

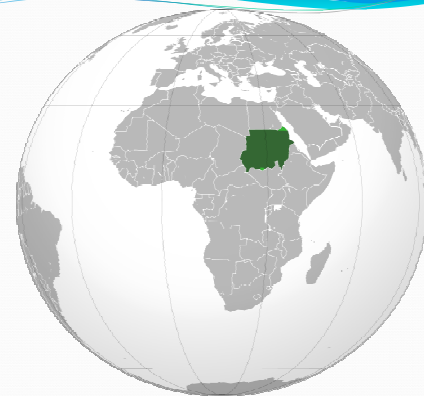
SUDAN

COTTON DEVELOPMENTS
FATMA ABDALLA AHMED SHOKE
THE SUDAN COTTON COMPANY

ICAC

THE RESEARCH ASSOCIATE PROGRAM
TECHNOLOGY INNOVATIONS FOR IMPROVING
COTTON PRODUCTIVITY

SUDAN is an Arab republic in the Nile Valley of North Africa, bordered by Egypt to the north, the Red Sea, Eritrea and Ethiopia to the east, South Sudan to the south, the Central African Republic to the southwest, Chad to the west and Libya to the northwest. The Nile River divides the country into eastern and western halves. Its predominant religion is Islam.

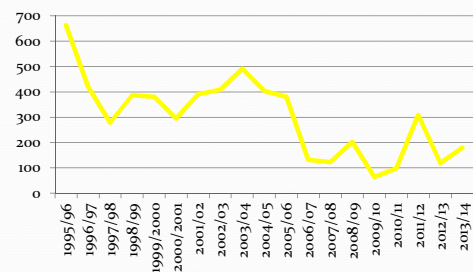


SUDAN COTTON PRODUCTION

| YEAR | PRODUCTION 1000 BALES |
|------|--------------------------|
| 1971 | 1300 |
| 1981 | 813 |
| 1991 | 350 |
| 2001 | 378 |
| 2011 | 219 |
| 2012 | 79 |
| 2013 | 179 |
| 2014 | 460 |

IT IS A REALITY AND A CHALLENGE THAT BOTH ,LOW YIELD AND HIGH COST OF PRODUCTION WERE THREATENING THE CONTINUITY OF COTTON PRODUCTION IN THE SUDAN.

BREEDING MEASURING UP TO THESE CHALLENGES THE COTTON RESEARCH PROGRAM HAS GONE THROUGH DRASTIC CHANGES IN THE LAST DECADES , WHERE EARLY MATURING SHORT STATURE VARIETIES (I.E HAMID, ABDIN , BURHAN) WERE BRED

AREA 1995-2014
1000 FED

BT COTTON

THROUGH THE COOPERATION BETWEEN A CHINESE RESEACH CENTRE AND THE SUDAN MINISTRY OF AGRICULTURE, BT COTTON WAS INTRODUCED, EVALUATED AND RECENTLY RELEASED AS A COMMERCIAL VARIETY .SINCE THEN AND DURING TWO YEARS OF ADOPTION THE AVERAGE YIELD HAS INCREASED BY MORE THAN 50%.

COMMERCIAL ADOPTION OF THE NEW EARLY MATURING AND INSECT RESISTANT VARIETIES HAS ULTIMATELY REDUCED THE HIGH COST OF PRODUCTION REDUCING THE PERCENT OF IRRIGATION WATER BY 15%. FURTHER MORE , THE EARLY MATURING VARIETIES BEING OF SHORT DURATION WERE FOUND TO BE MORE ADOPTED TO SUDAN AGRICULTURE WHERE SITE- SPECIFIC CONSTRAINS SUCH AS SHORTAGE OF WATER, LABOUR AND PEST INFESTATION AT THE END OF THE SEASON ARE ANTICIPATED.

YIELD

| YEARS | KINTAR/HA |
|-------|-----------|
| 2012 | 8 |
| 2013 | 12 |
| 2014 | 14 |

COST OF PRODUCTION USD/HA

| YEARS | COST OF PRODUCTION |
|-------|--------------------|
| 2012 | 1.07 |
| 2013 | 0.9 |
| 2014 | 0.8 |

ALTHOUGH BT COTTON TECHNOLOGY IS NOT GRANTED AND INCORPORATES BIG RISK BUT SUDAN GOVERNMENT POLICY IN THIS REGARD IS TO WORK WITH CHANGE AND AT THE SAME TIME TO WORK FOR FINDING PARTNERS WHO WILL HELP IN THE CONTINUOUS SUPPORT FOR THIS TREND.

COST OF PRODUCTION HAS BEEN REDUCED IMMENSELY, AS AT LEAST NO INSECTICIDE APPLICATION HAS BEEN CARRIED OUT IN ALL BT COTTON PRODUCING AREAS AGAINST THE BOLL WORM. THAT HAS BEEN REFLECTED POSITIVELY ON THE ENVIRONMENT. THIS TECHNOLOGY WILL ALSO WORK AS INCENTIVE FOR FARMERS TO GROW COTTON. SO INDIRECTLY BT COTTON WILL INFLUENCE COTTON AREA POSITIVELY.