



A public-private partnership for the dissemination of *Urochloa* hybrids

Impacts, potential, constraints

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Target Product Profiles (TPP) – tropical forage breeding

Interspecific *Urochloa* for sub-humid tropical savanna in Latin America
tolerates acid and low fertility soils; grazing and cut and carry

Interspecific *Urochloa* for sub-humid tropical savanna in East & Southern Africa
tolerates acid and low fertility soils; grazing and cut and carry; drought tolerance and spider mite resistance

Hybrid *Urochloa humidicola* for humid tropical savanna in Latin America
tolerates acid and low fertility soils; grazing

Hybrid *Megathyrsus maximus* for sub-humid tropical savanna in Latin America
fertile soils; high productivity; grazing

Hybrid *Megathyrsus maximus* for sub-humid tropical savanna in East & Southern Africa
fertile soils; high productivity; cut and carry

Target Product Profiles (TPP) – tropical forage breeding

	Interspecific <i>Urochloa</i> Latin America	Interspecific <i>Urochloa</i> Africa
Main countries	Honduras, Venezuela, Mexico, Colombia, Nicaragua, Brazil	Kenya, Tanzania, Uganda, Ethiopia, Nigeria, Mali
Hectares (min.)	4,947,087	465,756
Soil type	acid and low fertility	
System	grazing & cut-and-carry	
Essential traits	yield, drought tolerance, tolerance to acid soils, forage quality, seed yield, spittle bug resistance	yield, drought tolerance, tolerance to acid soils, forage quality, seed yield, spider mite resistance
Nice to have traits	waterlogging tolerance, heat tolerance, nitrogen-use-efficiency, shade tolerance, palatability, rhizoctonia foliar blight resistance	

Commercial *Urochloa* hybrids on the market



COBRA®



CAYMAN®



MULATO II®



CAMELLO®



MESTIZO
BLEND



CAMELLO
BLEND



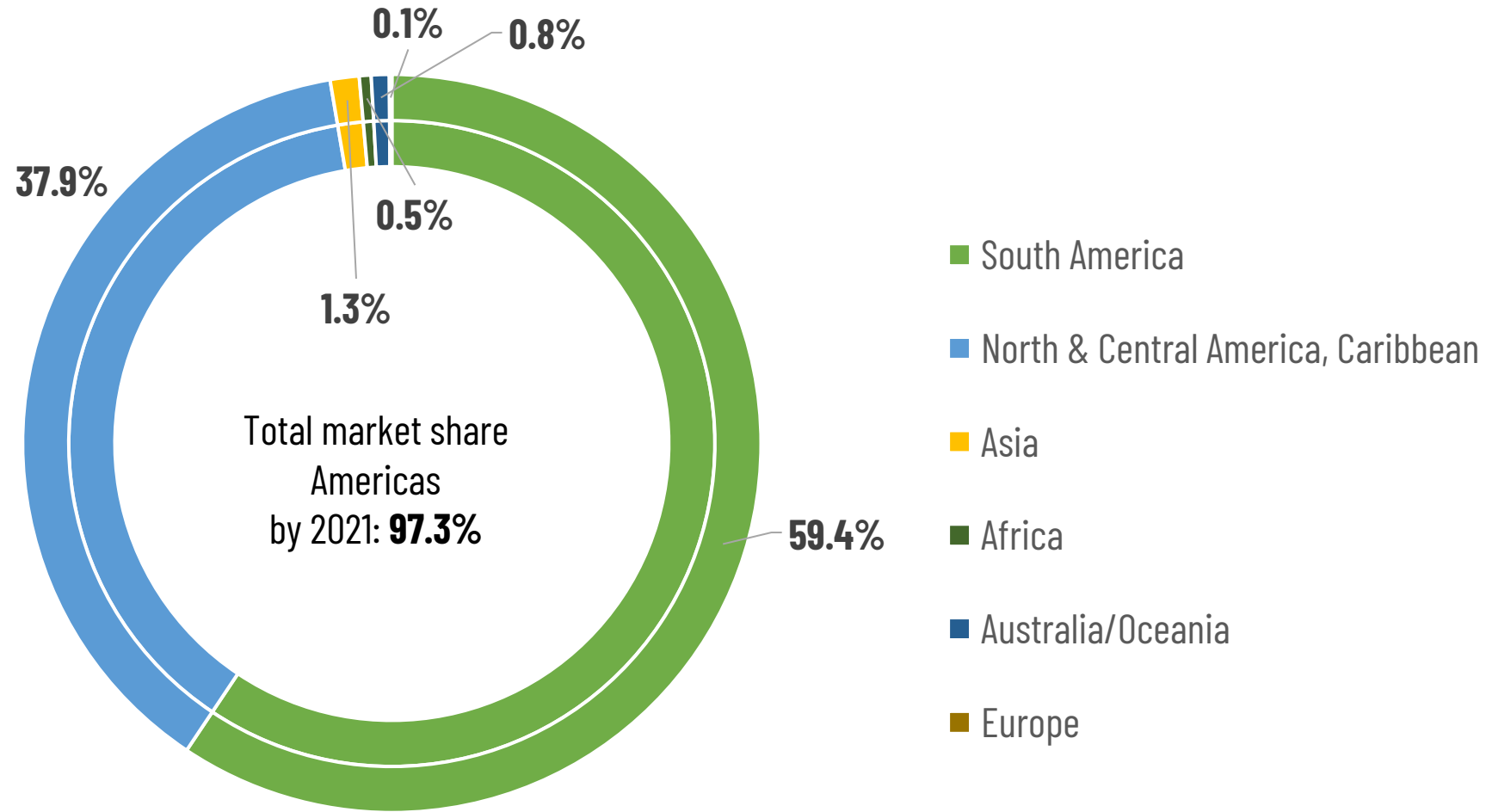
CAYMAN
BLEND

TALISMAN®



Where is *Urochloa* hybrid seed being sold?

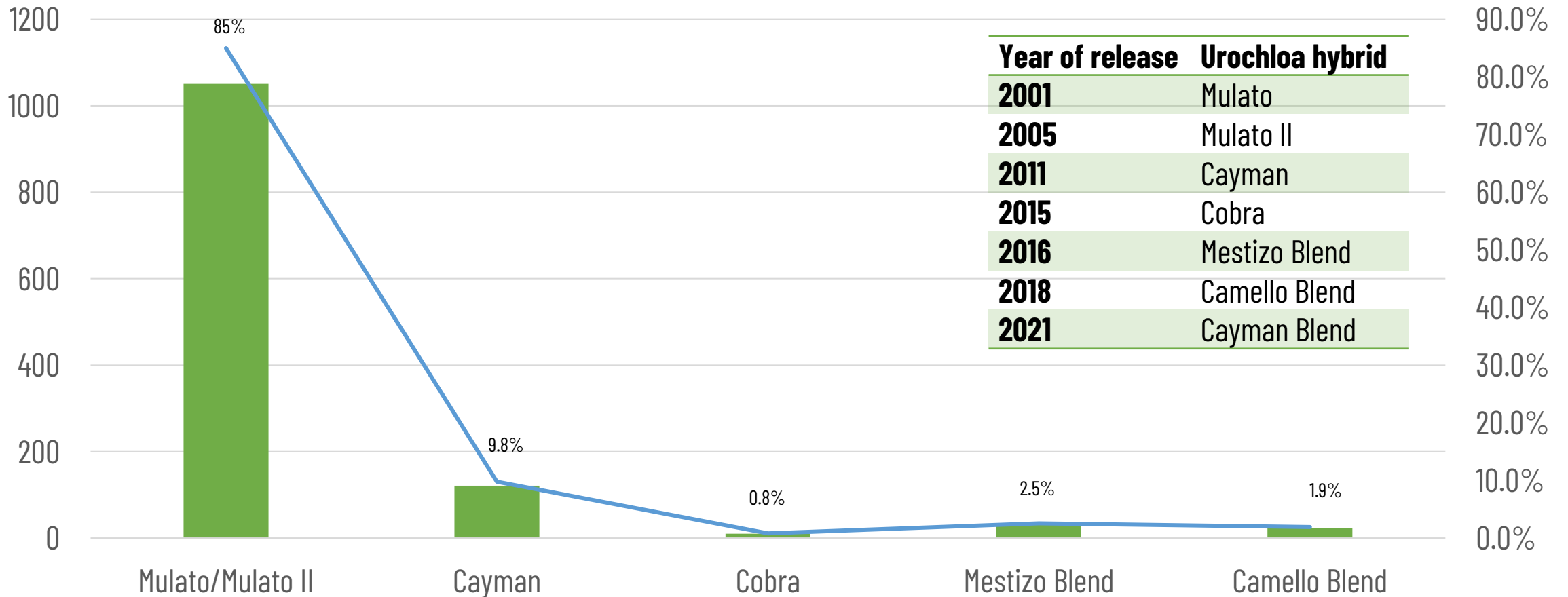
2001-2021



Burkart (under review)

Market share of different *Urochloa* hybrids

2001-2021 (ha, cumulative, seeds)

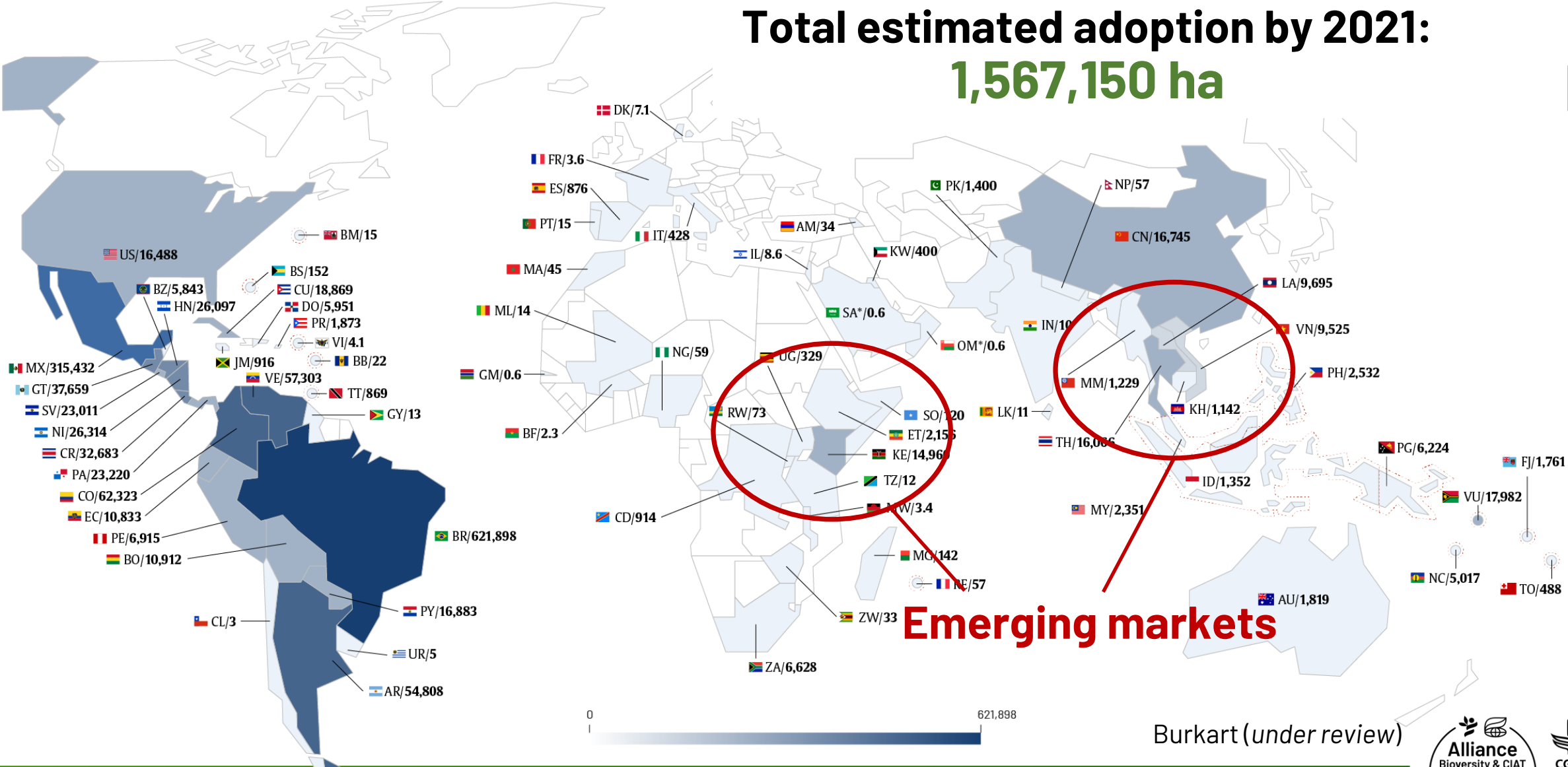


Burkart (under review)

Hectares cultivated with CIAT *Urochloa* hybrids

Seed rate: 7 kg/ha

Total estimated adoption by 2021:
1,567,150 ha

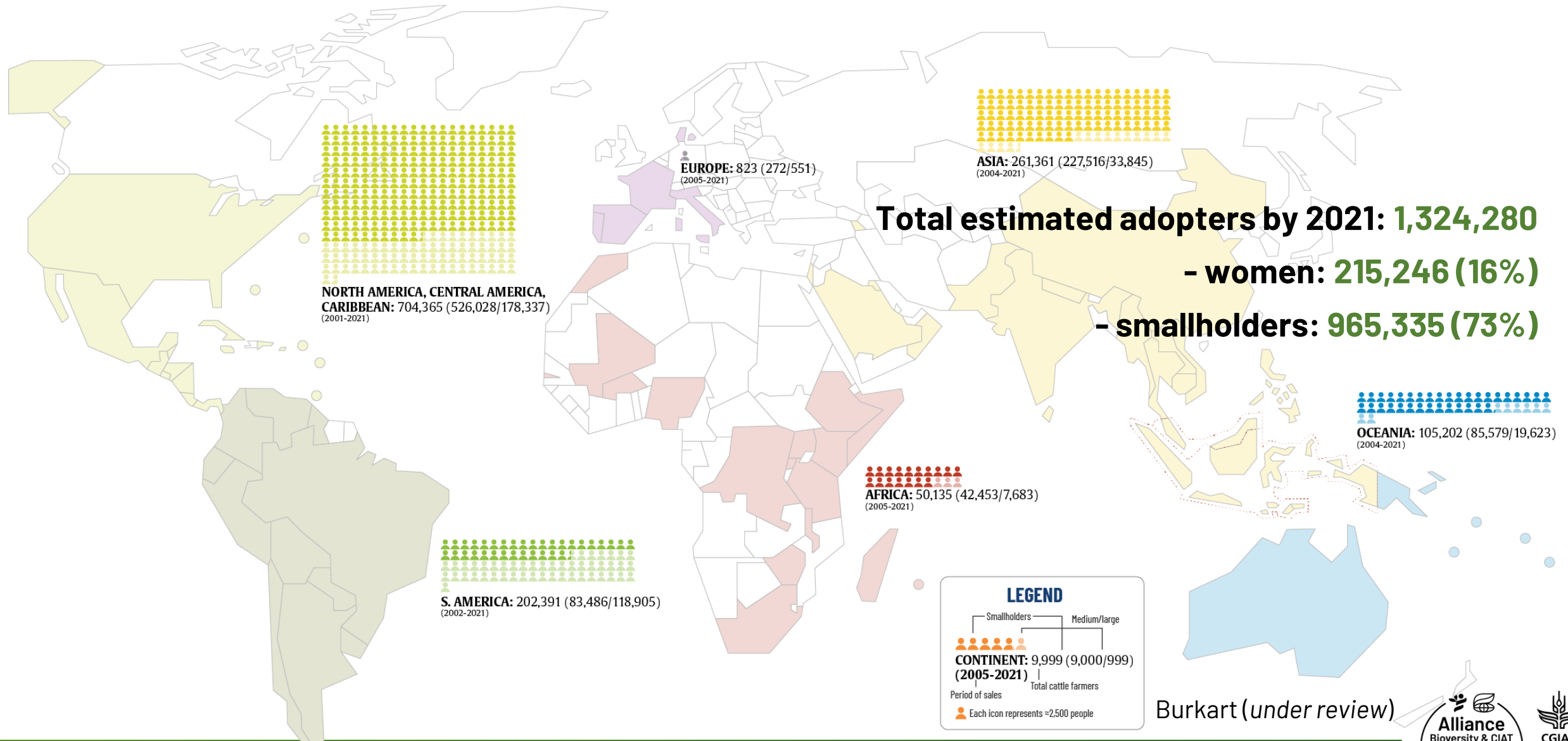


Emerging markets

Burkart (under review)

CIAT *Urochloa* hybrid adopters (cattle farmers)

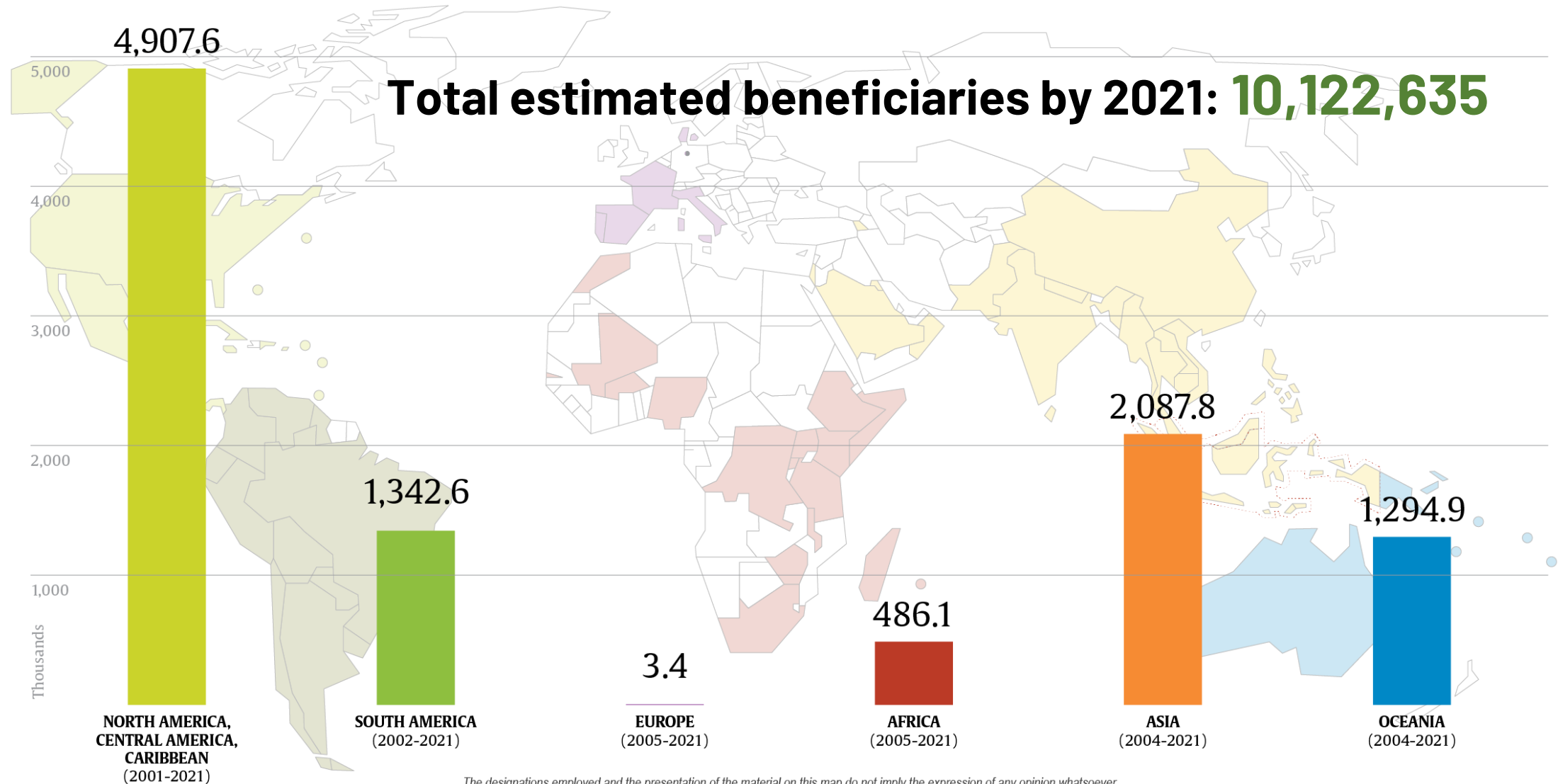
Seed rate: 7 kg/ha



Burkart (under review)

CIAT *Urochloa* hybrid beneficiaries

Seed rate: 7 kg/ha. Values in thousands



The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever

Burkart (under review)

CIAT *Urochloa* hybrid value

Values in millions US\$ (2015)

NORTH AMERICA, CENTRAL AMERICA, CARIBBEAN

Total: 3,435-5,727

Annual: 119-199

EUROPE*

Total: 8.23-11.6

Annual: 0.52-0.73

ASIA*

Total: 383-552

Annual: 15.9-22.8

AFRICA*

Total: 163-247

Annual: 7.3-11.1

OCEANIA*

Total: 204-395

Annual: 8.5-16.1

SOUTH AMERICA

Total: 5,223-8,402

Annual: 186-299

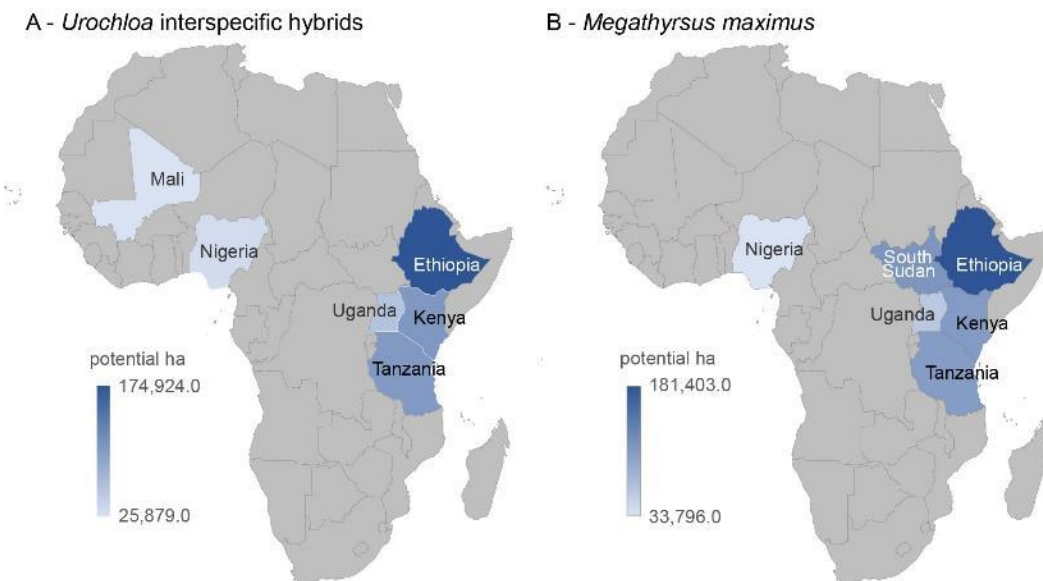
Total value by 2030: **9.4-15.3 billion US\$**

Annual value by 2030: **338-549 million US\$**

Burkart (under review)

Potential markets (size/value) for new forage hybrids in Africa

Junca Paredes, J.J.; Florez, J.F.; Enciso Valencia, K.J.; Hernández Mahecha, L.M.; Triana Ángel, N.; Burkart, S. (2023) Potential forage hybrid markets for enhancing sustainability and food security in East Africa. *Foods* 12(8):1607. DOI: <https://doi.org/10.3390/foods12081607>



Country	New Interspecific <i>Urochloa</i> Hybrids		<i>Megathyrsus maximus</i> Hybrids		Vm: Total Annual Market Value (US\$/Country)
	MS: Potential Market Size (ha)	Vm: Annual Market Value (US\$)	MS: Potential Market Size (ha)	Vm: Annual Market Value (US\$)	
Ethiopia	111,703	19,818,364	115,840	22,173,319	41,991,682
Tanzania	105,204	18,665,332	109,100	20,883,276	39,548,609
Kenya	75,573	13,408,261	78,372	15,001,524	28,409,785
Uganda	59,678	10,588,040	61,888	11,846,184	22,434,224
South Sudan	n/a	n/a	129,271	24,744,292	24,744,292
Nigeria	32,726	5,806,335	33,938	6,496,284	12,302,619
Mali	29,505	5,234,733	n/a	n/a	5,234,733
Total	414,388	73,521,066	528,409	101,144,879	174,665,945

Main problems for emerging hybrid seed markets

Florez et al. (under review)

- **Access to seed, seed price, seed scarcity**
Poor infrastructure, Development of informal seed sector with high shares of vegetative propagation, lost market potential
- **Complex process of forage variety registration**
Disincentives for seed importers, delays in market development, informal seed sector, lost market potential
- **Complexity of hybrid cultivation**
Different knowledge and skill set required, extension and technical assistance limited, disincentive for adoption
- **Small-scale family farming model**
Limited availability of resources for investing in hybrid seed, cultural burdens, different preferences
- **High input costs and low milk/beef prices**
e.g., fertilizer, disincentive for adoption



Thanks!



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