



Guatemala Sugarcane Industry

Circular Economy

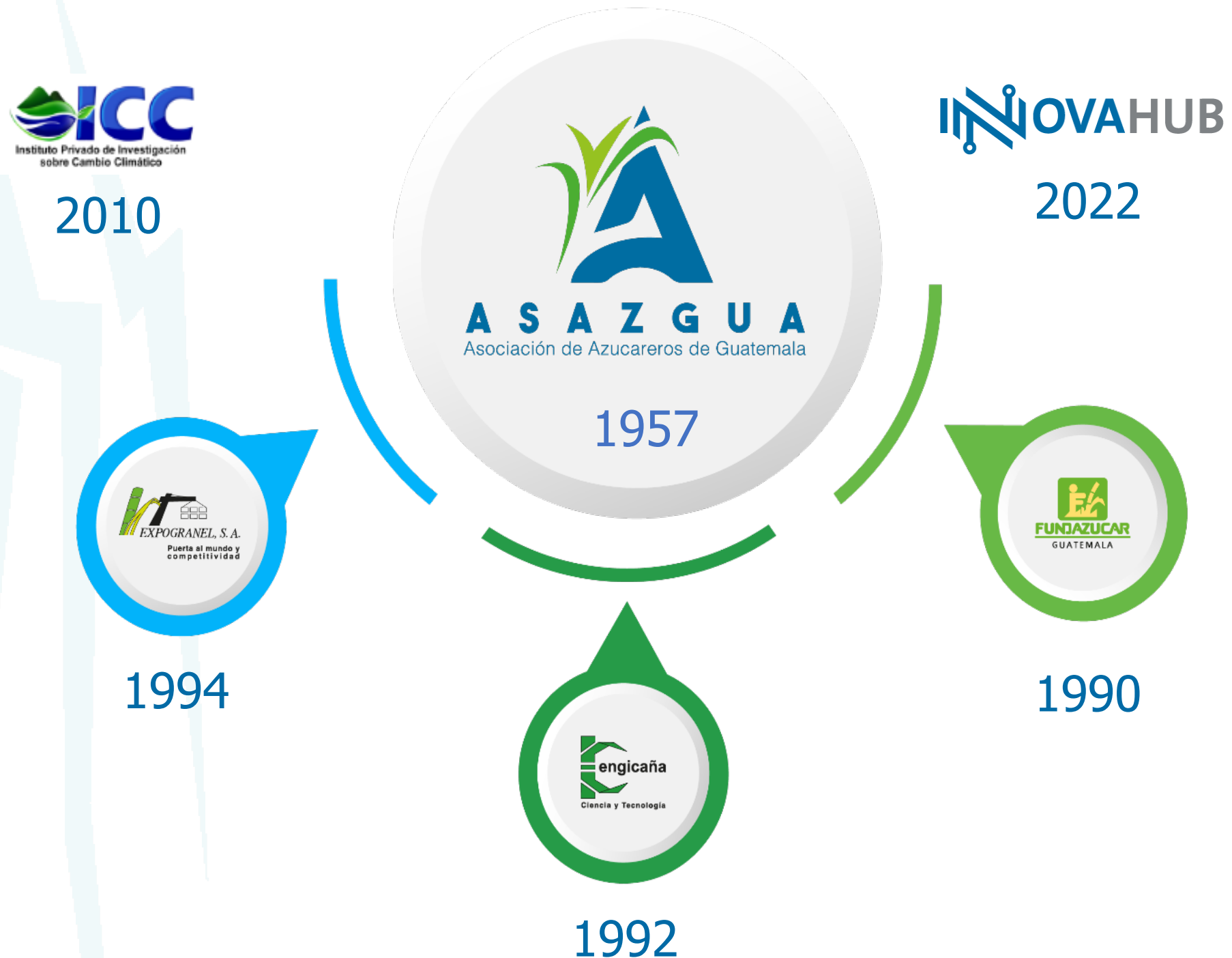
Gustavo Paredes
International Advisor



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SOLUTIONS
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Guatemalan sugar agroindustry

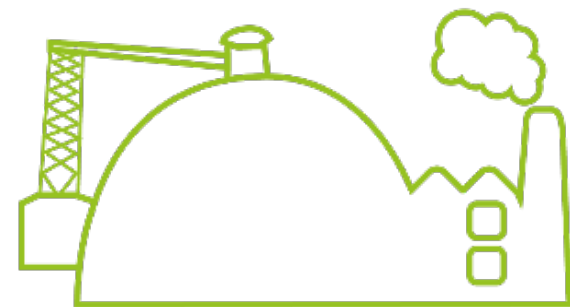
11 sugar mills are united as a Guild in the Guatemalan Sugar Producers Association –Asazgua–.



Sugar mills

- La Unión
- Santa Ana
- Magdalena
- El Pilar
- Trinidad
- Concepción
- Pantaleon
- Palo Gordo
- Madre Tierra
- Santa Teresa
- La Sonrisa

ASAZGUA is committed to promote the implementation and fulfillment of the objectives and goals of the 2030 Agenda, as well as other global agendas, such as Climate Change, Biodiversity and Human Rights. For this reason, we work on actions directed in the three axes as the basis for achieving the sustainable development.



La Asociación de Azucareros de Guatemala tiene el agrado de invitarle a la presentación:

***La Agroindustria de la caña de Azúcar de Guatemala,
una estrategia de desarrollo sostenible local de impacto global***

Presentación del Reporte Gremial de Sostenibilidad GRI y los Estudios de Caso sobre el aporte de la Agroindustria Azucarera de Guatemala al cumplimiento de los Objetivos de Desarrollo Sostenible.

02
de marzo
10:00 horas

SEMINARIO
WEB

Registra tu participación



Escanea el código QR
o haz clic aquí para inscribirte.



Luego de la inscripción, recibirás un correo electrónico de confirmación con información para unirse al seminario web.



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Water and Energy

The Sugar Agroindustry has implemented practices to reduce water consumption and to ensure the rational use of this resource.

Water consumption in agricultural processes has been reduced through the implementation of efficient irrigation systems as well as with the use of new innovative technologies and processes such as the dry cleaning of sugarcane which reduces substantially the use of vital liquids.



The Sugar Cane Agroindustry, produces electricity for the operation of the sugar mills and covers at least 30% of the electricity demanded in the country, all this using 100% of the residual biomass (bagasse) obtained during sugar production, as well as decreasing the use of water and improving techniques that allow the production of green energy; to remain as an Agroindustry with zero net GHG emissions,

The generation of renewable electricity from biomass has prevented 1.5 million tons of CO₂ from reaching the environment by reducing the use of fossil fuels to generate energy. This neutralizes GHG emissions from sugar production.



Guatemala Sugarcane Industry and circular economy

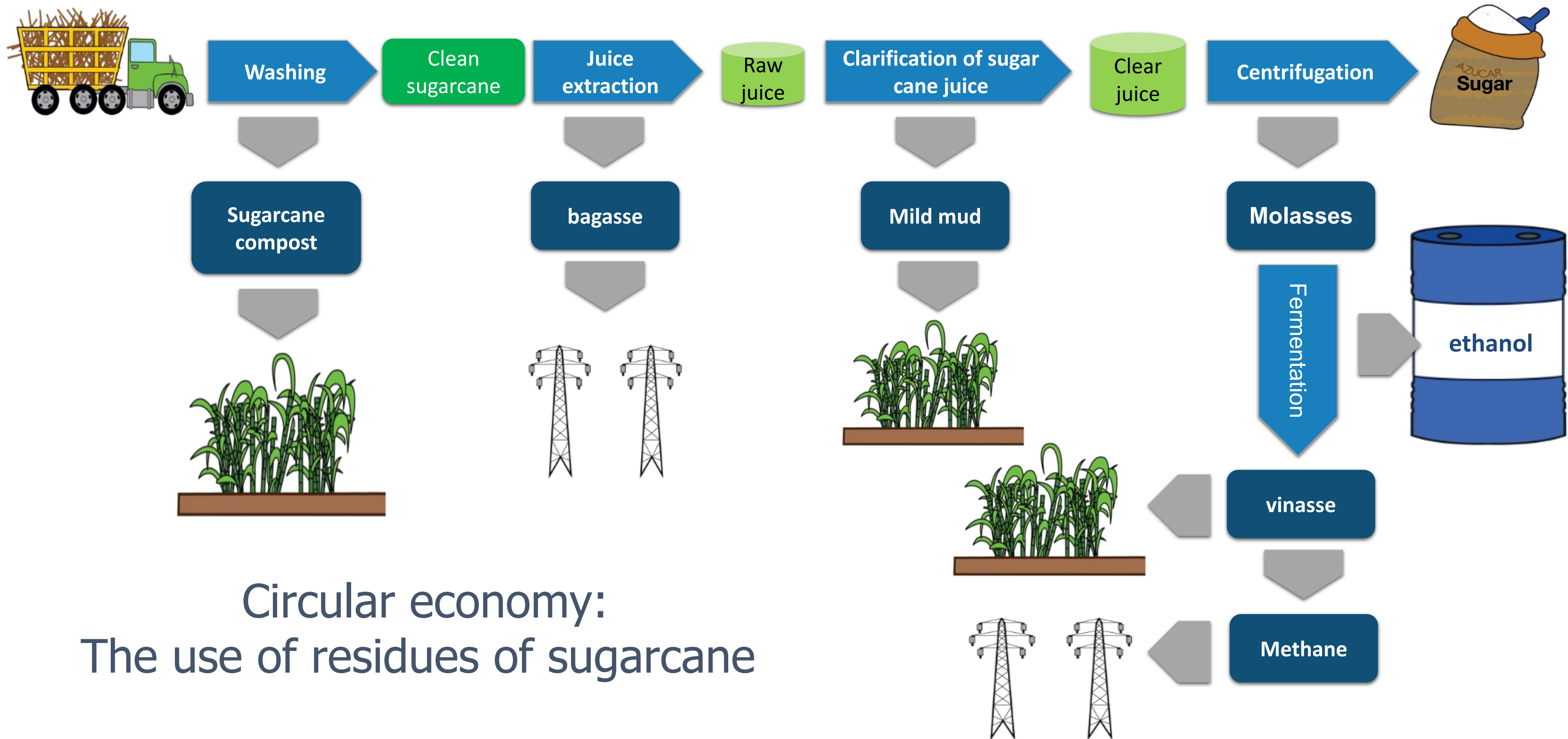
The Guatemalan Sugarcane Industry is aware that responsible operations, a focus on a sustainability strategy and the circular economy, all together contribute to the value chain.

The Guatemalan Sugarcane Industry is committed to a sustainable production of sugar throughout a responsible use of water, energy production and R&D.

Our sustainable commitment is based in the national legal framework and Asazgua's environmental policies.

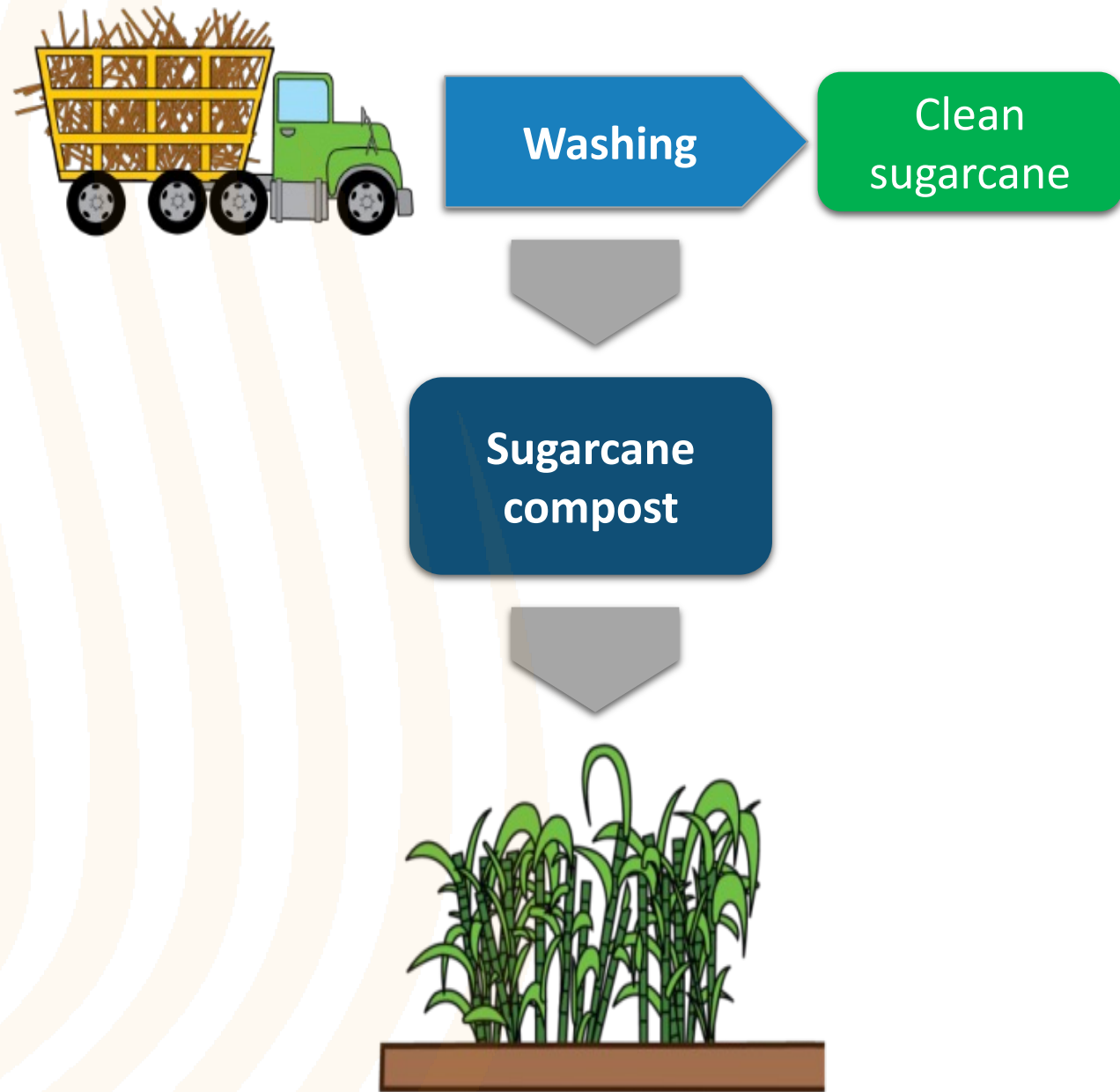


Guatemala Sugarcane Industry



Circular economy:
The use of residues of sugarcane

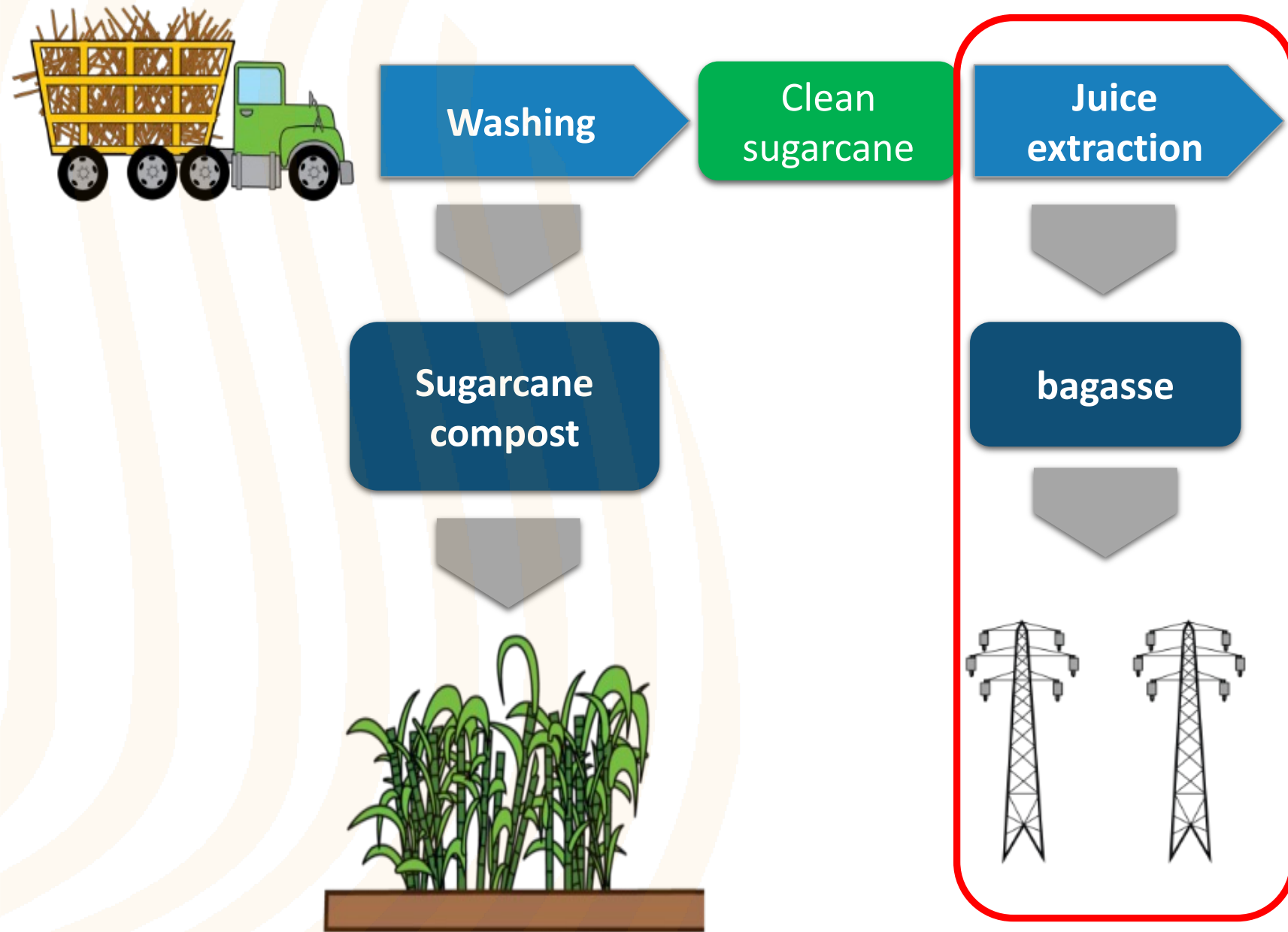
Guatemala Sugarcane Industry



The dust, soil, ash, either dry or dissolved in water when cleaning the cane, are returned to the mills
Benefits

- Rivers are not polluted
- Is a good source of nutrients for soil

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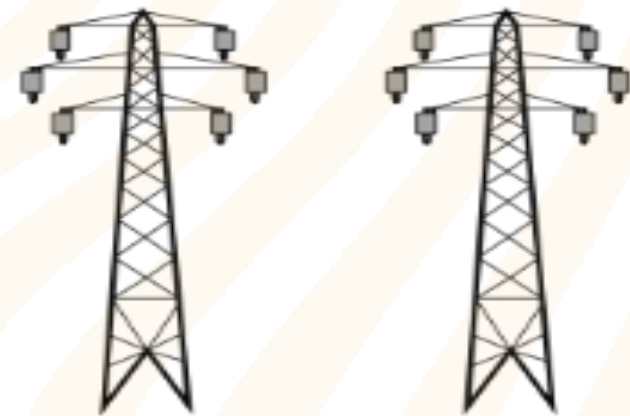


Energy production

Bagasse

Cane crushing and Juice extraction

bagasse



Guatemala sugarcane mills produce bioelectricity. They are energy self-sufficient, producing more than enough electricity to cover their own needs and generate surplus energy, which is supplied into Guatemala's National Interconnected System.

Sugarcane is energy

988 MW

installed capacity

the Sugar Industry supplies renewable energy to the National Interconnected System.



30 %

of the energy consumed in the country

is produced by the Guatemalan Sugar Industry during the Zafra.

1,784 GWh

It was renewable energy

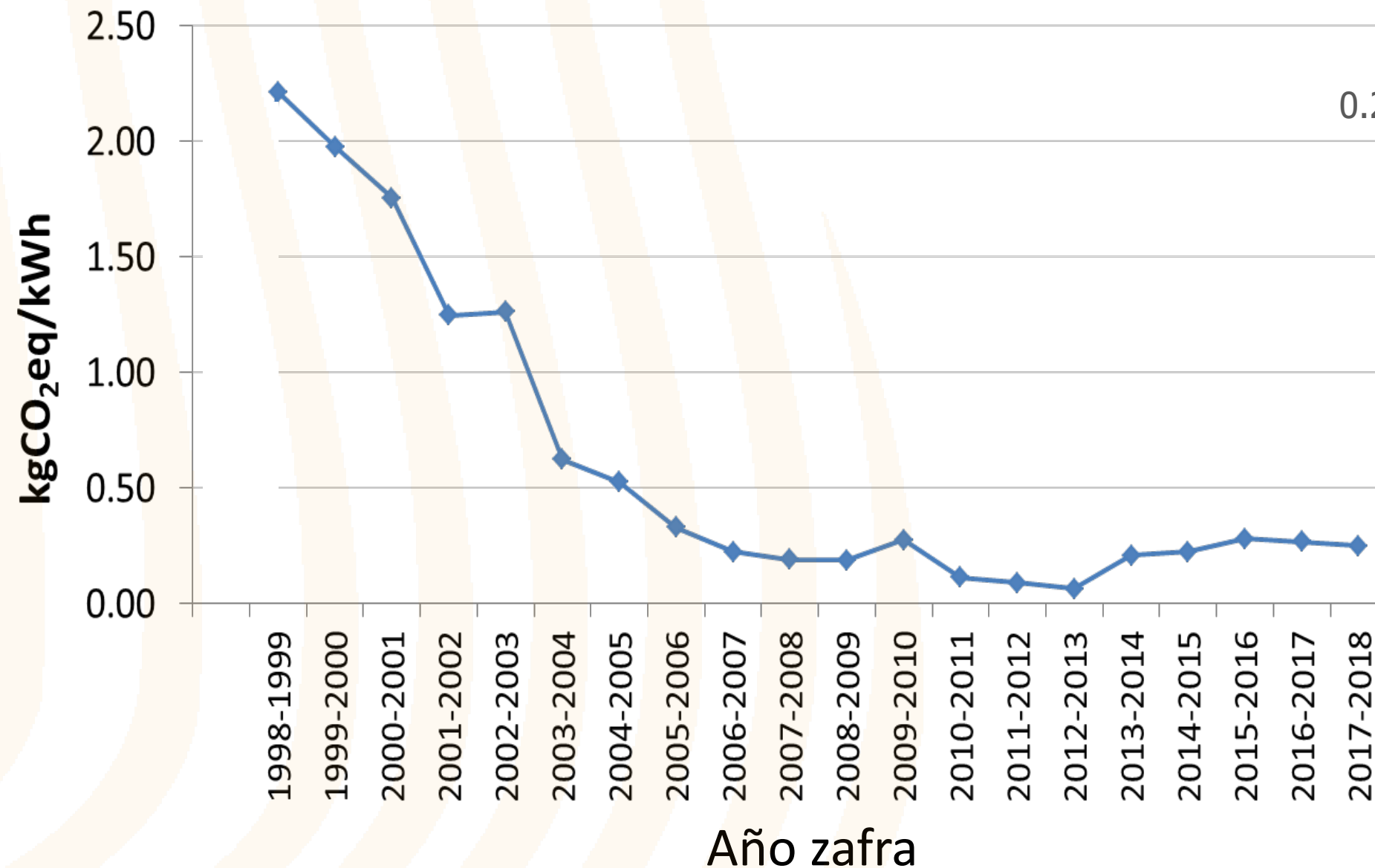
generated by the Guatemalan Sugar Industry during the 2021-2022 Zafra to deliver to the network.

Sugarcane is energy



The production of electricity from sugarcane bagasse presented a low carbon footprint

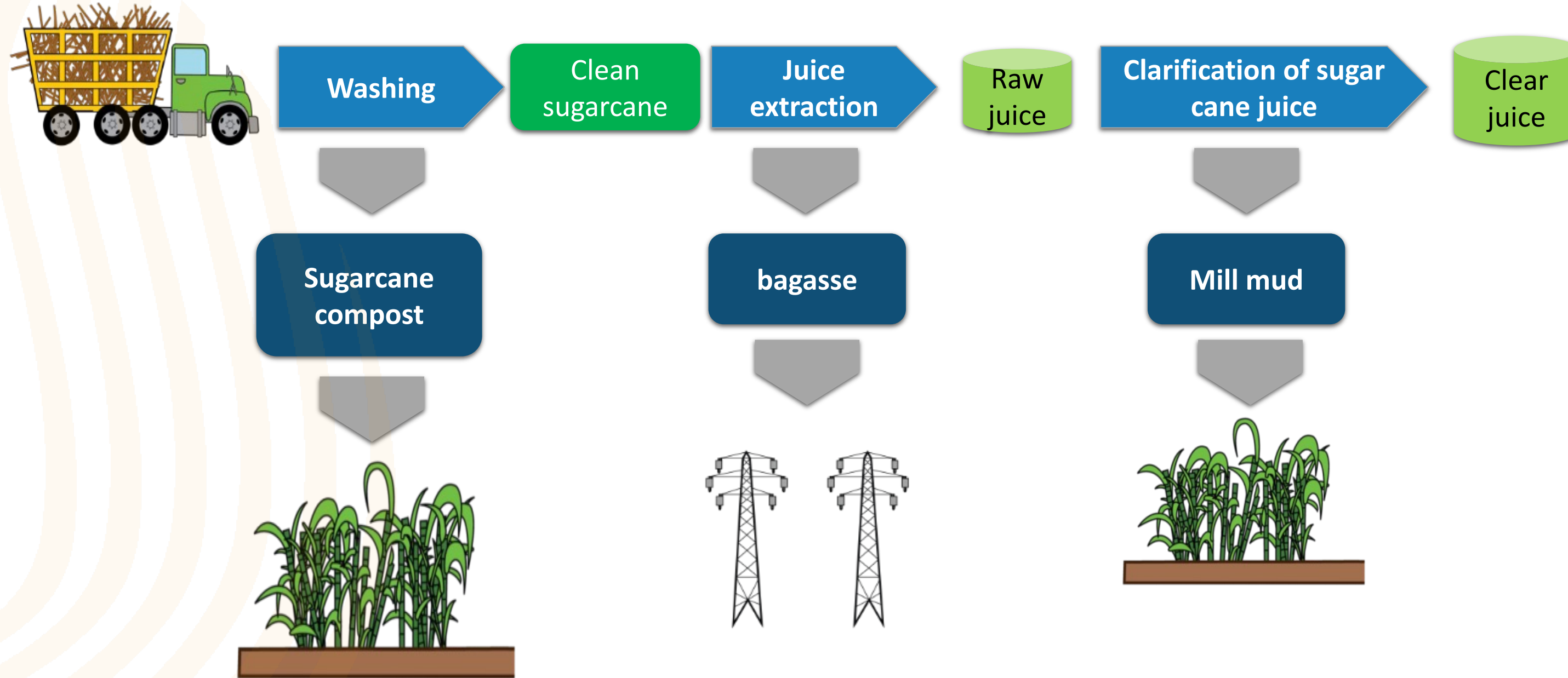
Huella de carbono global:
0.24 – 1.16 kgCO₂eq/kg azúcar



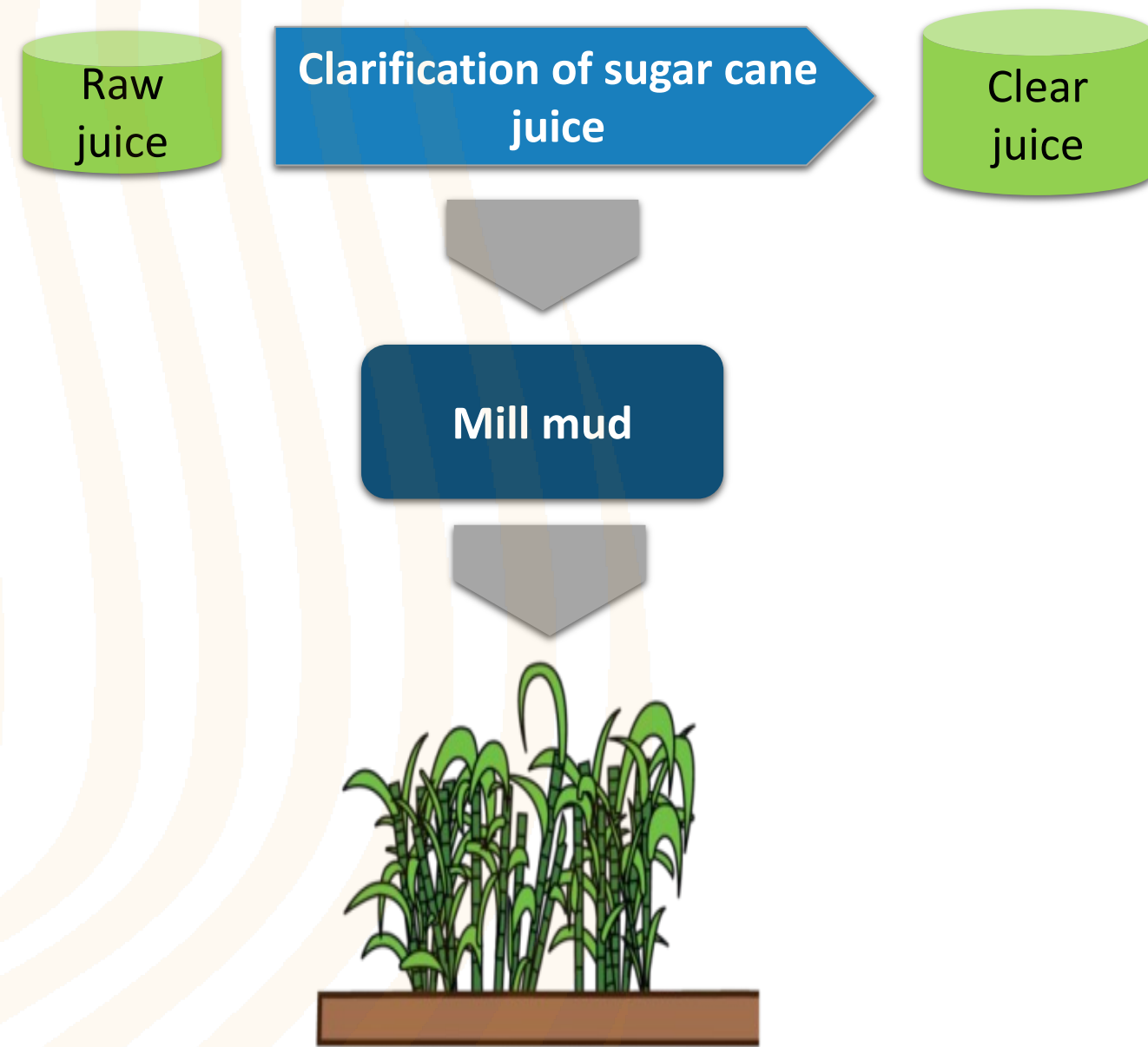
- **4 million tons of CO₂e are avoided annually through generation of electricity from sugarcane biomass**
- **10% of national emissions (equivalent of)**
- **It has replaced the use of fossil fuels.**
- **230% increase in yield (kWh/ton of biomass) has contributed to a lower carbon footprint**



Guatemala Sugarcane Industry



Mill mud



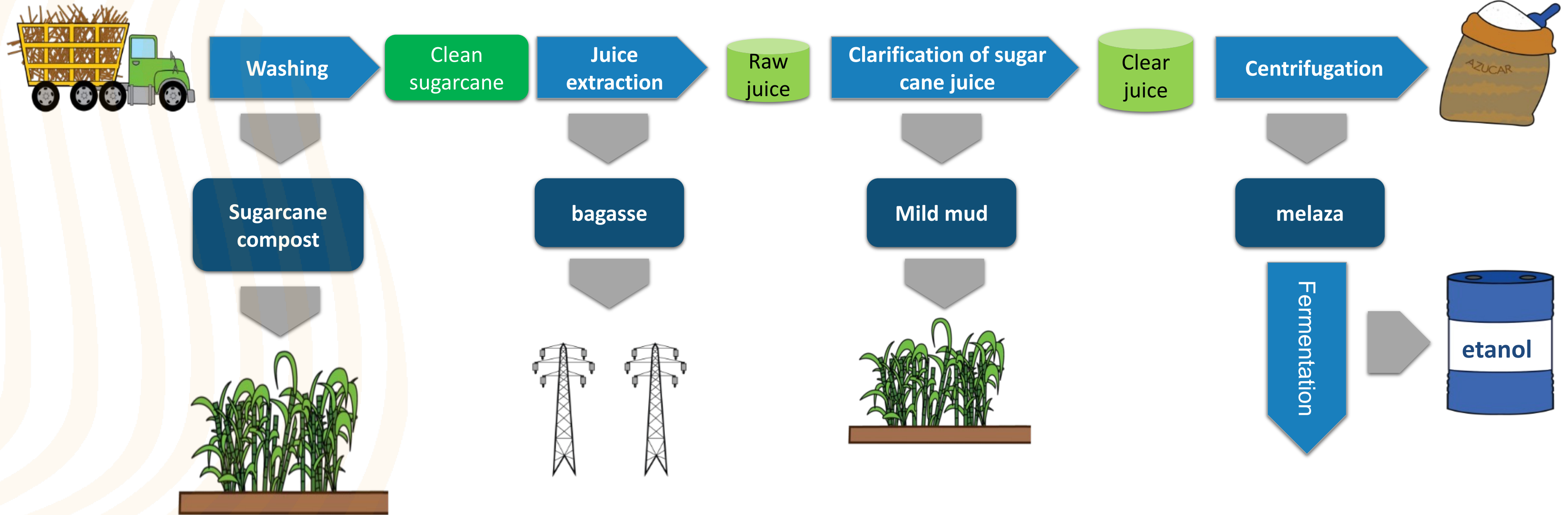
Cachaca: organic fertilizer



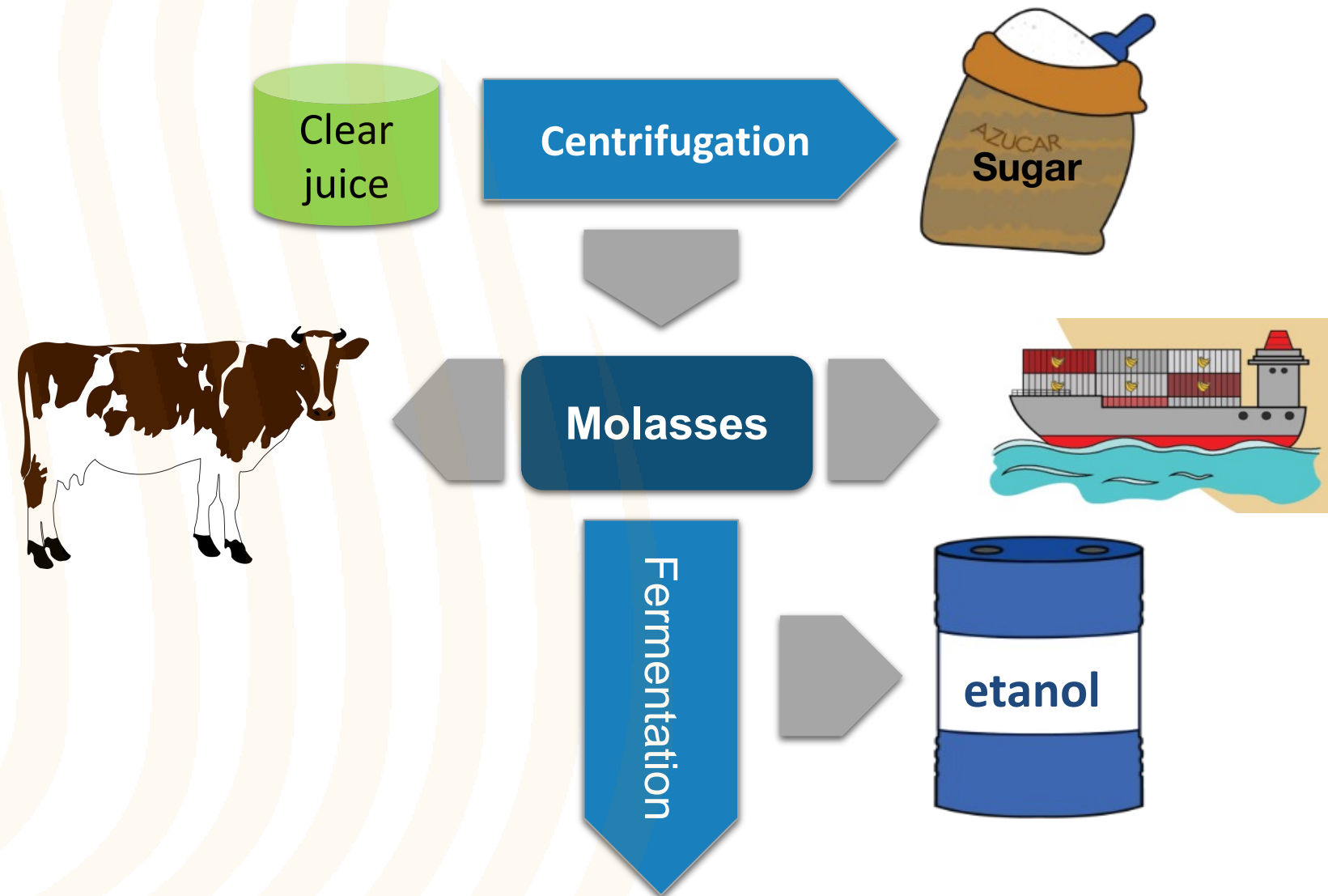
Benefits

- Mill muds are organic fertilizers (compost)
- Savings from buying less synthetic fertilizers
- In milling year 20-21 838,149 tons of mill muds were generated

Guatemala Sugarcane Industry



Molasses



Molasses is fermented to produce ethanol. They are also sold for animal feed.



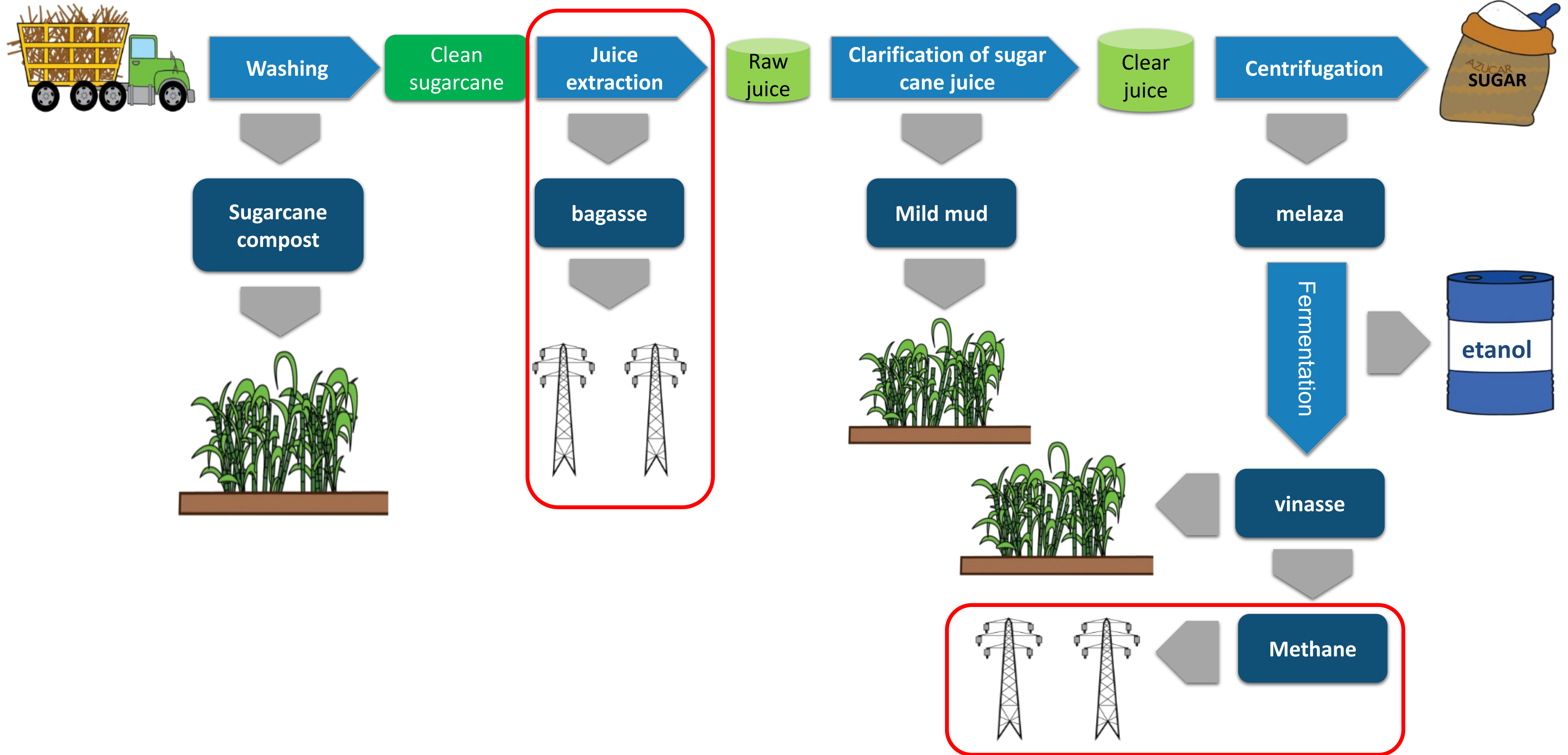
65 million

Gallons of ethanol
100% of ethanol is
exported

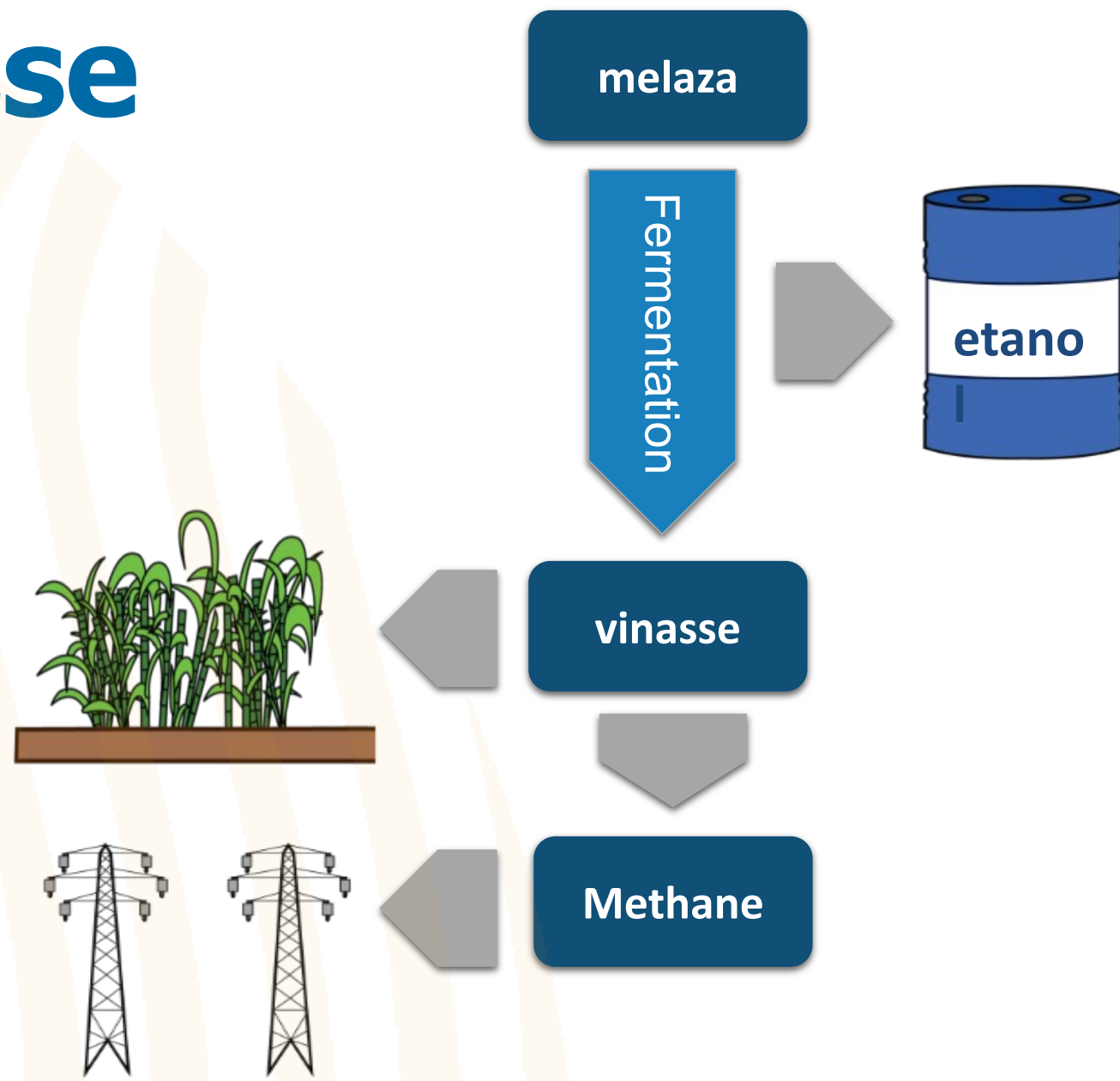
Guatemalan ethanol is exported and used for beverages, cosmetics and as biofuel.

It has great potential for Guatemala if mixed with fuel with benefits for human health and reduction of greenhouse gas emissions.

Guatemala Sugarcane Industry



Vinasse



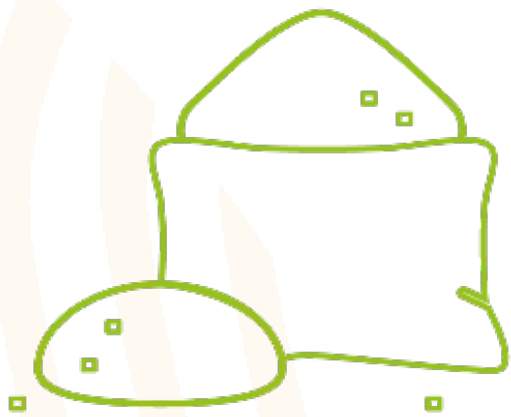
Vinasse is used as fertilizer. In one of the main mills, methane is extracted and used to generate electricity



Benefits

- It is an organic fertilizer
- Reduced costs from purchase of synthetic fertilizers
- Electricity generated from methane is an additional source of income
- Using methane for electricity generation avoids its emissions as a greenhouse gas
- If released into rivers, vinasse consumes oxygen and harms aquatic life. Its use prevents polluting the environment.
- During milling year 20-21 1.8 million cubic meters of vinasse were generated

Conclusions



2,8 Million

metric tons of sugar was the sugar production in Guatemala during the 2021-2022 Zafra



30 %

of the energy consumed in the country is produced by the Guatemalan Sugar Industry during the Zafra.



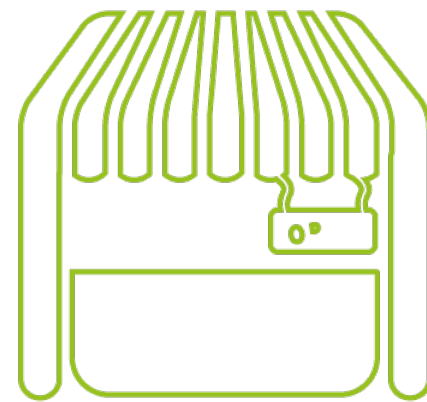
65 million

Gallons of ethanol
100% of ethanol is exported



55,636

direct jobs



278,180

indirect jobs



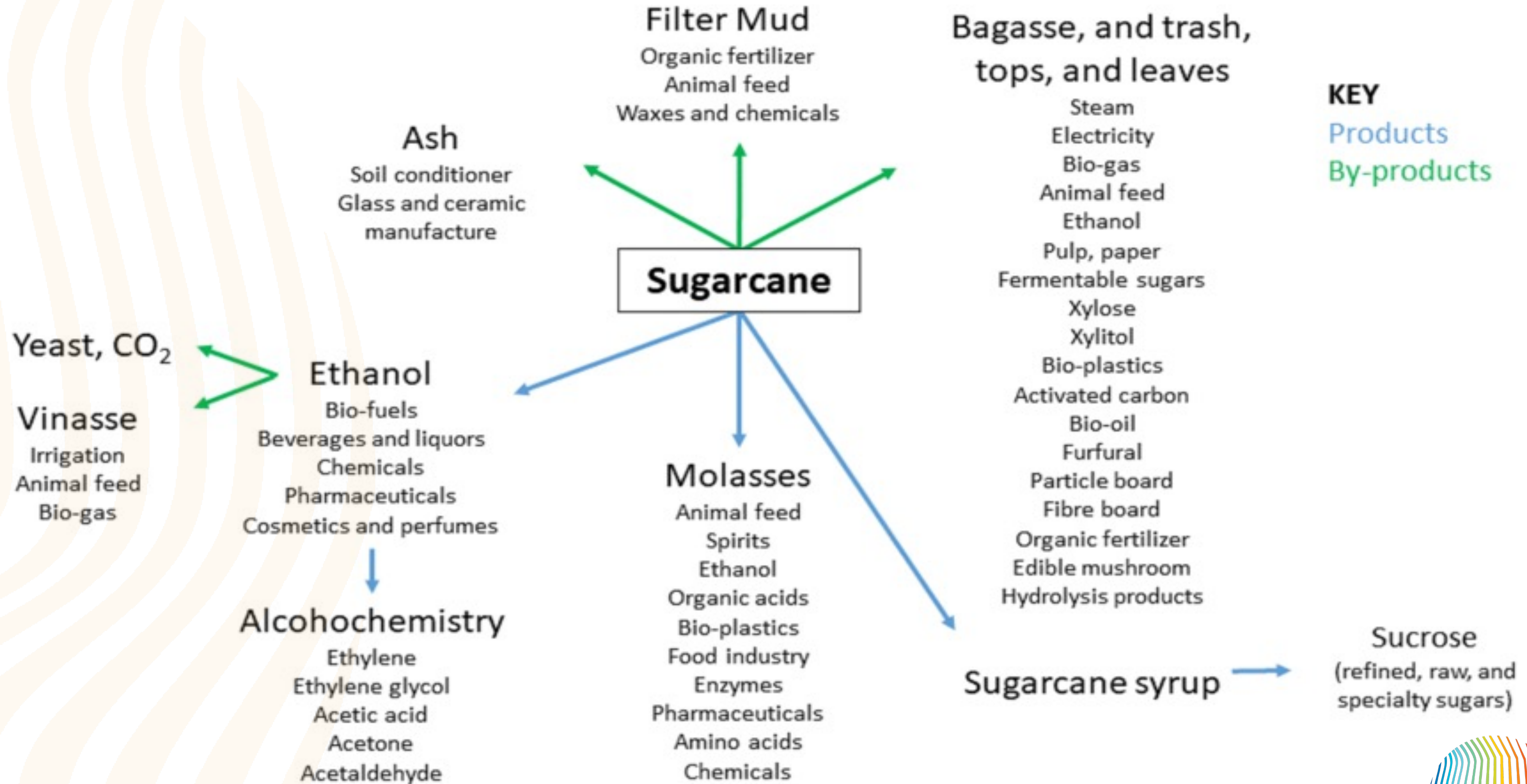
324,000

families depend on the Guatemalan Sugar Industry



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Conclusions: by products of the sugarcane





We are more than Sugar
We are energy for sustainable development

Twitter: @AsazguaGT
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