Labeling Laws be Harmonized to Help U.S. Manufacturers?**

While the FPLA prohibits the Metric option for most consumer products, State laws permit it for many consumer products. Amending the FPLA is an opportunity to streamline the U.S. package and labeling requirements that can frustrate U.S. manufacturer success in foreign markets.

Products not regulated by the Federal FPLA are subject only to State regulations under the *Uniform Packaging and Labeling Regulation* (UPLR).³ Adding the Metric option will align the FPLA with the UPLR and State labeling laws and regulations (e.g., in Figure 1, Products A, B, and C labels are permitted by the UPLR). Many consumer products are subject only to State regulations under the UPLR.⁴

For more than 50 years, the UPLR has provided U.S. manufacturers with the Metric option on non-consumer packages. The Metric option has also been permitted by the UPLR on consumer packages since 1999. Currently, fifty (50) jurisdictions permit the Metric option on all packages (Figure 2, forty-nine (49) States and (1) the District of Columbia). New York is the only jurisdiction whose regulation does not permit the Metric option, but notes it will be accepted should the FPLA be amended. New York has indicated that they would not take any enforcement action against Metric Option products for sale in the state.

![Figure 2 – Jurisdictions that permit the Metric option (50).](image)


⁴ Products under the State jurisdiction include these examples: Automotive products, such as motor oil and cleaning and polishing chemicals; Greeting cards; School supplies; Bottled gas for heating or cooking; Hardware; Sewing accessories; Christmas light sets; Ink; Small arms ammunition; Cigarette lighters; Lawn and garden supplies; Souvenirs; Clothing and other textiles; Magnetic recording tape; Stationery and writing supplies; Durable goods; Paints and kindred products; Threads; Gift ties and tapes; Pet care supplies; Tools; Gift wraps; Safety flares; Toys; Safety pins; and Typewriter ribbons.
NIST and the States have provided training and technical assistance to U.S. packagers so their packages' labels comply with the UPLR to use the Metric option (Figure 1, Product C).

**How Can the Metric Option Expand U.S. Exporting Opportunities?** Adding the Metric option will remove a legal barrier, enabling U.S. firms exporting to Canada, Mexico, the European Union (EU), Asia and Pacific regions, and other markets to use a single (global) package label that is compliant in **all** markets.

Labeling requirements differ from one country to another, creating issues related to the use of **measurement** units and languages. Although many countries allow U.S. Customary units on packages imported from the U.S., several countries have noted that the slow acceptance of the metric system in the U.S. limits the complete international transition to the metric system. Correspondence from the governments of Japan and New Zealand indicate that importers of U.S. goods would find it easier to sell products in their economies when they are labeled with only metric units. Members of the International Organization of Legal Metrology (OIML) continue working to identify and resolve international labeling conflicts.\(^9\)

**How Can U.S. Manufacturers Gain Efficiencies with the Metric Option?** Current FPLA requirements can hinder the export of U.S. products intended for purchase by international consumers that use and understand metric units. To overcome this barrier and participate in international markets, U.S. exporters must develop and maintain two separate consumer product inventories: one for domestic distribution and the second for international exports (Figure 3).

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**Figure 3 - Proposed Metric option would eliminate the need to maintain segregated product inventories.**

While this added operating expense is not experienced by foreign competitors, it must be passed on to consumers in the final retail price. If the Metric option were available, operational savings and efficiencies could be gained by consolidating previously segregated product inventories.

Could an EU Metric Directive Review Impact U.S. Exporters? The European Union (EU) Commission is committed to strongly pursuing the acceptance of products labelled only in the metric system units within the U.S. marketplace. The EU Units of Measurement Directive was amended in 2009, requiring metric units to be used on all packages while permitting supplementary unit declarations (e.g., U.S. customary units). In 2019, the EU will review their policy on accepting supplementary units. This analysis could result in a renewed push for mandatory metric units (where supplementary units would be prohibited) or maintain the status quo (where supplemental units are permitted). Amending the FPLA to permit the Metric option would help ensure that U.S. exporters are prepared for any eventual change in the EU labeling ecosystem.

Are there any Unintended Consequences with Using the Dual Unit Option? U.S. manufactures risk making quantity overstatements when using the Dual Unit option. The consequences include the product being declared “off sale” within the jurisdiction, lost revenue, monetary fines, and litigation. The magnitude of these penalties can be amplified when multiple State jurisdictions discover a quantity overstatement. This risk can be eliminated when a single quantity is declared using the Metric option.

When the Dual Unit option is used, a mathematical calculation is made to convert one quantity and determine the second quantity declaration (e.g., the other measurement system unit). Converted and rounded measurements can inadvertently overstate the quantity value displayed on the product label. State Weights and Measures regulatory inspectors evaluate package content against the larger of the Dual Unit option declarations. When the package contents do not comply with the largest quantity, regulatory action is initiated.

Manufacturers could experience monetary savings during the quality control process, monitoring a single net quantity declaration when filling packages on the production line. The Metric option also reduces mix-ups for products labeled using the U.S. Customary unit “ounce.” The fluid ounce (volume) and ounce (weight) are not equivalent and are frequently confused by both packers and consumers.

How will this Proposal Impact Products Sold within the U.S.? The new Metric option is 100% voluntary. Domestically sold consumer products may maintain the Dual Unit option. Expanding the Metric option while maintaining the Dual Unit option is consistent with the Congressional policy of

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voluntary conversion to the metric system. The proposed revisions would not apply to unit pricing, advertising, recipes, nutrition labeling, or any other general pricing information.

U.S. manufactures are likely to decide to use the new option only when their customers are ready. Changes in the U.S. marketplace have increased consumer acceptance of metric units on package goods. A 2009 NIST study found that packages with the Metric option were present in the marketplace and consumers routinely purchase Metric option products without difficulty. Metric measurement unit use in nutritional labeling, prescription and over the counter medicine, vitamin supplement dosing, and other health information have increased consumer exposure.

**What are the Advantages of Simplified Label Quantity Statements?** The Dual Unit option currently requires redundant information to appear on packages. This can result in very cluttered and difficult to understand labels for some products (e.g., Figure 4, Paper Napkins). This type of information overload is common in products sold by Area (e.g., length by width) within the United States and Canada.

![Figure 4 - Information Overload. Consumers are confronted with complex net quantity statements (Product: Paper Napkins).](image)

Although the Metric option doesn’t eliminate multiple language requirements (e.g., English, French, and Spanish), it significantly simplifies the last line of the net quantity statement.

Manufacturers report that they want the option to take control of limited package “real estate.” Product labels could be significantly simplified using the Metric option, freeing up label space to clearly communicate useful information to consumers.

**Can Consumers Make Value Comparisons with the Metric Option?** The metric quantity is the common element found in both the Dual Unit and Metric options (refer to Figure 1, Products A, B, and C). Consumers can easily make value comparisons between Dual Unit and Metric option packages using unit pricing on retail store shelves and e-commerce websites.

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12 In 1866, Congress adopted the metric system. Today it is the preferred system of measurement for trade and commerce. In the 1975 Metric Conversion Act, Congress declared that U.S. conversion to the metric system was voluntary. However, current FPLA requirements are contrary to the policy, restricting the use of metric units alone.

Unit pricing is a tool that can be used to make value comparisons between similar products of various sizes (Figure 5). The Food Marketing Institute (FMI) reports that 78% of consumers use unit pricing when it is available. NIST has published a *Unit Pricing Best Practice Guide* that includes model best practices that can be used by retailers to effectively provide information to customers using either the Dual Unit or the Metric option. For example, a Metric unit price for a commodity sold by volume would be expressed using either the price per liter or price per 100 milliliters.

![Figure 5 - Customers use unit pricing on store shelves to make value determinations. In this example, Brand B is the best value.](image)

Unit pricing was developed around the time the FPLA was enacted. Historically, there had been considerable discussion to limit or restrict the package sizes sold in U.S. retail stores. In response to those discussions, U.S. manufacturers and retailers suggested the idea of providing unit prices on store shelves. The widespread use of unit pricing in the U.S. has eliminated the need for package size restrictions.

**How Would the Metric Option be Introduced?** For packers that choose the Metric option, product labels changes would occur during their normal packaging design updating process or as new products are introduced. Manufacturers plan and design product packaging several years before a product reaches store shelves. Because of this lead time, retail product will not immediately be impacted following an FPLA amendment. U.S. manufacturers would not have to modify existing package designs or sizes. Under the proposal, all packers will retain the ability to make labeling design decisions based on consumer need.

Manufacturers thrive by providing the best value to their customers and retailers. Packers will work with their consumers and retailers to determine when and how to use metric units on their products. These companies will develop marketing and educational efforts that promote their new packaging to consumers. NIST will work with manufacturers and retailers to coordinate Metric option introduction, including collaborating with State regulators and developing consumer educational resources.

Conclusion

The NIST proposal to amend the FPLA is designed to provide U.S. manufacturers increased flexibility when labeling their products: 1) Dual Unit label (current option) or 2) Metric label (additional option). U.S. packers may choose to continue to use the Dual Unit option.

Expanding the FPLA will enable U.S. manufacturers to implement the Metric option at their own pace, in the most efficient manner, and at the lowest cost, as part of the routine redesign of packaging or with the introduction of new products.

The proposed amendment to the FPLA would help strengthen the ability of U.S. manufacturers to compete in the global marketplace by:
- Expanding labeling options to allow all U.S. manufacturers to make labeling decisions based on customer needs and market demands;
- Permitting packagers, through increased labeling flexibility, to reduce production and packaging costs by producing fewer label types for different markets; and
- Enabling consumers to make value comparisons using the Metric option when it is used on packages.

The NIST Metric Program works with the National Conference on Weights and Measures (NCWM), U.S. industry, and other stakeholders to promote the voluntary use of metric units on packages. NIST offers a Handbook 130, Packaging and Labeling, seminar for both Industry and Weights and Measures Official participants, which focuses on the Uniform Packaging and Labeling Regulation (UPLR).

Learning objectives include the interpretation and application of UPLR requirements for packaging of consumer and non-consumer commodities, determination of appropriate methods of sale, and evaluation of package labels present in the U.S. marketplace. Packaging and labeling training requests can be made directly to the OWM Training Program. Currently scheduled opportunities are listed on the Calendar of Events webpage. NIST continues to develop labeling, unit pricing, and advertising guidelines for Metric option packages. NIST has developed educational materials to assist retailers and consumers understand metric units and to encourage consumers to use unit pricing to make value comparisons.

Information and education efforts include:

- Technical inquiries and collaboration with U.S. industry, trade associations, and Federal and State government agencies;
- Technical metric system and package labeling training delivered through webinars and seminars;
- Development and distribution of printed and electronic education resources; and
- Coordinated voluntary adoption of the Metric option for consumer packages on a sector by sector basis in cooperation with trade and industry associations, retailers, and consumers partners.
Appendix A. Proposed FPLA Amendments

This section describes the proposed amendment to Sections 1453 and 1458 of the Fair Packaging and Labeling Act (FPLA) to allow voluntary metric labeling. These amendments would modify the FPLA to require packages to have net quantity of contents declarations in metric units, but would allow U.S. Customary (inch-pound) units to continue to be declared. The clauses of Section 1453 that would be amended include: (a)(2), (a)(3)(A), and (a)(6). Proposed amendments to: §1453 Requirements of Labeling; Placement, Form, and Contents of Statement of Quantity; Supplemental Statement of Quantity.

i. Amend (a)(2) by deleting the struck-through text:

(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label using the most appropriate units of both the customary inch/pound system of measure, as provided in paragraph (3) of this subsection, and except as provided in paragraph (3)(A)(ii) or paragraph (6) of this subsection, the SI metric system.

b. Amend (a)(2) by adding the text shown as underlined:

(A) using units of the metric system of measurement and equivalent units of the customary inch-pound system measurement, except as provided in paragraph (6) of this subsection; or

(B) using only units of the metric system of measurement.

ii. Amend (a)(3)(A) by adding the underlined text and deleting the struck-through text:

(a)(3) The separate label statement of net quantity of contents appearing upon or affixed to any package:

(A) for those portions of the net quantity of contents statement using inch-pound units,

(ii) if on a random package, may be expressed in terms of pounds and decimal fractions of the pound carried out to not more than three decimal places; and is not required to, but may include a statement in terms of the SI metric system carried out to not more than three decimal places.

iv. Delete the struck-through text in (a)(6) as shown:

(6) The requirement of paragraph (2) that the statement of net quantity of contents include a statement in terms of the SI metric system shall not apply to foods that are packaged at the retail store level.

v. Revise (a)(6) by inserting the underlined text as shown:

(6) The net quantity of contents statement for foods packaged at the retail store level shall be expressed using one of the following formats: only metric units, only customary inch-pound units, or, both metric and customary inch-pound units.
Appendix B. Amended Sections of FPLA and Definitions

TITLE 15 - COMMERCE AND TRADE -- CHAPTER 39 - FAIR PACKAGING AND LABELING PROGRAM

§1451. Congressional Declaration of Policy.

Informed consumers are essential to the fair and efficient functioning of a free market economy. Packages and their labels should enable consumers to obtain accurate information as to the quantity of the contents and should facilitate value comparisons. Therefore, it is hereby declared to be the policy of the Congress to assist consumers and manufacturers in reaching these goals in the marketing of consumer goods.

§1452. Unfair and Deceptive Packaging and Labeling: Scope of Prohibition.

(a) Nonconforming labels - It shall be unlawful for any person engaged in the packaging or labeling of any consumer commodity (as defined in this chapter) for distribution in commerce, or for any person (other than a common carrier for hire, a contract carrier for hire, or a freight forwarder for hire) engaged in the distribution in commerce of any packaged or labeled consumer commodity, to distribute or to cause to be distributed in commerce any such commodity if such commodity is contained in a package, or if there is affixed to that commodity a label, which does not conform to the provisions of this chapter and of regulations promulgated under the authority of this chapter.

(b) Exemptions - The prohibition contained in subsection (a) of this section shall not apply to persons engaged in business as wholesale or retail distributors of consumer commodities except to the extent that such persons (1) are engaged in the packaging or labeling of such commodities, or (2) prescribe or specify by any means the manner in which such commodities are packaged or labeled.

§1453. Requirements of Labeling; Placement, Form, and Contents of Statement of Quantity; Supplemental Statement of Quantity.

(a) Contents of label - No person subject to the prohibition contained in section 1452 of this title shall distribute or cause to be distributed in commerce any packaged consumer commodity unless in conformity with regulations which shall be established by the promulgating authority pursuant to section 1455 of this title which shall provide that -

(1) The commodity shall bear a label specifying the identity of the commodity and the name and place of business of the manufacturer, packer, or distributor;

(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label using the most appropriate units of both the customary inch/pound system of measure, as provided in paragraph (3) of this subsection, and except as provided in paragraph (3)(A)(ii) or paragraph (6) of this subsection, the SI metric system.

   (A) using units of the metric system of measurement and equivalent units of the customary inch-pound system measurement, except as provided in paragraph (6) of this subsection; or

   (B) using only units of the metric system of measurement.

(3) The separate label statement of net quantity of contents appearing upon or affixed to any package

   (A) for those portions of the net quantity of contents statement using inch-pound units,
(i) if on a package labeled in terms of weight, shall be expressed in pounds, with any remainder in terms of ounces or common or decimal fractions of the pound; or in the case of liquid measure, in the largest whole unit (quarts, quarts and pints, or pints, as appropriate) with any remainder in terms of fluid ounces or common or decimal fractions of the pint or quart;

(ii) if on a random package, may be expressed in terms of pounds and decimal fractions of the pound carried out to not more than three decimal places; and may include a statement in terms of the SI metric system carried out to not more than three decimal places

(iii) if on a package labeled in terms of linear measure, shall be expressed in terms of the largest whole unit (yards, yards and feet, or feet, as appropriate) with any remainder in terms of inches or common or decimal fractions of the foot or yard;

(iv) if on a package labeled in terms of measure of area, shall be expressed in terms of the largest whole square unit (square yards, square yards and square feet, or square feet, as appropriate) with any remainder in terms of square inches or common or decimal fractions of the square foot or square yard;

(B) shall appear in conspicuous and easily legible type in distinct contrast (by topography, layout, color, embossing, or molding) with other matter on the package;

(C) shall contain letters or numerals in a type size which shall be (i) established in relationship to the area of the principal display panel of the package, and (ii) uniform for all packages of substantially the same size; and

(D) shall be so placed that the lines of printed matter included in that statement are generally parallel to the base on which the package rests as it is designed to be displayed; and

(4) The label of any package of a consumer commodity which bears a representation as to the number of servings of such commodity contained in such package shall bear a statement of the net quantity (in terms of weight or mass, measure, or numerical count) of each such serving.

(5) For purposes of paragraph (3)(A)(ii) of this subsection the term "random package" means a package which is one of a lot, shipment, or delivery of packages of the same consumer commodity with varying weights or masses, that is, packages with no fixed weight or mass pattern.

(6) The requirement of paragraph (2) that the statement of net quantity of contents include a statement in terms of the SI metric system shall not apply to foods that are packaged at the retail store level.

(6) The net quantity of contents statement for foods packaged at the retail store level shall be expressed using one of the following formats: only metric units, only customary inch-pound units, or, both metric and customary inch-pound units.

(b) Supplemental statements

No person subject to the prohibition contained in section 1452 of this title shall distribute or cause to be distributed in commerce any packaged consumer commodity if any qualifying words or phrases appear in
conjunction with the separate statement of the net quantity of contents required by subsection (a) of this section, but nothing in this subsection or in paragraph (2) of subsection (a) of this section shall prohibit supplemental statements, at other places on the package, describing in nondeceptive terms the net quantity of contents: Provided, That such supplemental statements of net quantity of contents shall not include any term qualifying a unit of weight or mass, measure, or count that tends to exaggerate the amount of the commodity contained in the package.

No amendments are proposed for the following sections:

§1454. Rules and Regulations.
§1455. Procedures for Promulgation of Regulations.
§1456. Enforcement.
§1457. Annual Reports to Congress: Submission Dates.
§1458. Cooperation with State Authorities; Transmittal of Regulations to States; Noninterference with Existing Programs.
§1459. Definitions.
§1461. Effect Upon State Law.
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