

# Corn fed domestically and shipped internationally

Domestic demand and export demand. Their definitions seem self-evident. But as is often the case, even the most self-evident concepts can be less than straight-forward when applied.

Recently, we have been grappling with how to account for corn and soybean meal that is exported via exports of meat and poultry. It is not all that easy because the USDA does not routinely estimate feed demand by livestock category. So we can't look up somewhere how much corn is demanded by broilers and divvy-up the total based on levels of domestic and export consumption of broiler meat.

Assumptions have to be made about feed conversion rates and other factors to estimate how much corn is fed to broilers in total and then to estimate how much corn is shipped overseas via poultry exports. Yes, the corn is fed domestically, but we can't count the same corn both as domestic demand and export demand. So for every bushel of corn that reaches another country embedded in meat or poultry, and is added to corn export demand, a bushel of corn must be deducted from domestic demand.

After accounting for corn exported via meat and poultry, are we finished? Well, it would seem so, because we now have a better picture of the totality of grain that finds its way directly or indirectly to export customers. But trade is not a one-way street. In fact, we tend to import more beef than we export. To the extent that livestock and poultry farmers in other countries have fed corn/grain to produce the meat, we also import grain via meat. Since imported beef, for example, tends to be from cattle that are more grass-fed than is typically the case in the U.S., not as much corn is implicitly imported per pound of beef as would be the case in beef exported from the U.S.

One way to deal with this import issue is to net out the estimated grain fed to meat/poultry that is imported into the U.S. from the estimated grain exported from the U.S. via meat and poultry. We showed a graph of domestic and export demand that resulted from using this "net export" approach in a recent column.

Another, and perhaps more conceptually correct approach, would be to make two separate calculations: one being the estimated quantity of corn exported by way U.S. exports of meat and poultry and the other being the quantity of corn imported via U.S. imports of meat and poultry. But rather than subtracting corn imported from corn exported as is done in the net export approach, treat the implied corn exports as described earlier. That is, add it to the usual/published corn export number and subtract it from the published level of domestic corn demand. But then do an additional step. Add the corn embedded in U.S. imported meat to the U.S. domestic demand for corn. That is, if we count corn used to produce exported meat and poultry as corn exports, logically we also should count meat/poultry-based corn imports as domestic utilization of corn.

It is easy to make the argument that published corn export numbers underestimate "total" corn exports because they leave out corn fed to livestock and poultry that are exported as meat. But if one argues for representing total corn export demand in that way, then a corresponding representation of grain imported via imported meat seems to be required.

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