BIOMASS AT A GLANCE.

AGCO BIOMASS SOLUTIONS™

Biomass has been around since the dawn of man. It is organic matter, especially plant matter, that can be converted to fuel and is highly regarded as a renewable energy source. It can also be used to create high-value chemicals, recyclable products, animal bedding, pellets and more.

Biomass practices are continuously evolving, and AGCO is helping to lead the way. We work with leading businesses and major universities to perfect best practices, tight risk mitigation strategies and the right equipment to help companies navigate today's complicated biomass logistics ecosystem.

It's estimated the Earth grows about **130 billion** tons of biomass annually.

That's more than **6X** the world's energy use.

Globally, biomass is the

4th largest supplier of energy (14%) after coal, oil and natural gas.

Corn-derived ethanol accounts for about

10% of U.S. gasoline consumption.

Biomass produces more than

54 billion gallons of ethanol, enough to meet gasoline needs in 10 states.

Biomass has the potential to produce more than

732 billion kilowatt-hours of electricity, enough to run half the homes in the U.S.

Biomass currently provides about

2% of America's electricity **&** **1%** of the fuel used in cars and trucks.

And some of the heat and steam used by homes and businesses. With more energy crops and better conversion technology, it could gain a much larger portion of the market.

Energy crops and crop residues could provide **14% of U.S. electricity use** or 13% of the nation's motor fuel.

Farmers could grow 188 million dry tons of switchgrass on

42 million acres of cropland in the U.S. at a price of less than $50 per dry ton delivered.

This would increase total U.S. net farm income by

nearly $6 billion.

About 150 million dry tons of corn stover and wheat straw are available annually in the U.S. at the same price, which could increase farm income by another **$2 billion**

Assumes about 40% of total residue is collected and the rest is left to maintain soil quality.

Tripling U.S. use of biomass for energy could provide as much as

$20 billion in new income for farmers and rural communities. It could reduce emissions by the same amount as taking **70 million cars** off the road.

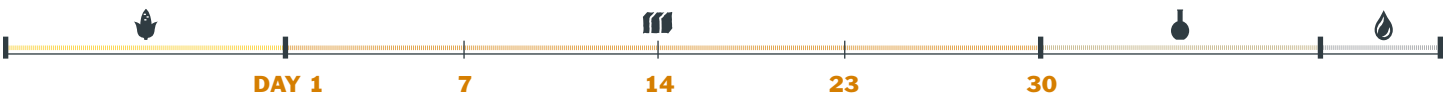
We're experts in biomass supply chain logistics and risk mitigation.
Email us at: AGCO_Biomass_Solutions@agcocorp.com. Or visit blog.agcocorp.com/technology

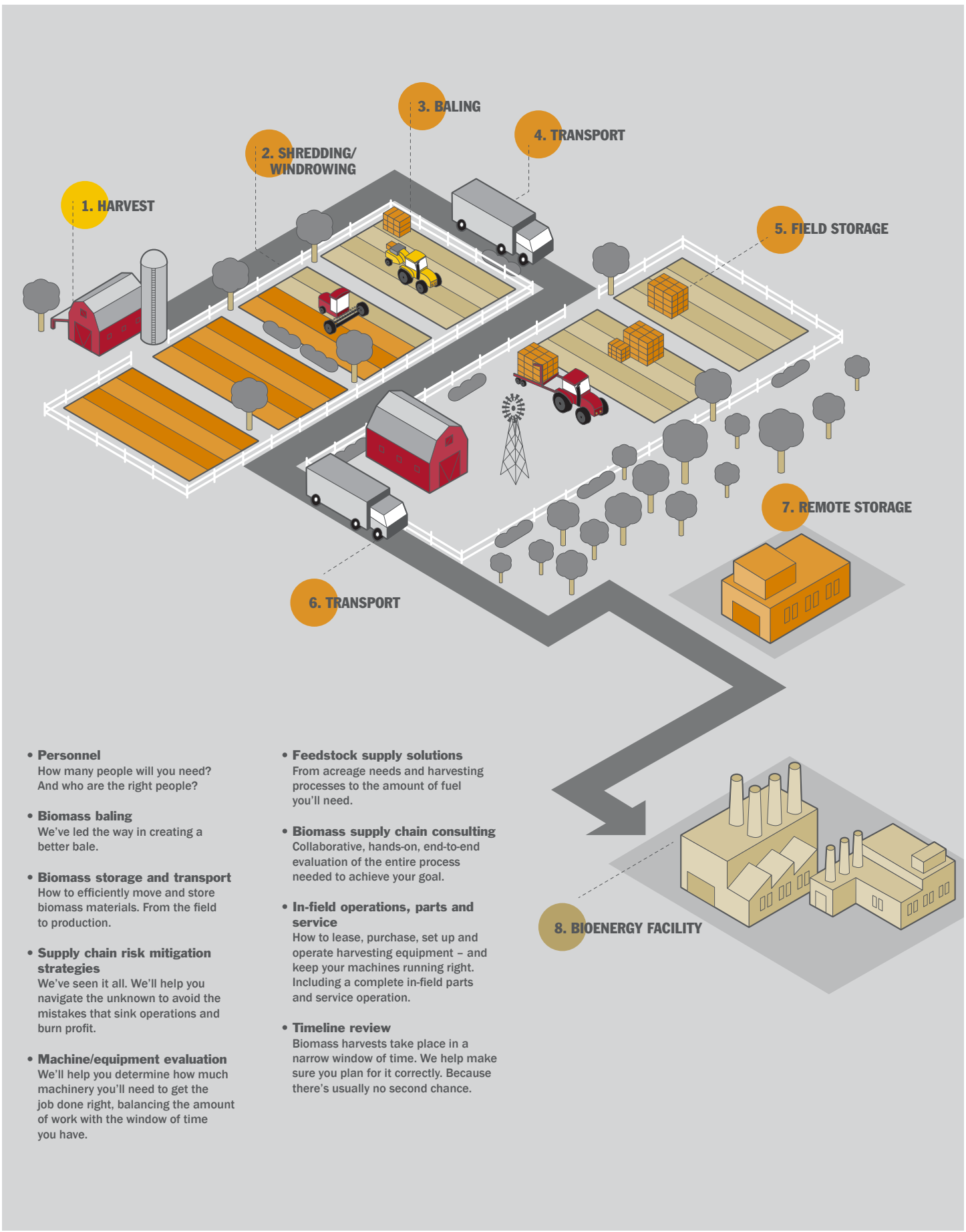
AGCO Your Agriculture Company

MAKING BIOMASS OPERATIONS BETTER. FROM THE FIELD TO THE BIOFACILITY.

AGCO BIOMASS SOLUTIONS™

The potential is enormous, but the window is tight. Harvesting feedstock is a race to get everything done in the shortest time possible. It involves a massive coordination of equipment, spare parts, highly trained personnel and tightly choreographed supply chain logistics.





- **Personnel**
  How many people will you need? And who are the right people?
- **Biomass baling**
  We've led the way in creating a better bale.
- **Biomass storage and transport**
  How to efficiently move and store biomass materials. From the field to production.
- **Supply chain risk mitigation strategies**
  We've seen it all. We'll help you navigate the unknown to avoid the mistakes that sink operations and burn profit.
- **Machine/equipment evaluation**
  We'll help you determine how much machinery you'll need to get the job done right, balancing the amount of work with the window of time you have.
- **Feedstock supply solutions**
  From acreage needs and harvesting processes to the amount of fuel you'll need.
- **Biomass supply chain consulting**
  Collaborative, hands-on, end-to-end evaluation of the entire process needed to achieve your goal.
- **In-field operations, parts and service**
  How to lease, purchase, set up and operate harvesting equipment – and keep your machines running right. Including a complete in-field parts and service operation.
- **Timeline review**
  Biomass harvests take place in a narrow window of time. We help make sure you plan for it correctly. Because there's usually no second chance.

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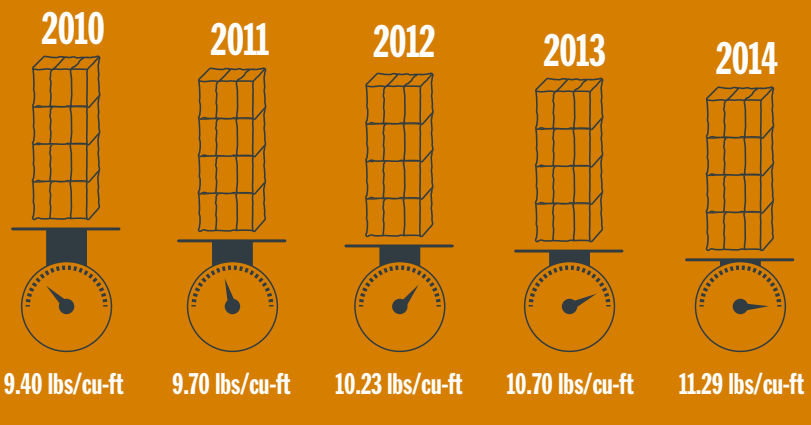
AGCO Your Agriculture Company

THE RELENTLESS PURSUIT OF THE BETTER BALE.

AGCO BIOMASS SOLUTIONS™

We understand biomass. And one of the most important things we've learned is that the bale is the key to an efficient, profitable biomass operation. The denser the bale, the better. In the past five years, we've dedicated ourselves to finding innovative ways to make a better bale. We've relentlessly improved the bale density of our Hesston® by Massey Ferguson large square balers. And the new Hesston 2270XD Extra Density large square baler creates extra-dense, 3-foot-by-4-foot bales that are 15% denser than the standard 2270 large square baler. These bales have the density, moisture content, storability and transportability to efficiently deliver corn stover, wheat straw, Miscanthus or other material to bioproduct facilities.



In the past five years, we've improved our bale density by

20.1%

DENSER BALES = LESS BALES = MORE SAVINGS

A denser bale is more efficient and more economical.
But how much more?

SITUATION

350,000 tons
of biomass is needed to produce
30 million gallons
of biofuel.

Four short years ago, it took
840,700 bales, at 833 lbs. each
to provide the desired biomass.

Today, with AGCO's dry matter bale density improvements, a large square baler can produce
1,000 + -lb. bales.
This means it now takes
140,700 LESS bales
(-20.1%)
to deliver the same amount of biomass

Less bales means
LESS
- Harvesting time
- Touches & handling
- Manpower
- Fuel
- Emissions
- Equipment wear & tear
- Maintenance

Furthermore, reduced harvesting time and fewer bale touches means more than
3,600 fewer tractor trailer loads
and a reduction of 18.6 million feet, or 3,500 miles, of twine.

Source: AGCO internal bale research.

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