
AN INTRODUCTION TO
COTLOOK
WORLD COTTON™
FUTURES & OPTIONS



NEW YORK COTTON EXCHANGE



COTLOOK WORLD COTTON™ FUTURES & OPTIONS

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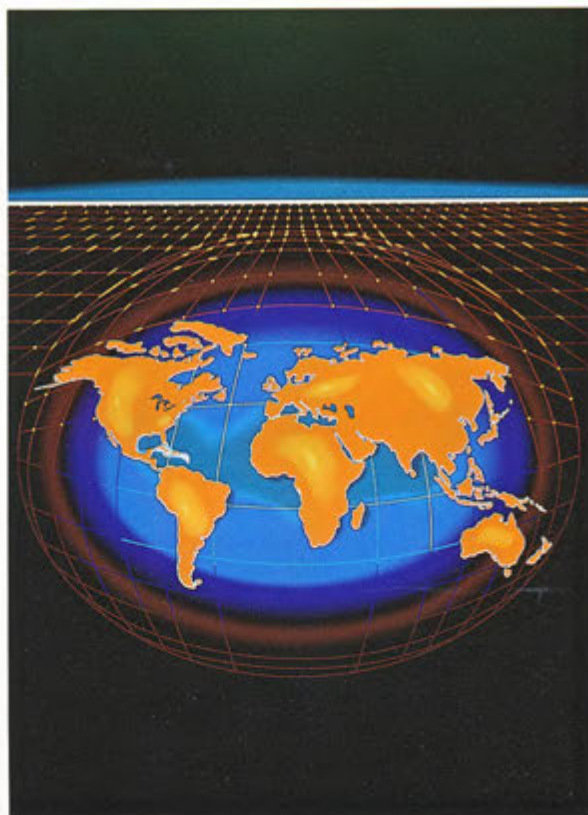
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INTRODUCTION

For participants in the cotton industry, a widely used form of risk management has been cotton futures and options contracts traded on the New York Cotton Exchange (NYCE®). Since 1870, the NYCE® has provided a means for all sectors of the cotton trade to hedge the price of cotton they must buy and/or sell in order to protect themselves from the potentially devastating effects of unexpected price fluctuations. When options on cotton futures were introduced in 1984, it opened a wealth of new hedging and trading strategies, as options are a very versatile hedging instrument.



Now there are two additional vehicles available to the international cotton industry as well as the trading community - Cotlook World Cotton™ futures and options. Cotlook World Cotton™ futures and options are based on an index of world cotton prices commonly known as the Cotlook "A" Index™. This world cotton price is recognized as the price barometer of world cotton and is widely accepted throughout the industry as an accurate measure of the fluctuation of international raw cotton values. To help better manage these price fluctuations experienced by the international cotton industry, and because Cotton No. 2 reflects U.S. prices - and sometimes U.S. prices and world prices diverge - Cotlook World Cotton™ futures and options were developed by the NYCE® and Cotlook, Limited.

The Cotlook A Index™ Price and How It's Calculated

Based in the United Kingdom (U.K.), Cotlook, Ltd. assesses world cotton quotations by surveying an extensive list of merchants and brokers for raw cotton prices every U.K. business day. The geographical basis is CIF Northern Europe and the base quality is Middling 1 ³/₃₂". There are fourteen different growths of cotton eligible for use in the index (See Table 1) and the index is an average of the offers for the cheapest five growths. The Cotlook A Index™ is released by Cotlook, Ltd. every U.K. business day at approximately 14:30 hours (U.K. time).

As a transition from one marketing season to the next, Cotlook, Ltd. employs a

NYCE® is a registered service mark of the New York Cotton Exchange

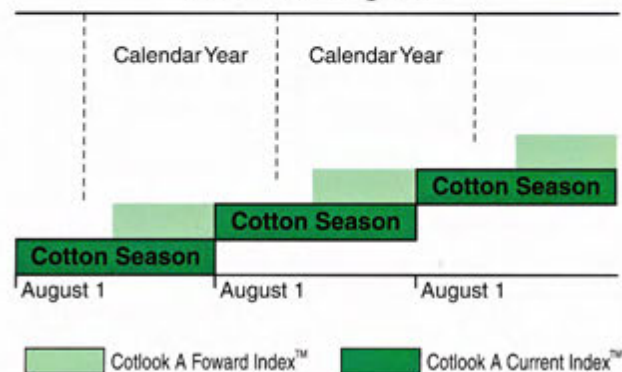
Dual Index system for international cotton prices. Under this system, during a portion of the year Cotlook's two sets of indices run concurrently from the establishment of the forward indices, typically in January, until the end of the marketing season, typically in August. (Cotton's marketing season begins August 1 and runs through the end of July.) One index reflects nearby quotations of the current season while the other index represents forward quotations for the next season. On August 1, what had been the Cotlook A Forward Index[™] becomes the current index. Only this index is published until early the following year, when a new forward index is established for the upcoming cotton season. (See graph 1). It is the current index which is the basis for the Cotlook World Cotton[™] futures and options contracts.

Use of the Cotlook A Index[™]

The Cotlook A Index[™] price plays an important role in U.S. farm policy. It is used to calculate the Adjusted World Price (AWP) which in turn is used as a measure of the competitiveness of U.S. cotton on the world market.

U.S. producers who place cotton in the U.S. government loan program are allowed to repay that loan at the lower of the loan rate or the adjusted world price in effect for that week. This portion of the Food Security Act is known as the marketing loan and was constructed to keep U.S. prices competitive in world markets and maintain raw cotton supplies in the pipeline and out of U.S. government control.

GRAPH 1
Cotlook A Index[™] and Cotlook A Forward Index[™]
Dual Index Sequence



The current Cotlook A Index[™] is the basis of the Cotlook World Cotton[™] futures and options contracts. Source: Cotlook, Ltd.

TABLE 1
Cotlook A Index[™] Components

<u>Country</u>	<u>Growth</u>
America	Memphis Terr. Middling 1 3/32" Calif/Ariz Middling 1 3/32"
Mexico	Middling 1 3/32"
Central America	Middling 1 3/32"
Paraguay	Middling 1 3/32"
Turkey	Izmir/Ant. ST.I White 1 3/32" RG
Central Asia	Middling 1 3/32"
Pakistan	Punjab SG 1503 1 3/32"
China	TYPE 329
Africa Franc Zone	Middling 1 3/32"
Australia	Middling 1 3/32"
India	Hybrid - 4 1 3/32"
Tanzania	AR Type 3
Greece	Middling 1 3/32"

The Cotlook A Index[™] is derived from a daily survey of CIF Northern Europe quotations for the above 14 descriptions from which the cheapest 5 are averaged. Source: Cotlook, Ltd.

FACTORS AFFECTING WORLD COTTON PRICES

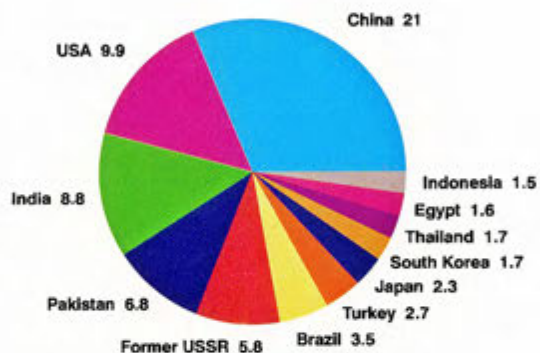
Since 1980, the cotton market has grown tremendously. During this time, there was a rediscovery of natural fibers and an overwhelming preference for 100% cotton garments. As a result, many countries realized the profit potential in the cotton textile trade and expanded their consumption or export capacities. In 1980, world cotton production was 65 million bales. In 1991 world cotton production expanded to 96 million bales, a 48% increase. In 1980, world consumption was 66 billion bales and 86 million bales in 1991. Over the same time period world cotton exports have also expanded. World trade had increased from 19.7 million bales in 1980 to 22.2 million bales, in 1991, a 13% increase.

During the 1992 season, production has dropped off by 13% to 83.4 million bales. Key cotton producing areas of China and Pakistan were hardest hit by adverse weather conditions and insect infestations. Drought and boll worms lowered China's production by 5.3 million bales. Serious flooding in Pakistan dropped their production by 2.8 million bales. As for world cotton consumption, the U.S. is still spinning at a healthy pace, while economic slowdowns in Japan and the European Community have kept total world cotton consumption on an even keel with 1991's rate (See graphs 2 and 3)

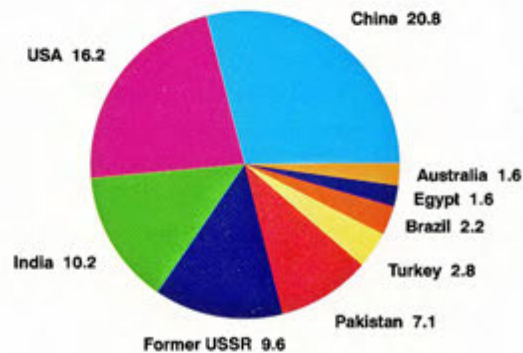
In the past, Cotton No. 2 futures and options have traditionally represented viable hedges for non-U.S. grown cotton. However, during the 1989/90 and 1990/91 seasons, the U.S. situation and restrictions on U.S. mills importing cotton caused New York futures to rise while world cotton prices remained somewhat stable. Consequently, the basis between Cotton No. 2 and world cotton prices became unmanageable. Therefore, in order to give the international cotton industry additional hedging vehicles, the NYCE[®] and Cotlook, Ltd. developed Cotlook World Cotton[™] futures and options.



GRAPH 2
MAJOR COTTON PRODUCERS
By Country of Origin - 1992/93 Season
Production in million (480 lb.) bales



GRAPH 3
MAJOR COTTON CONSUMERS
By Country of Origin - 1992/93 Season
Consumption in million (480 lb.) bales



WHAT IS A FUTURES MARKET?

Futures markets serve two primary economic purposes: price discovery and risk transfer. Futures prices reflect many adverse market participants' current expectations about the value of the commodity at some point in the future. These prices are publicly available and widely disseminated. In addition to consolidating price information, futures markets allow those buying or selling the underlying commodity to protect themselves or hedge against fluctuating prices. This is possible because other market participants - professional traders and speculative investors - are willing to assume risk in return for the opportunity to profit should the market move in their favor.

A futures contract is a commitment to make or take delivery of a specified quantity and quality of a given commodity at an agreed upon price sometime in the future. Futures contracts are sold and purchased through members of commodity futures exchanges. Qualified members may execute transactions for commission brokers, be retained by independent clients, or speculate for profit. Regulation of commodity futures and options market in the United States is performed by the Commodity Futures Trading Commission, an independent agency created by Congress in 1974.


Margin

The cost of obtaining a position in the futures market is a small fraction of the worth of the contract held. Futures contracts are highly leveraged, with a small

initial deposit controlling considerably larger assets. The deposit on a futures contract is called a futures margin; it does not represent a payment, but serves as collateral — a “good faith” deposit.

The minimum initial margin deposit required on a futures contract is determined by the exchange on which the contract is traded, and is affected by the volatility of the contract. Fluctuations in the futures market, which result in a change in the market value of the contract, result in daily debits or credits in the margin account of a contract holder, otherwise known as variation margin procedures. Commission brokers may set their own margin requirements which differ from those of the futures exchange.

Offset

Although a futures contract conveys the obligation to buy or sell at a given price, that obligation can be and usually is offset. Most contract holders eliminate their positions through offsetting transactions. In fact, fewer than two percent of all futures contracts are held until expiration. If a Cotlook A Index[™] futures contract holder chooses to hold the contract to expiration, a cash settlement is made. Cash settlement essentially represents the difference between the contract value at the time of original purchase or sale and the contract value at expiration. However, the buyer and seller do not exchange the full value of the contract — only the difference in the contract value from the previous day's price to the final settlement price. 

COTLOOK WORLD COTTON™ FUTURES HEDGING AND SPECULATIVE TRADING EXAMPLES

Following are examples of some basic transactions using Cotlook World Cotton™ futures. The examples are purely illustrative and are not to be construed as investment advice. The first section contains hedging examples while the second section addresses speculative trading examples. To keep the examples simple, we have omitted the commission costs that buyers and sellers incur.

Hedging with Cotlook World Cotton™ futures

Two factors make hedging possible:

- The relationship of the Cotlook World Cotton™ futures market and the world cash market;
- The presence of investors willing to assume the risk that producers, merchandisers and consumers wish to avoid.

Simply stated, hedging involves establishing a position in the futures market opposite your position in the cash market. Since futures market prices typically move in tandem with the cash market over the course of time — tending to converge as the contracts mature — a gain in the futures market will offset a loss in the cash market, or vice versa. And because cotton futures are highly leveraged instruments, requiring a relatively low deposit or margin, speculative investors produce a flow of private funds that helps maintain a market that is liquid, enabling traders to enter and exit with ease.

There are two basic types of hedge positions: the long — or buy — hedge and the short — or sell — hedge.

Long, or Buy, Hedge

The long, or buy, hedge is attractive to cotton buyers who want to ensure the lowest acquisition cost possible. By assuming a “long” position in the futures market, a merchant, mill or other buyer effectively protects against cotton price increases.

Example: If an Asian textile mill is a steady buyer of world cotton throughout the year, it currently must pay whatever price is being quoted for that growth at that particular shipment date. If Cotlook World Cotton™ futures are utilized, this textile mill can lock into a maximum price it will pay.

For example, if Cotlook World Cotton™ prices are at 70 cents today and the textile mill feels that low world production and tight world stocks will raise Cotlook World Cotton™ prices in the months ahead, it will buy futures contracts as far out in the future as necessary. If the Cotlook A Index™ cash quotes rise to 80 cents, the textile mill will have to pay 10 cents more for a particular world growth in the cash market; but this would be offset by a 10 cents rise in the Cotlook World Cotton™ futures price (assuming the basis remains relatively constant).

If the spot Cotlook A Index™ price moves to 60 cents, the textile mill will lose 10 cents on a straight hedge, but will pay 10 cents less for a particular world growth in the cash market.

Short, or Sell, Hedge

The short, or sell, hedge, is used by market participants seeking to protect themselves

from a decline in the price of cotton. This type of hedge typically is used by producers, merchants, wholesalers, cooperatives and cotton product marketers.

Example: An Australian cotton producer plants his crop in September and sells May Cotlook World Cottontm futures at 70 cents. If Cotlook World Cottontm futures fall to 60 cents, the producer will gain 10 cents on the futures hedge but will receive 10 cents less on the world spot market, now at 60 cents. This in effect guarantees the producer 70 cents for his cotton — rather than 60 cents if no hedge had been in place.

If Cotlook World Cottontm futures rise to 80 cents, this means the quotes in the world cash price have risen and the producer can receive 10 cents more for his cash cotton; but would lose 10 cents on a straight futures hedge and will receive a net 70 cents for his crop.

Speculating with Cotlook World Cottontm futures

Speculators add needed liquidity to futures and options markets. Following are basic transactions a speculator might execute. These are examples only and should not be construed as investment advice.

Long futures position:

An investor will buy (go “long”) Cotlook World Cottontm futures contracts if he believes cotton will increase in price at some point in the future. Assume it is January 4, and August Cotlook World Cottontm futures are trading at 65 cents. Using a particular method of trading (either a fundamental and/or technical



approach), an investor feels strongly that August Cotlook World Cottontm futures have the potential to rally higher at some point between now and early August. He buys an August Cotlook World Cottontm futures contract for 65 cents on January 4 and watches August prices hoping to capitalize by a rise in price. The investor can hold onto this long position until last trading day or execute an opposite transaction by selling an August Cotlook World Cottontm futures contract. The deciding factor in his decision will be determined by the current August futures price. If August Cotlook World Cottontm futures rally to 75 cents at any point between January and August, the investor has to decide whether to exit the long trade and achieve a 10 cent/lb. profit (\$5,000 per contract), less any transaction costs, or hold onto the long futures position and hope for additional gains. Conversely,

if August Cotlook World Cotton™ futures drop to 55 cents/lb., the investor may decide to liquidate his long futures position by selling back the August futures contract at a 10 cent/lb. loss (\$5,000 per contract), plus any transaction costs, or continue to hold onto the long position in expectation of a price rise by expiration of the August futures contract.

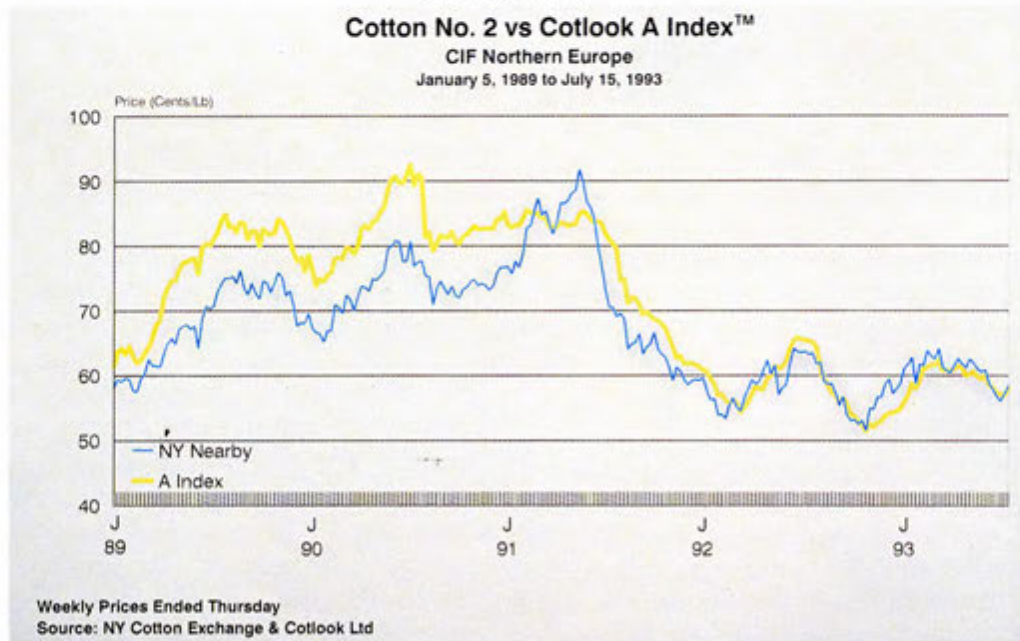
Short futures position:

An investor will sell (go "short") Cotlook World Cotton™ futures contracts if he anticipates a decrease in the price of world cotton at some point in the future. Assume it is March 1 and December Cotlook World Cotton™

futures are trading at 70 cents. Using his market analysis, the investor feels strongly that Cotlook World Cotton™ futures have the potential to fall to 60 cents between March and December. He sells December Cotlook World Cotton™ futures at 70 cents/lb. on March 1 and hopes to capitalize on a decrease in price from now until December. The investor can hold onto this "short" futures position until last trading day or execute an opposite transaction by buying back the December Cotlook World Cotton™ futures contract. If December futures fall to 60 cents/lb., the investor can buy back the contract at 60 cents and realize a 10 cent/lb. profit (\$5,000 per contract),

GRAPH 4

Cotton No. 2 vs Cotlook A Index™
 CIF Northern Europe
 January 5, 1989 to July 15, 1993




less any transaction costs. Conversely, if December Cotlook World Cottontm futures rise to 80 cents/lb., the investor will have to make a decision to take a 10 cent/lb. loss (\$5,000 per contract), plus any transaction fees, by liquidating his short position or hope for a price decline by the time the December futures contract expires.

Arbitrage between Cotlook World Cottontm Futures and Cotton

No. 2 Futures

If a direct relationship between two commodities exists, but there may not be a 100% correlation between them, there is an opportunity to arbitrage on the differences in price. In this case, arbitraging can be done between Cotlook World Cottontm futures (representing the "world" price of cotton) and Cotton No. 2 futures (representing the U.S. price of cotton). The correlation is high between the world and U.S. price of cotton but there are instances when a significant disparity in the U.S. price relative to the world price has occurred and so there are significant spreading and arbitrage opportunities. (See graph 4)

The competitiveness clauses in the U.S. 1990 Farm Bill have kept the U.S. price in line with the world price, however these clauses only take effect at certain price levels due to the intricacies of the bill. The world price for cotton and the U.S. price for cotton track each other more closely in crop years when supply/demand balances are similar. In years where the U.S. supply/demand situation is "tight" in relation to the world balances, there has been a severe tightening of the spread between Cotton No. 2 futures and the Cotlook A Indextm price. 



WHAT IS AN OPTION?

An option is an agreement between two parties — one of whom is the buyer and the other of whom is the seller. In the case of futures contract options, the buyer (also called the purchaser or holder) acquires the right, **but not the obligation**, to buy or sell a specific futures contract at a known fixed price at any time on or before a known expiration date. In exchange for acquiring this right, the buyer makes an irrevocable payment (called the premium) to the seller of the option.

The seller, (also called the writer or the grantor) receives the premium in exchange for assuming the obligation to take or make delivery of the specific futures contract **should the buyer choose to exercise** his right to it under the option contract.

Futures options are traded in two forms:

- call options (or calls), and
- put options, (or puts).

With a *call* option, the buyer is granted the right to buy (go long) the underlying futures contract. With a *put* option, the buyer is granted the right to sell (go short) the underlying futures contract. In both cases, if the buyer exercises his right, the seller of the option must fulfill its terms and assume the opposite position.

In practice, we say that the buyer of any option — put or call — has a long position in that option, while the seller has a short position. (Just remember that in the case of a put, being long the option actually confers to the buyer a right to go short the underlying futures contract, while being short the option carries a contingent obligation to go long the underlying future.)

Once this contractual agreement has been entered into — that is, once the buyer has purchased an option from the seller — the obligations under the option may be fulfilled in one of three ways:

1) The buyer may allow the option to expire unexercised: In this case, the buyer recovers none of the premium paid for the option — all of the premium is retained by the seller. With the expiration date passed, the seller's obligation is discharged.

2) The buyer may exercise his rights under the option contract on or before the last trading date: In this case, the seller must adhere to the terms of the option and accept the other side of the futures position. The seller keeps the premium paid. The buyer recovers none of his premium. In addition, the buyer becomes subject to margin requirements on his newly acquired futures position. (Presumably the terms of his assumption under the option contract, compared to the current market price, are favorable enough to compensate him for this.)

3) Finally, either the buyer or the seller may execute an offsetting transaction in the options market: This is accomplished by reversing the actions of the original agreement — selling (in the case of the buyer) or buying (in the case of the seller) another option of identical terms on the exchange. In this case, the rights or obligations under the original agreement are, in effect, transferred to a new holder or grantor. Profit or loss will depend on the current market price (premium) of the option compared to the original price (premium) paid or received.

This last alternative is extremely important to note. It means neither buyer or seller need hold any option until expiration, provided he is willing to accept or pay whatever premiums required to close out his agreement.

Summary

- Buyers of options pay premiums in exchange for fixed rights.
- Sellers of options receive premiums in exchange for assuming obligations.

- Call options give buyers the right to buy Cotlook World Cotton™ futures contracts.
- Put options give buyers the right to sell Cotlook World Cotton™ futures contracts.
- Once instituted, option obligations can be discharged through:
 - 1) expiration
 - 2) exercise, or
 - 3) transfer through an offsetting transaction in the options market.



COTLOOK WORLD COTTON™ OPTIONS HEDGING AND SPECULATIVE TRADING EXAMPLES

Following are examples of some basic options transactions using Cotlook World Cotton™ options contracts. These examples are purely illustrative and are not to be construed as investment advice. The first section contains hedging examples while the second section addresses speculative trading examples.

Hedging with Cotlook World Cotton™ Options

There are several advantages to Cotlook A Index™ options which make options a very flexible risk management tool:

- Option buyers enjoy limited risk with unlimited profit potential. Buyers can never lose more than the premium paid.
- Option contracts can be closed out prior to expiration.
- Users and producers can fix their prices at various levels, in effect using options as price insurance.
- Option buyers are not subject to margin calls.
- Options make significant new pricing strategies available.
- Option hedges protect against unfavorable price moves while allowing the holder to participate in favorable moves (less option premium).

Following are examples of how cotton producers, merchants and mills might employ Cotlook World Cotton™ options.

Planting Hedge for Cotton Producers

Production concerns at planting center upon the value of that crop at harvest. To

protect against downward price moves the producer can obtain insurance protection by purchasing a put.

Example: Upon planting the crop in March, a grower purchases a Dec. 70 cent put for 1.5 cents. Regardless of how low prices dip by harvest the grower has locked in a sale price of 68.5 cents/lb. (70 cents - 1.5 cents). However, should prices escalate to say 80 cents/lb. at harvest, the producer would participate in 8.5 cents of that move (10 cents minus 1.5 cents premium).

A further advantage to an option hedge is that should a disaster impact the yield of the crop the grower knows in advance what his hedge exposure will be - the cost of the premium.

Harvest Hedge for Cotton Producers

When a cotton producer sells his crop at harvest but doesn't want to miss out on a potential price increase, the purchase of a call option allows him to retain this potential. While purchasing a call option doesn't hedge the producer's sale directly, it does protect him against the opportunity cost of having sold too soon.

Example: Upon selling his crop in November at 70 cents, a grower purchases a May 70 cent call for 1.5 cents. The worst that can happen to the grower if the price of May futures does not rise above 70 cents before his call option expires is an effective reduction in his sales price from 70 cents to 68.5 cents. On the other hand, if May futures run up to, say 80 cents by early April, the grower can realize the 10 cent intrinsic value of his call option, bringing his effective sale price up to 78.5 cents.

Hedging a Purchase

When a commitment is made to purchase cotton not yet sold (or sold on call), the purchaser's traditional hedge has been the concurrent sale of a futures contract. A futures hedge protects against a price decline but eliminates the potential to benefit from rising prices. The purchase of a put option also provides protection against a price decline, but in contrast to futures hedge, allows the cotton option holder to share in the benefits of any increase in cotton prices.

Example: In March, with December futures at 70 cents, a merchant seeking to hedge an inventory purchase buys a put on December futures at a strike price of 70 cents for a premium of 1.7 cents/lb. (\$850 per futures contract). The Dec. 70 cent put protects him against any decline in cotton prices, but additionally if December futures rally to, say, 76 cents, the merchant can realize a 6 cent/lb. gain (reduced by the 1.7 cent/lb. option premium).

The results of this option hedge across a range of potential December futures prices are presented in the nearby chart (See table 2).

TABLE 2

Futures Price	Gain (Loss) on Cotton	Gain (Loss) on Option	Net Gain (Loss) on Hedged Position
66¢	(4¢)	2.3¢	(1.7¢)
68¢	(2¢)	0.3¢	(1.7¢)
70¢	0	(1.7¢)	(1.7¢)
72¢	2¢	(1.7¢)	0.3¢
74¢	4¢	(1.7¢)	2.3¢
76¢	6¢	(1.7¢)	4.3¢

Hedging Contingent Purchases

An options hedge has a unique advantage compared to a futures hedge under circumstances where a purchase commitment has been made but uncertainty remains as to whether the transaction will materialize (in whole or in part). One such circumstance might be a merchant's commitment to purchase a grower's entire crop before its size is known. The purchase of a put can protect the merchant against a price decline on the full projected crop without exposing him to the risk inherent in a futures hedge if yields turn out to be lower than projected.

Example: A merchant commits to the purchase of a grower's crop at 70 cents/lb. and that crop subsequently falls short of yield expectations. If futures had been sold, the merchant would have been exposed to the full extent of any run-up in the price of cotton on the fall crop. By comparison, the most he can lose on an option hedge is the premium paid for a put.

Hedging a Sale

When a merchant commits to sell cotton not yet purchased (or bought on call), the purchase of a call option can serve to protect against any price increase while still allowing him to benefit from a price decline. (Such a call hedge is the logical counterpart to put hedges made to protect against price declines on unsold inventory.)

Example: In November, a European merchant makes a sale at 69 cents that is covered by an on call purchase versus March futures. At the time of sale, March futures are at 70 cents and a March call can be purchased

for 1.5 cents. The call protects the merchant against a run-up in the price of cotton without eliminating his chance to profit if prices decline. Should March futures decline to 64 cents before the on call purchase is priced, the merchant will profit by the difference between his purchase and sales prices (reduced by the premium paid for the call).

The results of the merchant's option hedge (assuming a 1 cent differential between the futures price and the merchant's call price basis) is charted (See table 3) across a range of March futures prices.

As with a put hedge of cotton purchases, the cost of a call hedge of a sale is dependent on the type of the option purchased (out-of-the-money vs. in-the-money) and whether any premium is recovered by closing out the option position prior to expiration. Additionally, a call option can also be used to hedge a contingent sale without incurring the risk of loss inherent in a futures hedge in a declining market if the transaction doesn't come to full fruition.

Fix Price and Buying a Put

On March 1, a mill enters into a fixed price agreement with a seller to purchase 50,000 pounds of raw cotton at 70 cents for delivery in December. The mill is concerned that prices will decline by delivery date and that it paid too generously. In this instance the mill can protect against that eventuality by purchasing a put. Should prices indeed slip by December the mill would benefit via the put value appreciation. If prices were to increase, the mill would ignore the option (and allow it to expire)

TABLE 3

Futures Price	Gain (Loss) on Cotton	Gain (Loss) on Option	Net Gain (Loss) on Hedged Position
64¢	6¢	(1.5¢)	4.5¢
66¢	4¢	(1.5¢)	2.5¢
68¢	2¢	(1.5¢)	0.5¢
70¢	0	(1.5¢)	(1.5¢)
72¢	(2¢)	0.5¢	(1.5¢)
74¢	(4¢)	2.5¢	(1.5¢)
76¢	(6¢)	4.5¢	(1.5¢)

and be content in the knowledge that it paid less than it would have, had it waited.

Unfixed Price and Buying a Call

Another mill is bearish on price direction and decides to wait to fix prices on their raw material purchases. This mill can hedge the possibility that an unforeseen event instead causes prices to increase by purchasing a call. In this event, they have hedged their forecast and will be protected should the market appreciate, but can participate in market declines, less the option premium.

Speculating with Cotlook World Cotton™ Options

Speculators add needed liquidity to futures and option markets. Following are four basic transactions a speculator might execute. These are examples only and should not be construed as investment advice.

Buying a Call

Call options are typically purchased when a price rise in the underlying commodity is anticipated.

Assume it is early March, and August Cotlook World Cotton™ futures are trading for 75 cent/lb. Your market forecast indicates that prices will rise between now and early August. Taking advantage of the risk-limiting possibilities of options, you purchase an August 75 cent call for a premium of 1.5 cents/lb. or \$750 (all of which is time value). This option gives you the right to purchase a August Cotlook World Cotton™ futures contract at 75 cents any time through early August.

By early May, August Cotlook World Cotton™ futures has climbed to 78 cents. At this point, you may elect to execute a closing transaction by selling your August 75 cent call on the Exchange for a premium of 3.5 cents/lb. or \$1750, earning a profit of \$1000. In this way, not only have you secured the 3 cents of intrinsic value of your option, but also recovered the remaining time value (0.5 cents) still attributed to it by the market. This remaining time value reflects the possibility that August cotton might climb still higher - and therefore increase the intrinsic value of the August 75

cent call - in the weeks remaining before expiration.

Had cotton for August delivery not climbed above 75 cents by early August, of course, the August 75 cent call would never have acquired any intrinsic value. In this case you would have faced a choice between holding your option until expiration, in hopes that cotton prices would rally above 75 cents, or selling your option before expiration for whatever premium (reflecting remaining time value) was offered in the market.

In neither case, however, could you lose any more than the original \$750 premium paid for the option in March. An option buyer's maximum risk is fixed the moment he purchases an option; only the potential reward remains to be determined. In the example above, had August Cotlook World Cotton™ futures soared to 85 cents by early August, the August 75 cent call would have an intrinsic value of \$5000 - a considerable multiple of the original \$750 premium paid for the option.

Buying a Put

Puts are typically purchased when a decline in the price of the underlying commodity is anticipated.

In September, with December Cotlook World Cotton™ futures trading for 67 cents, your analysis indicates that the price will fall to 64 cents or less sometime during the next three months. The purchase of a December 68 cent put for 2.25 cents (\$1125) gives you the right to sell a futures contract at 68 cents any time through early December. The price reflects \$500 of intrinsic value and \$625 of time value.

Within weeks, Cotlook World Cotton™ prices drop. December Cotlook World Cotton™ futures are trading for 61.25 cents and you elect to sell your put in the open market for 7 cents (\$3500), reflecting 6.75 cents of intrinsic value and a residual 0.25 cents of time value. Your profit on the option totals \$2375.

Had December Cotlook World Cotton™ futures not dropped, you might have suffered a loss. Had prices remained firm at 67 cents, your choice would have been to exercise the option at expiration and thereby recover \$500 of your premium or to sell the option at some intervening point in order to recover some of the time value originally included in the option's premium in addition to its \$500 intrinsic value.

In no event, however, could you have lost more than the \$1125 you paid for the option. Even if December futures rally to 90 cents, your maximum risk is fixed at \$1125. You can wait until expiration if you wish, even let your option lapse, without risking any more. This opportunity to sit out unfavorable price moves without incurring increasing risk is one of the unique advantages that option purchases afford.

Selling (also called writing) an option - except when done to offset an option you previously purchased - entails considerably greater risk than buying an option and consequently carries significant margin requirements. A seller's gain/loss potential is the reverse of the buyer's; his maximum potential profit is the premium received on the sale, while his potential loss is open-ended. Writing options, therefore, is usually restricted to

very sophisticated traders who often have offsetting positions in order to limit their exposure.

Selling (Writing) A Call

Assume, with March Cotlook World Cotton™ futures trading at 75 cents, that a trader sells a March 76 cent call for 1.5 cents or \$750. By early March the trader is proven right and March cotton doesn't rise. Assuming the option expires unexercised, the entire \$750 the trader received for the option is profit.

Even if March Cotlook World Cotton™ futures had risen to 76 cents in this example, the trader could still have kept the whole \$750. The futures could have gone as high as 77.5 cents by expiration before he actually suffered a net loss (not counting transaction costs), because the 1.5 cent premium received would have offset his loss at expiration if he'd had to sell a March futures at 76 cents and buy it back at a higher price in the market. Above 77.5 cents, of course, he would have suffered a net loss, which could have been substantial.

Because of the risks, option writers keep a sharp eye on the market at all times, so that they can quickly buy their options back should the market turn against them.

Selling a call can also be a way to improve the return on an already profitable position if an investor thinks the market has stabilized. Assume our investor bought a March 66 cent call at-the-money, and Cotlook World Cotton™ futures subsequently rose 4 cents. At this point, he decides to sell a March 70 cent call at-the-money to improve his gain. If he receives a 1.5 cent premium for this sale, and


cotton remains at 70 cents, he will have improved his total return by 1.5 cents. If cotton moves above 70 cents, his increased profits on the 66 cent call he owns will cover any losses on the 70 cent call he sold - still netting him the extra 1.5 cent premium. If prices trail off from 70 cents, the reduction in his profits on his 66 cent call will be moderated, to some extent, by a profit on the call he sold.

Selling (Writing) a Put

This is the opposite of selling a call. If prices stay even with or rise above the exercise price, the writer may retain all of the premium received. If prices fall, however, the writer may suffer a loss.

Assume a trader, believing prices will rise slightly, sells a December 56 cent put for 1 cent (\$500). This obligates him to buy a December futures contract at 56 cents/lb. if the buyer chooses to exercise his option. By expiration, however, December Cotlook World Cotton[™] futures are trading for 56.5 cents, and the buyer naturally chooses not to exercise. Consequently, the writer retains the entire premium he received.

Had prices fallen to between 55 cents and 56 cents, and the buyer exercised his option, a portion of the premium would have been offset by a loss on the futures contract our investor would have been obligated to purchase at 56 cents. If prices had fallen below 55 cents, of course, he would have sustained a net loss, which could have been substantial.

As with selling a call, selling an at-the-money put against an in-the-money put already owned can be a way of improving total profit should prices stabilize. 



A NOTE ABOUT OPTION PREMIUMS

The premium is the price the buyer of a Cotlook World Cotton™ futures option pays to the option seller for the right to take a futures position at the exercise price. The premium is determined in the trading pit via open outcry and Cotlook World Cotton™ option premiums are quoted in points and hundredths of a point. Since one option contract gives the holder the right to buy or sell one futures contract, the total cost of the option in dollars is equal to the quoted premium in points times 50,000 lbs., as demonstrated nearby (See table 4).

Table 4

Sample Option Premiums		
Option Contract	Quoted Price In Points	Total Dollar Premium
Dec 74 cent Call	2.50	\$1250
Mar 80 cent Call	0.40	\$ 200
Aug 76 cent Put	2.00	\$1000
Dec 82 cent Put	4.00	\$2000

The total premium paid for any option can be divided into two theoretic components:

- **Intrinsic value** — the amount by which the option's strike price is less than (in the case of a call) or exceeds (in the case of a put) the futures contract's current market price, and
- **Time value** — the dollar premium in excess of the intrinsic value. This is demanded by the seller to compensate him for the risk he is assuming over the life of the contract.

Intrinsic value can be thought of as (momentarily) guaranteed equity — how much

you would make if you exercised the option and concurrently liquidated your newly acquired futures position at the current market price.

There are two important things to remember about intrinsic and time value:

- Intrinsic value changes only when the price of the underlying futures contract changes, but
- Time value changes with both the price of the underlying contract and with the passage of time.

Time value normally diminishes with the passage of time. This is why options are called wasting assets. As the expiration date approaches, their time value will normally erode until, at the point of expiration, they have only their intrinsic value left (which may well be zero).

Because time value diminishes, option holders often close out their option positions before expiration, particularly if their price protection objectives have already been met or no longer apply. In this way, they recoup the time value that would be lost if they exercised or allowed their options to lapse. Holders do this by selling their long positions for the current premiums available. Conversely, option writers can close out or cover their short option positions at any time by buying back the options which they are short.

While premiums actually available for an option on any day are the direct result of supply and demand in the marketplace, three factors tend to affect the value of option and therefore, the supply and demand for the options. They are:

- Volatility of the underlying futures contract.
- Time remaining before expiration.
- The strike price/market price relation-

ship. Each is explained below.

Volatility of the underlying contract:

The more volatile the underlying contract, the larger the premium, and vice versa. This is because greater volatility increases the chances that the underlying contract will move substantially during the life of the option contract and decreases the chances that prices will remain unchanged. This uncertainty increases the premiums that buyers are willing to pay for their price protection, while also increasing the premium that sellers demand for the potentially greater risks they are accepting.

Time remaining: By the same token, the more time remaining before expiration of the option contract, the greater the chances of substantial price moves during the period covered. Again, higher uncertainty of outcome increases the premiums offered and demanded.

Strike price/market price relationship:

Options are typically classified in one of three categories, depending on the relationship of the strike price to the market price of the underlying futures contract:

- in-the-money
- at-the-money
- out-of-the-money

Call options are "in-the-money" when their strike price is below the current market price of the underlying futures contract; they are "out-of-the-money" when their strike price exceeds it. Put options are "in-the-money" when their strike price exceeds the current market price of the underlying futures contract; they are "out-of-the-money" when their strike price is below it. By definition, part of the premium on an in-the-money option is the intrinsic value, while none of the premium on


an out-of-the-money option can be (because the intrinsic value is zero). All options are referred to as "at-the-money" when the strike price equals the current market price of the underlying futures contract.

Everything else being equal, an in-the-money option will always be worth more than an out-of-the-money option. Professional traders are always watching the relationship between premiums on options with different striking prices and expirations and will act to make sure these premiums stay in line. As the prices of the underlying futures contracts (and the other factors listed above) change, of course, so will the premiums on the put and call options.

Option Writer Margins

Unlike option purchasers, option writers remain subject to margin requirements to assure fulfillment of their obligations. For writer positions that are not covered by futures positions or offset by other options (and are therefore referred to as "naked" positions), the margin requirement, as a rule, equals the sum of :

1) the initial margin requirement in the futures position that would result from the exercise of the option; plus


2) the marked-to-market value of the short position. The marked-to-market element of the requirement, in effect, freezes the premium initially received by the writer and then adds (or subtracts) any subsequent increase (or decrease) in the option's market value. A marked-to-market increase in the margin requirement on a short option position is comparable to variation margin on a futures position. 

HISTORY OF COTTON & THE NEW YORK COTTON EXCHANGE

The History of Cotton

Cotton is the most important plant fiber used for producing textiles in the world. Today, it is grown in over 80 countries on six continents. Despite competition from synthetic fibers, cotton has retained its importance domestically and internationally.


Cotton was first cultivated in the ancient civilizations of Egypt, Persia, India and China. The cotton plant, *Gossypium*, belongs to the mallow family. Although there are more than thirty species of cotton in the genus, only three have commercial significance: *G. barbadense*, *G. herbaceum*, and *G. hirsutum*. *G. hirsutum* is the most prominent and is commonly known as upland cotton. Approximately 99% of U.S. cotton and 88% of all cotton varieties grown outside the U.S. are upland.

Cotton grows in temperate to hot climates. The producing areas are divided into three geographical regions - the Northern, the Equatorial and the Southern belts. The quality characteristics of cotton can vary widely, changing from year to year and from location to location. A classing system has been developed to appraise the spinning quality of cotton. There are three components to cotton classing: grade, staple, and micronaire. Grade is the general appearance of cotton and is affected by the method of harvesting and weather. Staple is an estimate of the functional length of fibers. Micronaire is a measure of how well the fiber is filled out and fiber maturity. 

The History of NYCE[®]

Founded in 1870 by a group of cotton brokers and merchants, the New York Cotton Exchange (NYCE[®]) is the oldest commodities exchange in New York. Since its founding, the exchange has been an integral part of the cotton industry and today is the world's premier marketplace for cotton futures and options trading.

In 1966, the Exchange expanded its product line through the formation of the Citrus Associates of the New York Cotton Exchange, Inc., an affiliate of the Exchange, where frozen concentrated orange juice (FCOJ) futures and options are traded.

Then, in 1985, the Exchange entered the arena of financial futures and options through the creation of the Finex[®] division. Several innovative futures and options contracts are traded on Finex[®] including U.S. Dollar Index[®] futures and options, cash settled Treasury Auction Five Year U.S. Treasury Note futures and options, cash-settled Treasury Auction Two Year U.S. Treasury Note futures and ecu futures and options. The New York Cotton Exchange is one of the few international exchanges to so broadly diversify its product line. 

GLOSSARY OF TERMS

At-the-Money — when an option's exercise price is the same as the current trading price of the underlying commodity, the option is at-the-money.

Buyer — a market participant who takes a long futures position or buys an option. An option buyer is also called a taker, holder, or owner.

Call Option — a contract that entitles the buyer/taker to buy a fixed quantity of a commodity or underlying instrument at a stipulated basis or striking price at any time up to the expiration of the option. The buyer pays a premium to the seller/grantor for this contract. A call option is bought with the expectation of a rise in prices. See also [Put Option](#).

Cash-Settled — Settling or meeting the obligations imposed by an expiring contract by means of a cash payment, as opposed to physical delivery or physical receipt of a commodity. Cash payments determined by value of contract, i.e., marked-to-market price.

CIF — cost, insurance and freight.

Clearing House — an adjunct to a commodity exchange through which transactions executed on the floor of the exchange are settled. Also charged with assuring the proper conduct of the exchange's delivery procedures and the adequate financing of the trading.

Closing-Out — liquidating an existing long or short futures or option position with an equal and opposite transaction. Sometimes call [Offset](#).

Commodity Futures Trading Commission (CFTC) — federal regulatory agency established in 1974 to oversee futures trading and the operation of organized futures exchanges in the United States.

Exercise — to elect to buy or sell, taking advantage of the right (but not the obligation) conferred by an option contract.

Exercise (or Strike) Price — the price specified in the option contract at which the buyer of a call can purchase the commodity during the life of the option,

and the price specified in the option contract at which the buyer of a put can sell the commodity during the life of the option.

Expiration Date — the date on which an option contract automatically expires; the last day an option can be exercised.

Floor Broker — any person who, in or surrounding any pit, ring, post or other place provided by a contract market for the meeting of persons similarly engaged, executes for another any orders for the purchase or sale of any commodity for future delivery and receives a prescribed fee or commission.

Floor Trader — an exchange member who usually executes his own trades by being personally present in the pit or place for futures trading. Sometimes called a local.

Fundamental Analysis — analysis concerned with economic factors rather than price data, as are studied in [Technical Analysis](#).

Futures Contract — firm commitment to deliver or to receive a specified quantity of a commodity or cash payment during a designated month with commodity price or cash payment being determined by public auction among exchange members.

Hedging — taking a position in a futures market opposite to a position held in the cash market to minimize the risk of financial loss from an adverse price change; a purchase or sale of futures as a temporary substitute for a cash transaction that will occur later.

In-the-Money — an option with intrinsic value. For calls, the strike price must be below the current market price of the underlying futures contract. For puts, the strike price must exceed it.

Intrinsic Value — a measure of the value of an option or a warrant if immediately exercised. The amount by which the current futures price for a commodity is above the strike price of a call option or below the strike price of a put option for the commodity.

Last Trading Day — day on which trading ceases for the maturing (current) delivery month.

Liquidation — a transaction that offsets or closes out a long or short position.

Local — same as [Floor Trader](#).

Long — a trader who has purchased physical commodities, financial instruments or futures contracts and has not yet offset that transaction with a sale. Long can also be used as an adjective to describe such an open position. Opposite of [Short](#).

Long Hedge — purchase of a futures contract in anticipation of a cash market purchase. Generally used to protect against a rise in cash price.

Margin — the amount of money or collateral deposited by a client with his broker, or by a broker with the clearinghouse, for the purpose of insuring the broker or clearing house against loss on open futures contracts. The margin is not a partial payment on a purchase. (1) Original or initial margin is the total amount of margin per contract required by the broker when a futures position is opened; (2) Maintenance margin is a sum which must be maintained on deposit at all times. If a customer's equity in any futures position drops to or under the level because of adverse price action, the broker must issue a margin call to restore the customer's equity. See [Variable Limit Margins](#).

Mark-to-Market — Daily cash flow system used by U.S. futures exchanges to maintain a minimum level of margin equity for a given futures or option contract position by calculating the gain or loss in each contract position resulting from changes in the price of the futures or option contracts at the end of each trading day.

Margin Call — (1) a request from a brokerage firm to a customer to bring margin deposits up to minimum levels; (2) a request by the clearinghouse to a clearing member to bring clearing margins back to minimum levels required by the clearing house rules.

Minimum Price Fluctuation — smallest allowable increment of price movement in a given contract. Also known as [Tick](#).

Naked Position — unprotected long or short position in a futures market.

Naked Option — the sale of a call or put option without holding an offsetting position in the underlying commodity.

Nearby — the nearest listed trading month of a futures market.

Open Interest — the sum of futures contracts in one delivery month or one market that has been entered into and not yet liquidated by an offsetting transaction or fulfilled by delivery.

Option — a commodity option is a unilateral contract which gives the buyer the right to buy or sell a specified quantity of a commodity at a specified price within a specified period of time, regardless of the market price of that commodity. Also see [Put Option](#) and [Call Option](#).

Original Margin — total amount of margin per contract required by the broker when a futures position is opened.

Out-of-the-Money — a call (or put) option in which the strike price exceeds (is less than) the current market price of the underlying futures contract.

Position — an interest in the market in the form of open commitments, either long or short.

Premium — amount paid by the buyer of an option to its seller.

Put Option — an option to sell a specified amount of a commodity at an agreed price and time at any time until the expiration of the option. A put option is purchased to protect against a fall in price. The buyer pays a premium to the seller/grantor of this option. The buyer has the right to sell the commodity or enter into a short position in the futures market if the option is exercised. See also [Call Option](#)

Seller/Writer/Grantor — an individual who sells an option, establishing a short position.

Series (of Options), or serial options — options of the same type (i.e., either puts or calls, but not both), covering the same underlying futures contract or physical commodity, having the same strike price and expiration date.

Settlement Price — daily price at which a clearing house clears all trades. It is based on the closing range of that day's trading and is the basis for both margin calls and (if applicable) the next day's price limits.

Short — a trader who has sold physical commodities, financial instruments or futures contracts and has not yet offset that transaction with a purchase. Short can also be used as an adjective to describe such an open position. Opposite of [Long](#).

Spread — simultaneous positions in the same contract but in different months or simultaneous positions in related contracts for the same or a different month.

Strike (or Exercise) Price — the price, specified in the option contract, at which the underlying futures or commodity will move from seller to buyer.

Strike Price Increments — intervals established by the Exchange between exercise prices on options.

Technical Analysis — analysis concerned with price data rather than economic factors, as are studied in [Fundamental Analysis](#)

Tick — See [Minimum Price Fluctuation](#).

Time Value — that portion of an option's premium that exceeds the intrinsic value. The time value of an option reflects the probability that the option will move to in-the-money. Therefore, the longer the time remaining until expiration of the option, the greater its time value. Sometimes called [Extrinsic Value](#).

Underlying Commodity — the commodity or futures contract on which a commodity option is based, and which must be accepted or delivered if the option is exercised.

Variable Limit Margins — the performance deposit required whenever the daily trading limits on prices of a commodity are raised in accordance with exchange rules. In periods of extreme price volatility, some exchanges permit trading at price levels that exceed regular daily limits. At such times, margins are also increased.

Variation Margin — payment required upon margin call.

Volume of Trading — the number of contracts traded during a specified period of time. It may be quoted as the number of contracts traded or in the total of physical units, such as bales, bushels, pounds or dozens.



1870

*The first quarters of the New York Cotton Exchange
142 Pearl Street, New York, N.Y.*

NYCE® INFORMATION

The following provides general phone numbers and ticker symbols for the New York Cotton Exchange and Citrus Associates futures and options products.

GENERAL INFORMATION

Compliance and Rules	(212) 938-2671	Marketing Brochures	(212) 938-2702
Exchange Margins	(212) 938-2632	Memberships/Seat Quotes	(212) 938-2666
Exchange Fees	(212) 938-2654	Reportable Limits	(212) 938-7911
Finex® Information	(212) 938-2634	Statistics	(212) 938-2668

STATISTICAL INFORMATION

Recorded information on prices, volume and open interest can be obtained 24 hours a day by telephone.

Cotlook World Cotton™ futures and options	(212) 488-7418
Cotton #2 futures	(212) 432-2821
Cotton #2 options	(212) 432-7274
FCOJ futures and options	(212) 432-2821
Finex® futures and options	(212) 839-9083

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TICKER SYMBOLS

Cotlook World Cotton™ futures and options	CI	USDX® options	DO
Cotton #2 futures	CT	Ecu futures	EU
Cotton #2 options	CO	Ecu options	EO
FCOJ futures	JO	Five Year U.S. Treasury Auction futures	FY
FCOJ options	OJ	Five Year U.S. Treasury Auction options	FO
USDX® futures	DX	Two Year U.S. Treasury Auction futures	TW

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