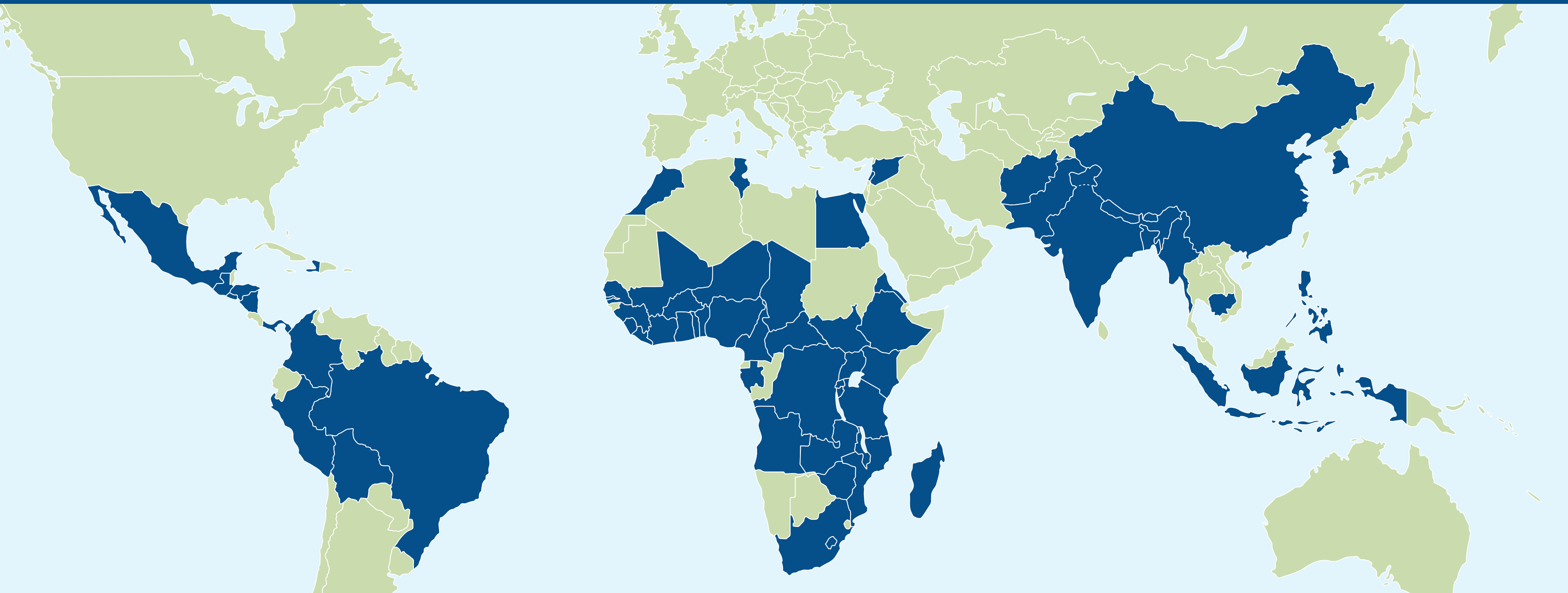


# Biofortified Crops Around the World

Biofortified crop varieties have been released and/or are in testing in the countries shaded dark blue on the map. See the table on the reverse for crop details by country.



These biofortified crops are conventionally bred to contain higher levels of essential vitamins and minerals needed for good health. This map and the crop table on the reverse are based on data from HarvestPlus and the International Potato Center.

HarvestPlus improves nutrition and public health by developing and promoting biofortified food crops that are rich in vitamins and minerals, and providing global leadership on biofortification evidence and technology. HarvestPlus is part of the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) and based at the International Food Policy Research Institute (IFPRI).

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**RESEARCH PROGRAM ON**  
**Agriculture for**  
**Nutrition**  
**and Health**

LED BY IFPRI

# Biofortified Crop Varieties Released (R) or in Testing (T) by Country

More than **42 million people** in smallholder farming households are benefiting from conventionally bred biofortified crops facilitated by HarvestPlus. These crops improve nutrition and health status when eaten regularly.

## HarvestPlus Focus Crops

### Iron Bean

*For Nutrition:* Provides up to 80% of daily iron needs  
*For Farmers:* High yielding, virus resistant, heat and drought tolerant  
*CGIAR Partner:* Bioversity/CIAT

### Iron Pearl Millet

*For Nutrition:* Provides up to 80% of daily iron needs  
*For Farmers:* High yielding, mildew resistant, drought tolerant  
*CGIAR Partner:* ICRISAT

### Zinc Maize

*For Nutrition:* Provides up to 70% of daily zinc needs  
*For Farmers:* High yielding, virus resistant  
*CGIAR Partner:* CIMMYT and IITA

### Zinc Rice

*For Nutrition:* Provides up to 40% of daily zinc needs  
*For Farmers:* High yielding, disease and pest resistant  
*CGIAR Partner:* IRRI and Bioversity/CIAT

### Zinc Wheat

*For Nutrition:* Provides up to 50% of daily zinc needs  
*For Farmers:* High yielding, disease resistant  
*CGIAR Partner:* CIMMYT

### Vitamin A Cassava

*For Nutrition:* Provides up to 100% of daily vitamin A needs  
*For Farmers:* High yielding, virus resistant  
*CGIAR Partner:* IITA and Bioversity/CIAT

### Vitamin A Maize

*For Nutrition:* Provides up to 50% of daily vitamin A needs  
*For Farmers:* High yielding, disease and virus resistant, drought tolerant  
*CGIAR Partner:* CIMMYT and IITA

### Vitamin A Orange Sweet Potato

*For Nutrition:* Provides up to 100% of daily vitamin A needs  
*For Farmers:* High yielding, virus resistant, drought tolerant  
*CGIAR Partner:* CIP

Africa	HIB	IPM	ZIM	ZIR	ZIW	ABP	VAC	VAM	OSP	IZC	IZP	IZL	ZIS
Angola								T	R				
Benin Rep		T					T	T					
Burkina Faso		T						T	R				
Burundi	R					R			R				
Cameroon						T	R	R					
Central African Rep							T						
Chad							T						
Côte d'Ivoire						T	T		R				
DR Congo	R					R	R	R					
Egypt					T			T					
Eritrea		T							T				
Ethiopia			T		T		T	T	R		T	R	
Gabon							T						
Gambia		T					T						
Ghana		T					R	R	R				
Guinea						T	T						
Kenya	T	T					T	T	R		T		
Liberia							T	T					
Madagascar		T		T					R				
Malawi	T	T					T	R	R				
Mali		T						R	T				T
Morocco									T			T	
Mozambique							T	T	R				
Niger		R					T	T	T				
Nigeria		T	T			T	R	R	R	T			T
Rwanda	R					T		R	R		T		
Senegal		T		T			T	T	T				
Sierra Leone							R	T					
South Africa								T	R				
South Sudan		T						T	T				T
Swaziland							T						
Tanzania	R	T				T	T	R	R				
Togo		T						T					
Tunisia		T											
Uganda	R	T				T	T	T	R		T		T
Zambia		T			T		T	R	R				
Zimbabwe	R	T			T			R	T				

HIB = Iron Bean  
 IPM = Iron Pearl Millet

ZIM = Zinc Maize  
 ZIR = Zinc Rice  
 ZIW = Zinc Wheat

ABP = Vit. A Banana/Plantain  
 VAC = Vit. A Cassava  
 VAM = Vit. A Maize  
 OSP = Vit. A Orange Sweet Potato

IZC = Iron/Zinc Cowpea  
 IZP = Iron/Zinc Irish Potato  
 IZL = Iron/Zinc Lentil  
 ZIS = Zinc/Iron Sorghum

Source: HarvestPlus, International Potato Center (2019)

Asia	HIB	IPM	ZIM	ZIR	ZIW	ABP	VAC	VAM	OSP	IZC	IZP	IZL	ZIS
Afghanistan					T								
Bangladesh				R	R				R				R
Bhutan					T						T		
Cambodia				T									
China				T	T			T	R		T		
East Timor									R				
India		R		R	R			T	R	R	T	R	R
Indonesia				R					R				
Lebanon												T	
Myanmar				T									
Nepal					T			T			T	R	
Pakistan				R				T				T	
Philippines					T								
South Korea									R				
Syria													R

LatAm/Caribbean	HIB	IPM	ZIM	ZIR	ZIW	ABP	VAC	VAM	OSP	IZC	IZP	IZL	ZIS
Bolivia	R		R		R						T		
Brazil	R			T	T		R	R	R	R			
Colombia	R		R	T			T	T	R				
El Salvador	R		T	R									
Guatemala	R		R	T			T		R				
Haiti	T		T	T				T	T				
Honduras	R		R						T				
Mexico			T		R			T					
Nicaragua	R		R	T					R				
Panama	R			T	T		T	T	R				
Peru									R		T		