



*Weekly News from Berry Science  
and the Superfruits Industry*

## *Why Would a Fruit Be Called "Super"?*



Mango (*Mangifera indica*), a true [superfruit](#)  
high in micronutrients, dietary fiber, pigments and other phytochemicals

[follow the [Wikipedia](#) links]

The commercial sector of [superfruits](#) is growing, forecast to become a \$20 billion world market by 2012.

To be prepared for this exciting sector, the Berry Doctor's Journal is expanding our content to include more than just berries, but also non-berry fruits with *unusually high nutrient content and phytochemical interest* -- the definition of a "true superfruit".



Red guava (*Psidium guyava*), a multinutrient superfruit.  
 You might first detect its sweet fragrance even before seeing it!

Part 1 -- [Setting Up the Superfruit Sector](#), *click!*

Part 2 -- [Top 14 Superfruits](#)

Superfruits	Total Score out of 25	Rank
<i>Tier 1 Superfruits</i>		
Mango	23	1
Orange	22	T2
Fig	22	T2
Strawberry	19	T4
Red Grape	19	T4
Goji (wolfberry)	19	T4
Cranberry	18	T7
Papaya	18	T7
<i>Tier 2 Superfruits</i>		
Kiwifruit	18	T7
Seaberry	17	T10
Tart cherry	17	T10
Red raspberry	17	T10
Blueberry	17	T10
Red guava	16	14

Tier 1 superfruits score points from each of the five criteria below;  
 Tier 2 superfruits have fewer points from the five criteria.

Candidate Superfruits

- fruits lacking one or more major category, such as mainstream consumer popularity as a *whole fruit*, significant research activity, and/or exceptional nutritional content

- blackcurrant, 14 points
- pomegranate, 13 points
- acai, 13 points

## Fruits Often Called Superfruits, But Are Not Really 'Super'

- fruits having little or no mainstream consumer popularity, insignificant research activity, and/or poor nutritional content
- amla (Indian gooseberry), 11 points
- mangosteen, 9 points
- noni, 7 points

## Completely Novel Fruits -- These Do Not Earn 'Super' Status

- some fruits are completely new and undeveloped in large consumer markets, have not yet been analyzed with reliable nutrient profiles and/or have little research history
- only marketers and manufacturers trying to establish a sales position are calling these fruits super
- baobab
- macqui
- gac
- camu camu



Papaya (*Carica papaya* L.), one of the top true superfruits

## Five Criteria for Superfruit Status

### 1. Popularity and sensory appeal of the *whole* fruit.

- most important qualifier for calling a fruit 'super'
- should have appealing attributes as a whole food to achieve optimal eating enjoyment and

nutrient intake

- includes sensory appeal of appearance, fragrance, taste, color, ease and versatility of uses, availability, reliability of supply and cost-effectiveness
- *a fruit not readily available and popular in developed countries can not be a superfruit*

## 2. Nutrient diversity and density.

- should contain diverse macro- and micronutrients
- several in particularly rich amounts achieving high %DV in one serving
- compared to nutrient assays by an independent third-party contractor or the USDA Nutrient Tables
- *a fruit not confirmed by independent analysis as rich in nutritional value can not be a superfruit*

## 3. Phytochemical diversity and density.

- phytochemicals under active research for potential importance to human health
- *not as antioxidants*, as most attention in current superfruit products is based on an unproved assumption that antioxidant properties of polyphenols shown in vitro apply in vivo, supported neither by the FDA nor by current scientific thinking
- *a fruit not established in scientific studies as having exceptional richness in phytochemicals can not be a superfruit*

## 4. Basic medical research intensity.

- in vitro research quickly and inexpensively defines properties relevant to human health
- qualified candidate compounds from fruits may be advanced into animal (in vivo) studies
- mechanism of action, specificity of organ effect, dose-response relationships, receptor identification, pharmacological antagonists and simple disease models are tested in vitro and in vivo
- assess number of publications as a simple index for breadth, intensity and duration of research inquiry
- *a fruit not under extensive study by independent scientists in many countries can not be a superfruit*

## 5. Clinical applications.

- shows how advanced science is to proving that a superfruit (or specific phytochemical) used regularly in the diet could lead to better human ('clinical') health or disease resistance
- can be assessed by judging where in the clinical development a product candidate is for accumulating significant scientific agreement needed for FDA approval as a health product
- *a fruit not well underway in human studies on the path toward health claim applications can not be a superfruit*

*Check out the  
new Archives just for superfruit essays, [click!](#)*

**Twitter for the Superfruits Book**

We're starting a new online update feature using [Twitter](#), a free micro-blogging service where we can periodically broadcast brief news updates on berries and superfruits.

Twitter is simply a "short message service" ([SMS](#)), just 140 characters for quickly broadcasting a message to our educational network of subscribers for the Berry Doctor's Journal. SMS is the same technology as cell phone texting, short messages being used by over 2 billion people. It's the fastest growing network service on the internet.

And you can reply using Twitter to stimulate a conversation or follow-up question.

To give Twitter a try and receive these news capsules -- even on your cell phone! -- go to [Twitter.com](#) and sign up with your own name or handle.

Then [visit twitter.com/superfruitsbook](#) where you need to click on "Follow" to be linked into Berry Doctor "tweets" on superfruit news.

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