

Specialty crop growers interested in marketing products through the wholesale market to retail stores will likely be required to have Universal Product Codes (UPCs) for most products. While some retailers may only require UPCs for packaged products, others may require them for every product sold to them including bulk fresh produce. Growers should contact retailers they expect to do business with to determine their specific needs and requirements.

# What is a UPC barcode?

A Universal Product Code (UPC) is a unique barcode that can be read by a scanner to help retailers manage inventory and make sales transactions with customers at the point of sale. UPCs are designed to uniquely identify products in the marketplace using a 12-digit number and a scannable strip of black bars and white spaces. The UPC barcode is the most common barcode for retail point of sale.

The 12-digit number of the barcode is made up of three components. The first six to nine numbers in the code are the company prefix. The company prefix identifies the business that owns the code, which ideally is the product producer. The next numbers (all but the 12th digit) are an item reference number. The item reference number identifies the single product assigned to the code. The final number in the code is called a check digit. The check digit is calculated using a special formula to ensure the accuracy of the barcode when it is scanned.

The task of obtaining UPC barcodes and getting them on product labels may seem challenging, and farmers may not know where to start. This publication will provide guidance to specialty crop growers interested in obtaining UPCs by answering some frequently asked questions.

# Where does a grower buy barcodes?

While barcodes can be created using multiple systems, the UPC barcodes all originate from a single entity called GS1. In the United States, UPC barcodes are managed by GS1 US. GS1 does not sell the barcodes themselves, rather, GS1 sells licenses that allow businesses to create a certain number of barcodes.

Growers in need of barcodes must apply for a Partner Connections Program membership from GS1 US. The grower will then be licensed for a unique GS1 Company Prefix. This company prefix becomes part of all barcodes for that business. The business is then given access to an online member center where UPC barcodes can be created, managed and printed using Data Driver software.



# How much do UPC barcodes cost?

As of the time of publication, GS1 US charged an initial fee and an annual renewal fee for UPCs. The fees are based on the number of barcodes needed. A grower needing 10 or fewer UPC barcodes would pay an initial fee of \$250 and then an annual renewal fee of \$50. Growers needing more than 10 but fewer than 100 barcodes would pay an initial fee of \$750 and an annual renewal fee of \$150 and so on as shown in Table 1.

Table 1. Initial Fee and Annual Renewal Fee for UPCs

Number of UPCs	Initial Fee	Annual Renewal Fee
1-10	\$250	\$50
1-100	\$750	\$150
1-1,000	\$2,500	\$500
1-10,000	\$6,500	\$1,300
1-100,000	\$10,500	\$2,100

# What are the risks of buying from other sources?

Specialty crop growers may find many other potential sources of UPCs on the Internet from UPC resellers offering a more flexible number of barcodes for sale or a less expensive purchase price. Purchasing UPCs from sources other than GS1 is risky, however. Some potential buyers of wholesale products requiring UPCs also require proof from GS1 that the grower owns the company prefix associated with the barcode. There is no guarantee that these other sources of barcodes are not selling the use of the UPC to more than one business; therefore, the bar code would not be unique to a single product. In addition, the UPCs would not be connected with the grower at GS1, because the grower would not hold a prefix license. This would prevent the ability to trace the product to the grower using the barcode, if needed.

#### References

GS1 US. www.gs1us.org. Accessed online May 5, 2014.



# How many UPC barcodes are needed?

A grower should carefully estimate how many barcodes are needed and account for future needs if additional products may be offered or developed. A different barcode is needed for each unique product, different size of product, different package type of product, etc.

It may not take specialty crop growers long to need more than 10 barcodes. For example, if a producer was making and selling salsa to a grocery store in four different flavors - mild, medium, hot and extra hot — and in two different sizes of jars — 16 ounces and 32 ounces — that producer would need eight UPC barcodes. If the producer added another flavor in each size, he or she would need 10 barcodes, or if the producer added another size for each flavor, 12 barcodes would be needed. It is easy to see how growth of product lines can push a specialty crop grower above the 10 UPC code threshold. This scenario should be considered when purchasing codes from the onset as a new initial fee would be assessed once moving from one category of UPCs to another.

# How does a grower buy barcodes?

To become a member of GS1 US and purchase UPC barcodes, specialty crop growers should visit www.gs1us.org and complete an application for a GS1 Company Prefix. According to the site, applicants should receive an email in one business day that will enable them to create and manage UPC barcodes for their products. Barcodes can then be printed as part of product labels or printed on separate stickers and added to the label or product separately.

# **Authors**

### Megan Bruch Leffew

Marketing Specialist Center for Profitable Agriculture

#### Faith Critzer

Assistant Professor UT Extension Food Safety Specialist Department of Food Science and Technology

# Acknowledgments

#### Reviewers

#### P. Michael Davidson

Professor, Department of Food Science and Technology UT Institute of Agriculture

#### Eric Goan

Research Associate, Department of Food Science and Technology UT Institute of Agriculture

#### Hal Pepper

Value-Added Financial Analysis Specialist Center for Profitable Agriculture, UT Extension

## Editing, Layout and Design

## April Moore Massengill

Editor, Marketing and Communications UT Institute of Agriculture

## Mary Puck

Graphic Designer



ag.tennessee.edu



This publication was funded, in part, through the United States Department of Agriculture's Specialty Crop Block Grant and administered by the Tennessee Department of Agriculture.



United States Department of Agriculture