

# Hemp Seed Deliverable Supply

## **Deliverable supply for Seed SEF's hemp seed contracts**

Hemp seeds will be among the first forward and option contracts traded on Seed SEF. These contracts will call for delivery of 5,000 lbs. of hemp seed against payment of the contract price. For example, unless they are offset by the two traders with another identical but opposite contract before the contract's expiration, a hemp seed forward contract requires the seller to deliver 5,000 lbs. of Grade No. 1 industrial hemp seed to the buyer at the price at which the contract was traded. The seller is to deliver the contract grade hemp seed within the next month. The seller may already have 5,000 lbs. of deliverable seed on hand, or the seller may have to procure it in the cash market.

Let's say the seller buys it in the cash market for redelivery on the contract. The difference between the cash market price and the contract price determines whether this is a profitable or a losing trade for the seller because if the seller has to pay more than the contract price for the hemp seed in the cash market, the seller has an instant loss.

## **The concept of deliverable supply**

One of the factors that will drive the cash market price of any commodity, including hemp seeds, is its availability relative to demand. Even if the market fundamentals for a product are stable, temporary imbalances can lead to unpredictable pricing. With exchange traded forward contracts, the delivery specifications – including notably quality standards - are laid out in the terms and conditions. Sometimes, there is a shortage only of the grade of the product that meets the contract specifications, but that can still drive up the price. So any forward contract seller, like the one in our example, could end up paying more for the commodity than expected.

In organized commodity markets this issue is discussed in terms of “deliverable supply”. Deliverable supply is the total amount of a commodity that could be delivered in fulfillment of the contract's terms. Usually, deliverable supply is discussed just in terms of the quality specified in the contract – that is, it does not include grades of the product that would be delivered at a premium or discount.

The U.S. market for hemp seed is relatively young, as a result it is hard for many traders and market participants to get clear reliable data for deliverable supply. Here at Seed CX, we have spent many hours interviewing industry participants and collecting the necessary data to estimate the deliverable supply of hemp seed.

## **Estimating deliverable hemp seed supplies**

The two major components of deliverable supply of hemp seed are imports and domestic production. Domestic production has to be estimated while the volume of imported hemp seeds are routinely recorded by the U.S. and other governments.

For domestic production, the estimation methodology consists of multiplying the acreage numbers by average yield. In most states, producers must provide data on acreage, variety, and GPS coordinates of all hemp fields. Seed SEF utilized state data supplemented with interviews of relevant staff in state departments of agriculture to estimate a figure for hemp acreage in 2016, 16,417 registered acres.

However, the number of harvested acres is less than the registered acres due to the facts that farmers might not plant the full allotment of acres that they were permitted and then for any number of reasons all of the planted acreage might not be harvested. Interviews with farmers along with published data indicate that 67% of acreage, or 11,000 acres of the more than 16,000 registered acres, is being harvested this year.

Industrial hemp can be grown for a variety of purposes, with the three most notable being seed, fiber, and CBD. Not all of the 11,000 harvested acres are dedicated to seed production. Through surveys with industry participants an estimated 40% of the harvest acres in 2016 are devoted to seed production. This estimates gives a total of 4,400 harvested hemp seed acres in 2016.

Combining these acreage estimates with average seed yields of around 1000 lbs. per acre gives an estimate of domestically produced hemp seed of 4,620,000 lbs in 2016

Trade statistics of hemp seeds entering the U.S. are found through USA Trade Online. Total imports of hemp seeds have steadily increased over the last five years with a record 35,148,821 lbs. in 2015 and the upward trend continued through the first half of 2016, with import numbers on track to break the 40 million lbs. mark in 2016. Hemp seeds imported into the United States are sourced overwhelmingly from Canadian producers, with nearly 99% of the 2015 hemp seed imports arriving from Canada. In 2015, Canada exported 34,701,851 lbs of hemp seeds to the United States. Even though Canada continues to be the number one source of hemp seeds, the U.S. receives deliveries from increasingly more countries including China, India, Romania and member states of the European Union. Most of the imported hemp seed, however, is committed under contracts and not available for further trading once in the US. The estimate of tradable imports is 12 million lbs. in 2016 yielding a total deliverable supply estimate of 16,620,000 lbs when combined with domestic production.

### **Economically deliverable supply**

The U.S. Commodity Futures Trading Commission (CFTC) distinguishes “economically deliverable supply,” which is the part of deliverable supply that actually is in position for delivery on a forward, option or futures contract. This concept excludes from the estimated total the product that is, for example, already contracted to other parties or that is so physically remote that transportation costs make delivery unreasonable. So what percentage of the deliverable supply do we estimate is available for delivery on Seed’s contracts at an economically affordable cost?

The main source of deliverable hemp seed is Canada, which has sufficient storage facilities. Importation of seed from Canada evidences no seasonality indicating that import patterns are dominated by demand factors in the U.S. We believe that a seller of a seed contract should have little difficulty acquiring product for redelivery. According to the contract terms, the seller selects the delivery date and the buyer pays for shipping. hemp seed is readily transportable. The seed can be packed into grain bags, labeled and shipped by numerous service providers. Consequently, the seller of the seed contract that is considering buying seed in the cash market to fulfill the contract requirements can be confident that there is a sizable predictable supply.

Additionally, while some hemp seed appears to be cultivated under forward contracts with processors, our interviews with processors and merchandizers indicate did not uncover any forward contracting of the hemp seed they had on hand.

Consequently, there are roughly 16,620,000 lbs. of hemp seed economically deliverable on the contracts – at least until the next harvest. There is no observed seasonality in demand so disappearance of seed from the marketplace may be expected to be predictable with few disruptions or peaks. Of course, that does not imply that the price will be flat – especially as both U.S. demand and supply are predicted to pick up and technological changes may shift the supply curve outward as regulation may shift the supply curve

inward or outward. There is still plenty of uncertainty, but short-run shortages of deliverable hemp seed will not add to it.