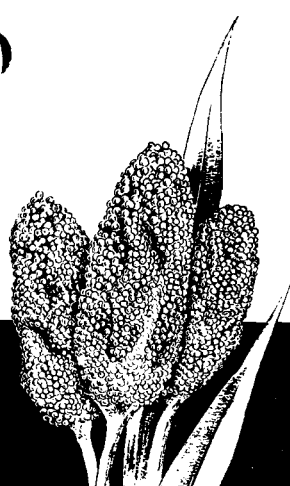


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MILO

in the Sacramento Valley

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April 1955

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THIS IS A COOPERATIVE BULLETIN SPONSORED
BY THE SACRAMENTO AND SUTTER COUNTY OFFICES
OF THE AGRICULTURAL EXTENSION SERVICE.

THIS CIRCULAR IS A STEP BY STEP GUIDE TO PRODUCTION OF MILO IN THE SACRAMENTO VALLEY AREA. WRITTEN BOTH FOR THE INEXPERIENCED AND FOR THE OLD GROWER WHO MAY WANT TO REVIEW OR IMPROVE SOME OF HIS PRACTICES--THIS CIRCULAR FURNISHES INFORMATION ABOUT -

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MILOS IN THE SACRAMENTO VALLEY

J. H. LINDT - TORREY LYONS - DOYLE REED

APRIL 1955

MILO HAS BEEN GAINING IN IMPORTANCE IN THE SACRAMENTO VALLEY AREA SINCE 1950. ACREAGE IN CALIFORNIA HAS FLUCTUATED WIDELY BECAUSE MILO HAS BEEN CONSIDERED AS A CATCH CROP. THIS MEANS THAT PRICE OUTLOOK, ACREAGE RESTRICTIONS AND WEATHER CONDITIONS AFFECTING THE PLANTING OF OTHER CROPS HAVE LARGELY DETERMINED MILO ACREAGE.

BEFORE 1951 THE SACRAMENTO VALLEY GREW 40 TO 45 PER CENT OF THE STATE'S TOTAL ACREAGE, BUT HAS GROWN OVER 60 PER CENT SINCE THEN. IN THE DELTA MILO HAS BEEN A PLANNED CROP; THEREFORE, ACREAGE HAS BEEN MORE CONSISTENT. EXPANSION OF ACREAGE IN RICE AREAS HAS BEEN AIDED BY THE VARIETY RYER 15. EARLY MATURITY ALLOWS IT TO BE PLANTED AFTER RICE PLANTING IS COMPLETE AND HARVESTED BEFORE THE RICE HARVEST STARTS. THIS EARLY MATURITY HAS ALSO BROUGHT ABOUT AN INCREASE IN THE USE OF MILO FOR DOUBLE CROPPING AFTER BARLEY OR WHEAT.

A STRONG POULTRY FEED DEMAND FOR BRIGHT COLORED MILO ENCOURAGES PRODUCTION IN CALIFORNIA. WE DO NOT PRODUCE ENOUGH MILO TO MEET THE DEMAND, THEREFORE PRODUCTION UNDER SEMI-ARID CONDITIONS IN THE PLAINS STATES IS COMPETITIVE WITH CALIFORNIA PRODUCTION; HOWEVER, CALIFORNIA GROWERS ARE FAVORED WITH A FREIGHT DIFFERENTIAL.

IN THE SUTTER BASIN AND DELTA AREAS YIELDS AVERAGE ABOVE 4,000 POUNDS, WITH MANY FIELDS GOING TO 6,000 POUNDS AND ABOVE. DRY LAND YIELDS AVERAGE FOUR TO TEN BAGS PER ACRE, WHILE YIELDS IN OTHER AREAS ARE INTERMEDIARY.

VARIETIES

DOUBLE DWARF 38 MILO IS THE MOST POPULAR VARIETY IN CALIFORNIA. IT WAS SELECTED FROM DOUBLE DWARF YELLOW MILO FOR RESISTANCE TO PERICONIA ROOT DISEASE AND RELEASED IN 1938. IT IS A MEDIUM MATURING VARIETY, AND DOES ESPECIALLY WELL ON CLAY SOILS. STRONG SEEDLING VIGOR IS ONE OF ITS ADVANTAGES. DOUBLE DWARF 38 IS THE RECOMMENDED VARIETY EXCEPT FOR LATE PLANTINGS OR OTHER SPECIAL SITUATIONS.

RYER 15 MILO IS A NON-STOOLING TYPE, SELECTED FROM A FIELD OF DOUBLE DWARF 38 ON RYER ISLAND IN 1944. ITS IMPORTANCE IS DUE TO BEING THREE TO FOUR WEEKS EARLIER THAN DOUBLE DWARF 38. THE SEED IS IDENTICAL, AND SHOULD BE SOWN AT 25 TO 30 POUNDS PER ACRE. HAVING A GOOD STAND IS ESSENTIAL TO OBTAIN EVEN MATURITY AND GOOD PRODUCTION. WHERE STAND IS THIN A SIDE SHOOT IS PRODUCED WHICH BEARS A SMALL, LATE HEAD, WHICH ADDS VERY LITTLE TO TOTAL YIELD, BUT DELAYS HARVEST. RYER 15 IS BEST USED ON RICE LANDS AND IN OTHER CASES OF LATE PLANTING, OR WHERE EARLY HARVEST IS NECESSARY.

DOUBLE DWARF YELLOW SOONER WAS DEVELOPED AT THE TEXAS AGRICULTURAL EXPERIMENT STATION. IT DIFFERS FROM DOUBLE DWARF 38 IN BEING 10 TO 15 DAYS EARLIER, UNLESS PLANTED VERY LATE. THE VARIETY WILL PRODUCE BETTER THAN DOUBLE DWARF 38 UNDER SEVERE CONDITIONS,

SUCH AS LOW FERTILITY, OR INADEQUATE IRRIGATION, BUT UNDER THE BEST CONDITIONS DOUBLE DWARF 38 WILL GENERALLY OUTYIELD DOUBLE DWARF YELLOW SOONER. CERTIFIED SEED IS AVAILABLE FROM ARIZONA.

DWARF WHITE DURRA WAS SELECTED FROM STANDARD WHITE DURRA BY HOEFLING BROS., CHICO, CALIFORNIA, AND DISTRIBUTED IN 1929. IT HAS CROOK-NECKED, COMPACT HEADS, AND FOLIAGE WHICH TENDS TO BE CURLED AND WRINKLED. THE LARGE, FLAT, SOFT, WHITE SEED IS WELL LIKED FOR POULTRY FEED. IT MATURES A LITTLE EARLIER THAN DOUBLE DWARF 38, BUT SHATTERS FREELY, AND THE GOOSE-NECKED HEADS MAKE IT DIFFICULT TO COMBINE. WHITE DURRA IS SUBJECT TO BIRD DAMAGE. THIS VARIETY IS FAVORED IN DRY LAND PLANTINGS ON RED DIRT.

HEGARI DOES ESPECIALLY WELL IN GOOD SOIL AND MOISTURE CONDITIONS. IT IS TALL AND HAS JUICY AND SLIGHTLY SWEET STALKS. GRAIN YIELD IS GOOD, BUT A PURPLE TINGE IN THE LIGHT-COLORED SEED, AND TIGHT HULLS LIMIT MARKETING. MATURITY IS LATER THAN DOUBLE DWARF 38. HOWEVER, THERE IS A LOWER YIELDING EARLY HEGARI WHICH MATURES ABOUT A WEEK EARLIER THAN DOUBLE DWARF 38. ALSO A HAAS HEGARI, WHICH IS LATER IN MATURITY THAN HEGARI, BUT WITH A HIGHER YIELD.

NORGHUM WAS DEVELOPED IN SOUTH DAKOTA FOR VERY EARLY MATURITY FOR THEIR SHORT GROWING SEASON. IT HAS FINE STEMS, VERY LOOSE HEADS, AND SMALL SEEDS. THE FIRST HEADS RIPEN AT THE SAME TIME AS RYER 15. IN CASES OF POOR STANDS OR LATE IRRIGATION, NEW HEADS ARE CONTINUALLY PRODUCED WHICH SERIOUSLY INTERFERE WITH HARVESTING. IT MAY BE POSSIBLE TO OVERCOME THIS HANDICAP BY A HEAVY SEEDING RATE OR BY LISTING AND LATER FILLING THE FURROW TO PREVENT FURTHER TILLERING.

CAPROCK ORIGINATED AT THE LUBBOCK EXPERIMENT STATION, TEXAS, FROM A CROSS BETWEEN KAFIR AND MILO, IN 1941. THE STEMS ARE STOUT AND BEAR ERECT HEADS WHICH ARE SOMEWHAT LOOSER THAN DOUBLE DWARF 38. THE SEEDS ARE REDDISH-YELLOW, AND OF MEDIUM SIZE AND HARDNESS. THIS VARIETY HAS BEEN PRODUCING WELL IN THE ISLETON AREA, AND IS LIKED BECAUSE ITS BRIGHT COLOR PERSISTS AFTER WET WEATHER.

PLAINSMAN IS QUITE SIMILAR TO CAPROCK. HOWEVER, HEADS ARE NOT AS LOOSE, AND THE COLOR IS NOT AS RED. MATURITY IS A FEW DAYS EARLIER THAN CAPROCK.

COMBINE 7078 IS SIMILAR TO CAPROCK IN APPEARANCE. THE PLANTS AND HEADS ARE SMALLER, LOOSER, AND THE SEED LESS RED. IT IS EARLIER IN MATURITY THAN DOUBLE DWARF 38. THIS VARIETY IS NOT CONSIDERED PARTICULARLY GOOD IN TEXAS WHERE IT WAS DEVELOPED; HOWEVER, IT HAS EQUALLED DOUBLE DWARF 38 IN TESTS AT DAVIS FOR FOUR YEARS, AND SIGNIFICANTLY OUTYIELDED DOUBLE DWARF 38 IN A TEST IN SACRAMENTO COUNTY IN 1954. IT IS PROMISING BECAUSE OF EARLY MATURITY, LOOSE HEAD, AND SIMILARITY TO CAPROCK, WHICH HAS FOUND A PLACE IN THE DELTA.

LAND PREPARATION

THE KEY TO SUCCESSFUL MILO GROWING IS A GOOD SEEDBED WITH MOISTURE NEAR THE SURFACE. ON LOAM AND ORGANIC SOIL THIS IS USUALLY NOT DIFFICULT, BUT ON ADOBE RICE LAND IT IS! SEEDBED PREPARATION ON HEAVY SOILS WILL BE AIDED BY FALL PLOWING OR A VETCH COVER CROP. PREIRRIGATION IS OFTEN NECESSARY. IF IN DOUBT, PREIRRIGATE.

FOR WEED CONTROL IN AREAS OF HIGH SOIL MOISTURE SEVERAL SHALLOW CULTIVATIONS BEFORE PLANTING ARE HELPFUL. A SMOOTH SURFACE ENCOURAGES WATER GRASS. WATER GRASS IS ESPECIALLY SERIOUS WHEN CROP IS IRRIGATED UP.

SEED AND SEED TREATMENT

GOOD, CLEAN SEED IS ESSENTIAL, AS MILOS FREELY CROSS AMONG THEMSELVES AND WITH SUDAN AND JOHNSON GRASS. CERTIFIED SEED, OF COURSE, IS THE BEST INVESTMENT, AND READILY OBTAINABLE FOR DOUBLE DWARF 38, DWARF WHITE DURRA, AND DOUBLE DWARF YELLOW SOONER. RYER 15 IS NOT PRESENTLY CERTIFIED, BUT CLEAN SEED IS AVAILABLE.

ALL SEED SHOULD BE TREATED WITH $1\frac{1}{2}$ OUNCE ARASAN SF, OR ONE OUNCE CERESAN M PER 100 POUNDS FOR THE CONTROL OF SMUT AND SEEDING DISEASES. IF WIREWORMS ARE A PROBLEM, USE 4 OUNCES OF 25% LINDANE, OR $1\frac{1}{3}$ OUNCE 75% LINDANE PER 100 POUNDS OF SEED. THESE TREATMENTS SHOULD BE COMBINED.

PLANTING TIME

IN GENERAL, THE EARLIER THE BETTER, BUT SOIL TEMPERATURES SHOULD BE AT LEAST 62 DEGREES AT THE PLANTING DEPTH; THE WARMER THE BETTER. MILO SEED

ROTS IF SOIL IS TOO COLD FOR IT TO START. THE BEST TIME TO PLANT IS THE FIRST WARM WEATHER IN APRIL. DOUBLE DWARF 38 CAN BE PLANTED UP TO JUNE 1ST IN THE DELTA; IN OTHER AREAS UP TO JUNE 10TH, BUT AFTER THIS DATE ONLY RYER 15 OR NORGHUM SHOULD BE PLANTED. JULY 15 IS THE LATEST SAFE DATE, EVEN WITH RYER 15 AND NORGHUM.

SEEDING RATES

IN THE PAST DOUBLE DWARF 38 MILO WAS SEEDED AT RATES OF 3-8 POUNDS PER ACRE. IN RECENT YEARS IN THE SACRAMENTO DELTA SEEDING RATES AS HIGH AS 18 POUNDS HAVE BEEN USED. YIELDS HAVE GONE UP, HARVEST PROBLEMS HAVE DIMINISHED, AND FIELDS HAVE MATURED EARLIER WITH LOWER MOISTURE CONTENT. WITH THICK PLANTINGS THERE IS NO LATE TILLERING; THEREFORE HEADS MATURE AT THE SAME TIME REGARDLESS OF FIELD MOISTURE. THE SEEDING RATES BELOW ARE RECOMMENDED FOR THE ENTIRE SACRAMENTO VALLEY.

SUGGESTED RATES

POUNDS PER ACRE

VARIETY	CONDITION		
	IRRIGATED- AMPLE SOIL MOISTURE AND FERTILITY	IRRIGATED- LIMITED SOIL MOISTURE OR FERTILITY	DRY LAND
DOUBLE DWARF 38	15 - 18	8 - 12	1 - 3*
RYER 15	25 - 30	22 - 25	2 - 10*
OTHERS	10 - 15	7 - 10	1 - 3

* VARY SEEDING RATE WITH MOISTURE HOLDING CAPACITY OF SOIL.

PLANTING

PLANT ONE INCH INTO MOISTURE, BUT NOT OVER $2\frac{1}{2}$ INCHES. ON IRRIGATED LAND RYER 15 OR NORGHUM CAN BE PLANTED WITH A GRAIN DRILL OR UP TO 20-INCH ROWS. PLANT OTHER VARIETIES IN 16 TO 24-INCH ROWS.

ON DRY LAND, ROWS SHOULD BE 24 TO 48 INCHES. ON DRY LAND IT IS OFTEN BENEFICIAL TO OPEN PLANTING ROWS WITH A LISTER. THESE CAN BE CLOSED LATER BY PUSHING THE SOIL TO THE PLANTS.

IMPORTANT! PRESSING SOIL TIGHTLY AROUND SEED STARTS GERMINATION FAST AND PRESERVES MOISTURE; THEREFORE, A PLANTER WITH AN EFFECTIVE PRESSWHEEL IS EXCELLENT INSURANCE OF A GOOD STAND.

FERTILIZATION

ON IRRIGATED LAND, EXCEPT PEAT SOILS, USE 80 TO 125 POUNDS OF ACTUAL NITROGEN, DEPENDING UPON THE SOIL AND CROP ROTATION. FOLLOWING A GREEN MANURE CROP THE RATE OF APPLICATION CAN BE REDUCED. ON DRY LAND PLANTINGS THE MOST EFFICIENT RATES WILL DEPEND ON SOIL FERTILITY AND AVAILABLE MOISTURE. USE 15 TO 40 POUNDS OF ACTUAL NITROGEN PER ACRE. ON PEAT SOILS NO NITROGEN IS NEEDED.

NITROGEN CAN BE APPLIED BEFORE PLANTING, AT PLANTING TIME WITH AN ATTACHMENT, OR SIDE-DRESSED. ALL CAN GO ON AT ONCE OR A SPLIT APPLICATION CAN BE MADE. HOWEVER, IF SOIL FERTILITY IS LOW, SOME NITROGEN SHOULD GO ON AHEAD OF PLANTING OR WITH PLANTER ATTACHMENT.

THE TYPE OF NITROGEN IS NOT IMPORTANT. BUY ON A BASIS OF COST PER POUND OF ACTUAL NITROGEN PLUS COST OF APPLICATION, GETTING THE MOST FOR YOUR MONEY.

ON RED DIRT, AND IN THE DELTA, BELOW WALNUT GROVE, PHOSPHOROUS IS NEEDED AS WELL AS NITROGEN. USE 40 TO 60 POUNDS OF ACTUAL PHOSPHATE DRILLED WITH, OR UNDER THE SEED. THE NITROGEN AND PHOSPHOROUS CAN BE APPLIED AT THE SAME TIME. NITROGEN FERTILIZERS APPLIED IN LARGE AMOUNTS VERY CLOSE TO THE SEED MAY CAUSE SEED INJURY.

IRRIGATION

MIL O MUST HAVE A GOOD MOISTURE SUPPLY THROUGHOUT THE SEASON TO PRODUCE HIGH YIELDS. ON RICE LAND ONE OR TWO IRRIGATIONS SHOULD BE ENOUGH. THIS IS USUALLY ONE ACRE FOOT PER ACRE. THE CROP CAN BE EITHER ROW IRRIGATED OR FLOOD IRRIGATED. IN FLOOD IRRIGATION THE FALL SHOULD NOT BE MORE THAN THREE-TENTHS FOOT BETWEEN CHECKS. KEEP TIME WATER STANDS TO A MINIMUM AND PROVIDE DRAINAGE. MIL O IS SENSITIVE WHEN YOUNG, BUT SURPRISINGLY TOLERANT AFTER IT HAS SHADED THE SOIL. IF THE FIRST IRRIGATION CAN BE DELAYED UNTIL THE MIL O HAS SHADED THE GROUND, WATER GRASS, WHICH IS GERMINATED BY IRRIGATION, WILL BE SUPPRESSED.

WEED CONTROL

WATER GRASS IS ONE OF THE MAJOR WEEDS, AND MAY BE CONTROLLED BY A SHALLOW CULTIVATION IN ROW PLANTINGS, OR IF POSSIBLE, DELAYING THE FIRST IRRIGATION UNTIL THE SOIL IS SHADED BY THE MIL O PLANTS. BROADLEAVED WEEDS CAN BE CONTROLLED BY 2,4-D AT ONE TO $1\frac{1}{2}$ POUNDS ACID EQUIVALENT PER ACRE AFTER THE MIL O IS 6 INCHES HIGH AND BEFORE IT COMES INTO THE BOOT. A GROUND RIG WITH DROP NOZZLES IS PREFERRED.

INSECTS

ARMY WORMS IN DAMAGING NUMBERS CAN BE CONTROLLED WITH 10% DDT AT 20 TO 30 POUNDS PER ACRE DUST OR EQUIVALENT SPRAY, OR 10% TOXAPHENE AT 30 TO 40 POUNDS PER ACRE OR EQUIVALENT SPRAY. CUTWORMS CAN BE CONTROLLED WITH 2 POUNDS ACTUAL DDT OR TOXAPHENE SPRAY APPLIED TO THE ROWS. OR, A BAIT OF 80 POUNDS BRAN PLUS 2 POUNDS OF 20 WEIGHT OIL PLUS 1 GALLON 25% EMULSIVE DDT IS SOMETIMES EFFECTIVE. IT MAY BE NECESSARY WITH EITHER TREATMENT TO IRRIGATE TO BRING CUTWORMS TO THE SURFACE.

APHIDS ARE OFTEN PRESENT IN VERY LARGE POPULATIONS, BUT INSECTICIDES ARE RARELY NECESSARY. USUALLY PREDATOR INSECTS BRING THEM UNDER CONTROL.

HARVESTING

USE A STANDARD GRAIN HARVESTER ADJUSTED TO SORGHUMS, AS SPECIFIED IN THE OPERATOR'S MANUAL. IN HIGH YIELDING FIELDS DO NOT OPERATE THE HARVESTER AT SPEEDS GREATER THAN ONE MILE PER HOUR. EVERY EFFORT SHOULD BE MADE TO HARVEST BEFORE RAIN OR FOGGY WEATHER STARTS BECAUSE SEED IS DISCOLORED AND BRINGS A LOWER PRICE. PRE-HARVEST SPRAYS (DESICCANTS) ARE NOT SATISFACTORY UNDER ALL CONDITIONS; RARELY IS THE BENEFIT WORTH THE COST. THESE MATERIALS, IF TRIED, SHOULD BE APPLIED AT APPROXIMATELY 12 POUNDS PER ACRE OF SODIUM CHLORATE BORATE WITH THE PROPER SPREADER IN 10 GALLONS OF WATER. SOME GROWERS MAY WANT TO USE DESICCANTS TO DRY THE FOLIAGE TO MAKE HARVESTING EASIER. DRYING WEATHER IS ESSENTIAL AFTER APPLICATIONS.

DRYING AND STORAGE

IF MOISTURE PERCENTAGE IS OVER 14%, DRYING WILL BE NECESSARY. MILO CAN BE DRIED ON THE FARM IN BULK BUILDINGS OR BINS. A FAN AND AN AIR DISTRIBUTION SYSTEM IS USED TO FORCE AIR THROUGH THE MASS. USE UNHEATED AIR AT A RATE OF TWO TO FOUR CUBIC FEET PER MINUTE PER SACK. FURTHER INFORMATION ABOUT ON THE FARM DRYING IS AVAILABLE FROM YOUR FARM ADVISOR.

PASTURING AND PRUSSIC ACID POISON

STUBBLE CAN BE PASTURED, BUT THERE IS SOME DANGER FROM PRUSSIC ACID POISON, PARTICULARLY WHEN THERE IS REGROWTH AFTER FROST OR DROUGHT. IF THERE IS SOME QUESTION AS TO ITS SAFETY, TRY A CHEAPER ANIMAL BEFORE TURNING VALUABLE STOCK INTO THE FIELD. DRIED UP STRAW AND STUBBLE ARE PERFECTLY SAFE.

RESIDUES

CONTRARY TO POPULAR OPINION MILO WILL NOT POISON THE SOIL. MILO ROOTS AND STRAW CONTAIN SUGAR WHICH MUST BE DECAYED BY SOIL ORGANISMS. NITROGEN IS NEEDED FOR THIS PROCESS. POOR RESULTS FOLLOWING MILO ARE DUE TO THE TEMPORARY TYING UP OF THIS PLANT FOOD. NITROGEN FERTILIZATION OF THE FOLLOWING CROP WILL PREVENT ANY DEPRESSING EFFECT.

IF MAXIMUM RATE OF DECOMPOSITION IS NEEDED TO MINIMIZE THE TRASH PRESENT WHEN PREPARING THE SEED-BED FOR AN IMMEDIATELY FOLLOWING CROP, USE 30 TO 60 POUNDS OF NITROGEN PER ACRE.

COSTS OF PRODUCTION

PRACTICES INVOLVED IN MILO PRODUCTION ARE VARIABLE THROUGHOUT THE REGION. THE COSTS IN THE FOLLOWING TABLE ARE BASED ON TYPICAL COSTS FOR GOOD FARMING PRACTICES UNDER THE CONDITIONS LISTED. THEY INCLUDE CASH COSTS PLUS INTEREST AND DEPRECIATION. CASH COSTS FOR PREHARVEST OPERATIONS WILL AMOUNT TO ABOUT \$9.00 LESS THAN THOSE SHOWN ON THE CHART.

YOU WILL NOTE THE COST OF OPERATIONS UNDER DIFFERENT FARMING AREAS VARIES WIDELY, BUT THE TOTAL COST OF PRODUCTION IN ALL METHODS IS CLOSE. BECAUSE EXPECTED YIELDS ALSO DIFFER THIS GIVES A WIDE RANGE TO THE COST PER UNIT (BAG).

THE GREATEST SINGLE FACTOR IN DETERMINING THE COST OF PRODUCING A SACK OF MILO IS YOUR YIELD.

MILO IN THE SACRAMENTO VALLEY

OPERATION 1/	PEAT LAND SUBIRRIGATION 5500 LBS./Ac.	LOAM SOIL, Row CROP LAND FURROW IRRIGATION 5000 LBS./Ac.
LAND PREPARATION	\$ 9.50	\$ 8.50
PRE-IRRIGATE	--	--
FERTILIZATION		
NITROGEN 100-125#	--	16.50
PHOSPHOROUS 40-50#	4.75	--
PLANT	2.70	2.70
IRRIGATE	1.75	5.50
CULTIVATE & FURROW	3.00	3.00
WEED CONTROL	2.00	--
CULTURAL COSTS	23.70	36.20
HARVEST, COMBINE	7.00	7.00
HAUL	5.50	5.00
DRY, 2/3 @ 3.50/TON	6.40	--
HARVEST COSTS	18.90	12.00
CULTURAL AND HARVEST COSTS	42.60	48.20
TAXES)		
OVERHEAD & MISC.)	30.00	32.00
INTEREST ON LAND)		
TOTAL COST PER ACRE	72.60	80.20
COST PER CWT.	1.32	1.60

1/ OPERATIONS INCLUDE LABOR, MATERIALS AND EQUIPMENT COSTS COVERING FUEL, INTEREST, AND DEPRECIATION

TYPICAL COSTS

RICE LAND CONTOUR IRRIGATION 4500 LBS./Ac.	CLOVER CROP LAND HARD PAN & RED SOILS FURROW IRRIGATION 4000 LBS./Ac.	MY COSTS
\$ 11.50	\$ 11.00	
1.25	1.25	
16.50	14.50	
--	4.75	
3.80	3.00	
3.00	7.00	
--	3.50	
--	2.00	
36.05	47.00	
7.00	6.50	
4.50	4.00	
--	--	
11.50	10.50	
47.55	57.50	
28.00	25.00	
75.55	82.50	
1.68	2.06	