OILSEED FLAX STRAW: A BURNING PROBLEM OR A GROWING OPPORTUNITY

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MONTREAL
OILSEED FLAX IN CANADA

(APPROXIMATE 10 YEAR AVERAGE)

• AREA PLANTED..........................650,000 HECTARES

• PRODUCTION OF SEED..................750,000 TONNES

• PERCENTAGE EXPORTED............. > 90%

• PRODUCTION OF STRAW............... > 800,000 TONNES

• % OF STRAW PURCHASED............. < 15%
WHY ISN’T FLAX STRAW USED MORE?

• BADLY DAMAGED GOING THROUGH COMBINE

• IS NOT RETTED BECAUSE IT IS GENERALLY HARVESTED LATE (COLD NIGHTS) AND DROPPED IN ROWS (LITTLE GROUND CONTACT)

• LACK OF LOCAL USERS AND BUYERS

• IN THE PAST, FOREIGNERS NOT INTERESTED ONCE THEY SEE THE TYPE OF STRAW FARMERS WANT TO SELL
CROSS SECTION OF A FLAX STEM
RETTING?

- THE PARTIAL ROTTING OF STEMS SO THAT PECTIN IN INNER BARK IS DISSOLVED

VERY IMPORTANT BECAUSE:

- IT REDUCES EFFORT AND COST NEEDED TO SEPARATE FIBER FROM THE REST OF THE STEM

- IT GREATLY INCREASES THE YIELD OF CLEAN FIBERS
RETTED VS. NON RETTED STRAW
HOW IS RETTING DONE?

• IN OTHER PARTS OF THE WORLD:

  • WATER RETTING IN TANKS, PONDS OR RIVERS

  • FIELD RETTING WITH THIN EVEN LAYERS OF FLAX STRAW PULLED OUT AND LAID ON THE GROUND WITH SPECIALIZED SMALL PULLING AND TURNING MACHINES
WATER RETTING
FIELD RETTING
WHAT COULD WE DO IN CANADA?

• COPY EUROPEAN METHODS

• TRY NEW METHODS WHICH:
  • MINIMIZE DAMAGE TO STRAW
  • RET STRAW IN AN EVEN CONSISTENT MANNER
  • CAN BE DONE QUICKLY WITH LARGE MACHINERY
  • USE MACHINERY FARMERS HAVE OR CAN EASILY HIRE
  • ARE COST EFFECTIVE
NEW METHODS....

• MINIMIZE DAMAGE TO STRAW BY CUTTING ONLY HEADS OFF PLANTS OR BY USING A STRIPPER HEADER

• MOW OR ROLL STANDING STRAW AFTER SEED HARVEST SO THAT:
  • STRAW IS CUT OR BROKEN OFF AT GROUND LEVEL
  • MOST PIECES OF STRAW TOUCH THE GROUND
  • STRAW LIES IN A THIN EVEN LAYER COVERING THE WHOLE FIELD

• AFTER STRAW HAD RETTED, USE A V-RAKE TO RAKE STRAW IN WINDROWS
NEW METHODS

- USE A BALER TO MAKE LARGE ROUND BALES OF STRAW

- PROCESS STRAW USING A COMBINATION OF CRUSHING AND SHAKING (NOT HAMMER-MILLING) SO FIBERS STAY LONG (2 TO 6 INCHES)

- SEPARATE FIBER AND SHIVE INTO DIFFERENT GRADES TO MAXIMIZE VALUE ADDED POTENTIAL IN DIFFERENT MARKETS
ROLLING
RAKING
BALING
BIG ROUND STRAW BALE
USES FOR FIBER

• TEXTILES

• REPLACEMENT FOR FIBERGLASS (i.e., GLASS FIBERS) IN:
  • PLASTIC COMPOSITES (25% LIGHTER WEIGHT)
  • INSULATION (EASIER TO DECOMPOSE OR RE-CYCLE)

• OTHER BUILDING PRODUCTS (E.G., CEILING TILES)

• GEOTEXTILES (TEXTILES IN CONTACT WITH GROUND)

• OTHER MAT PRODUCTS
TEXTILES
PLASTIC COMPOSITES
INSULATION AND FILTRATION
USES FOR SHIVE

- MULCH AROUND PLANTS (REDUCES NEED TO WATER AND WEED)
- RE-INFORCING FILLERS FOR PLASTIC COMPOSITES
- ANIMAL BEDDING (ESPECIALLY FOR HIGHER VALUE ANIMALS AND PETS)
- SOIL AMENDMENT AND SOIL REPLACEMENT
- BIOFUEL
MULCH
THE NET RESULT

• FLAX STRAW PROCESSORS TARGETING HIGHER VALUE MARKETS CAN MORE THAN **DOUBLE THE GROSS VALUE** OF A HECTARE OF GOOD QUALITY OILSEED FLAX STRAW BY HARVESTING, PROCESSING AND MARKETING THE STRAW IN PROFITABLE NEW WAYS

• WE CAN HAVE A MORE THAN **TEN FOLD INCREASE** IN THE NUMBER OF JOBS CREATED COMPARED TO ONLY EXPORTING FLAX SEED
ANY QUESTIONS?

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