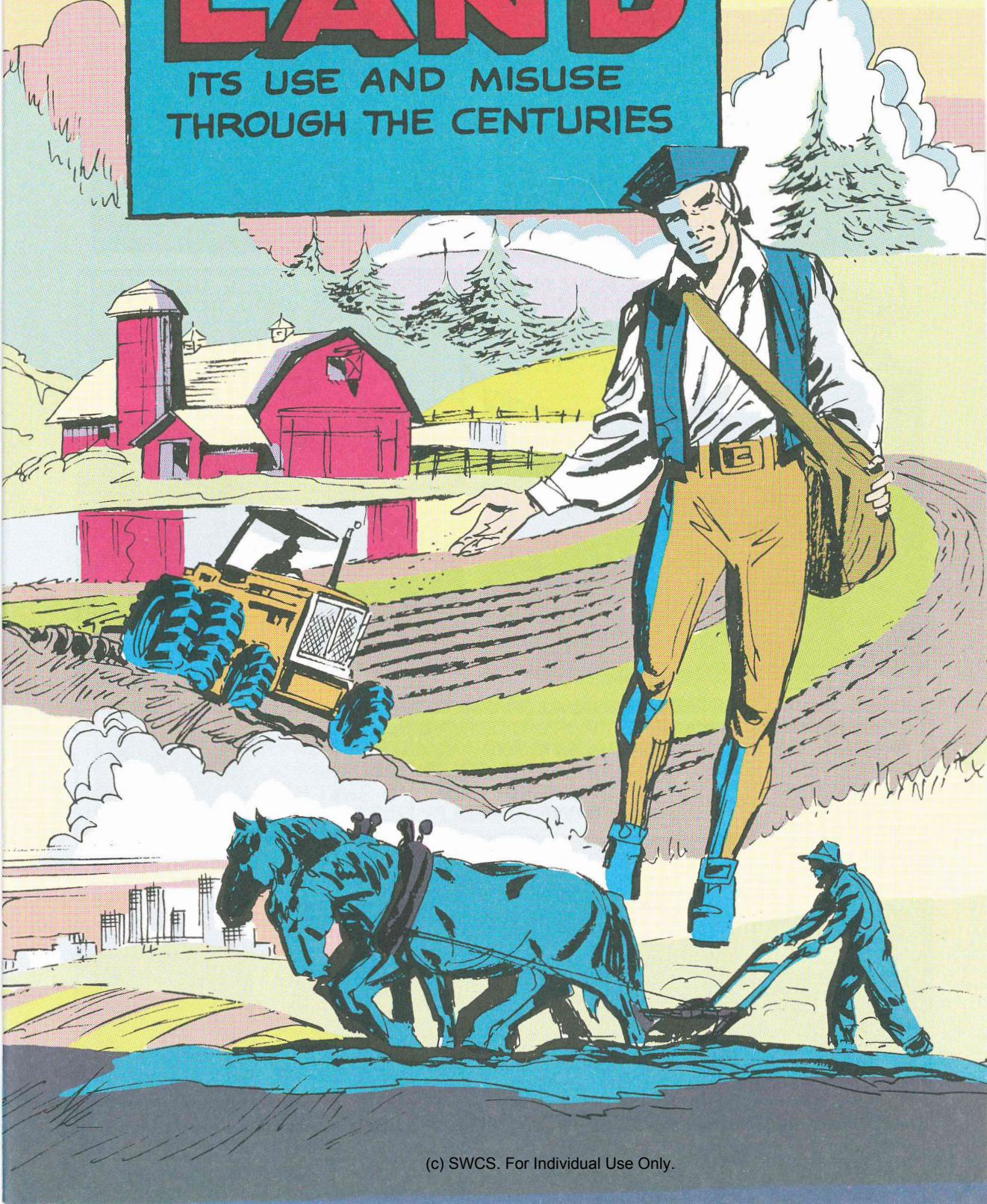


THE STORY OF  
**LAND**  
ITS USE AND MISUSE  
THROUGH THE CENTURIES







HEY! IS THIS GOLD?

COULD BE DIAMONDS!

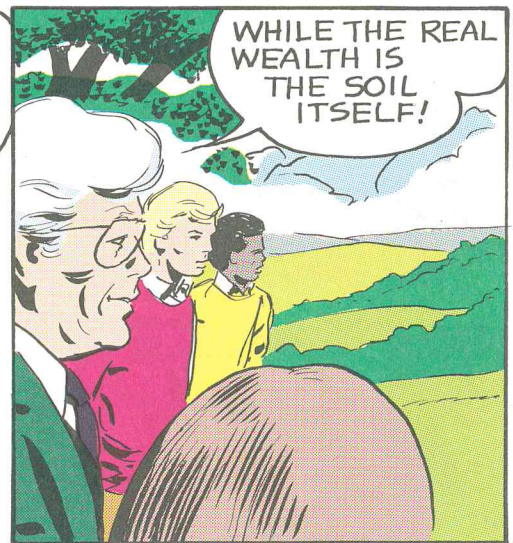
HERE COMES PROFESSOR WHARTON. HE CAN TELL US WHAT IT IS.



PYRITE CRYSTALS OR "FOOL'S GOLD"... A MINERAL OF NO SPECIAL VALUE.



STRANGE HOW PEOPLE HAVE TRIED TO FIND WEALTH FROM THE EARTH IN THE FORM OF GOLD AND GEMS...

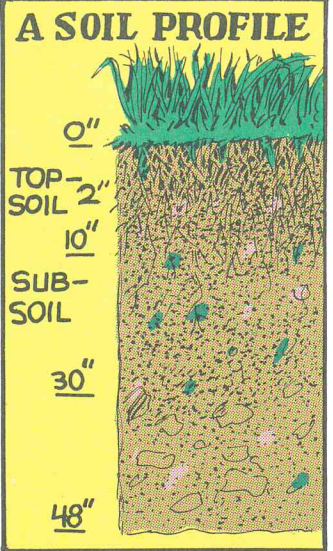
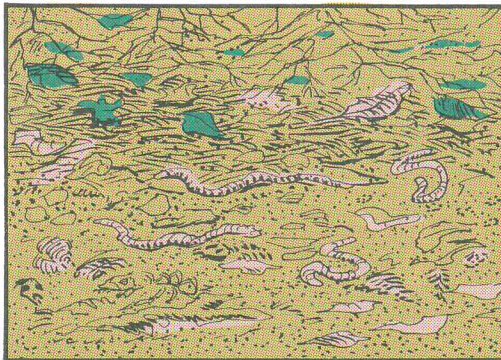


WHILE THE REAL WEALTH IS THE SOIL ITSELF!

MOST SOIL CONSISTS MAINLY OF SMALL ROCK PARTICLES BROKEN DOWN THROUGH THE AGES BY THE ACTION OF WIND, WATER, AND ICE.

2

FERTILE SOIL ALSO CONTAINS WATER, AIR, PLANT ROOTS, DECAYED PLANTS AND ANIMALS, AS WELL AS LIVING ORGANISMS, SUCH AS BACTERIA AND EARTHWORMS.



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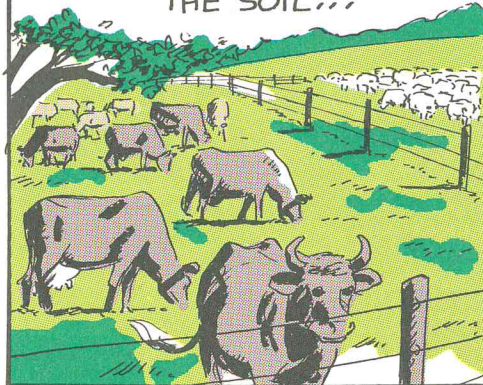
VEGETABLES, FRUITS, BREAD — ALL COME DIRECTLY FROM PLANTS THAT GROW IN THE SOIL ...



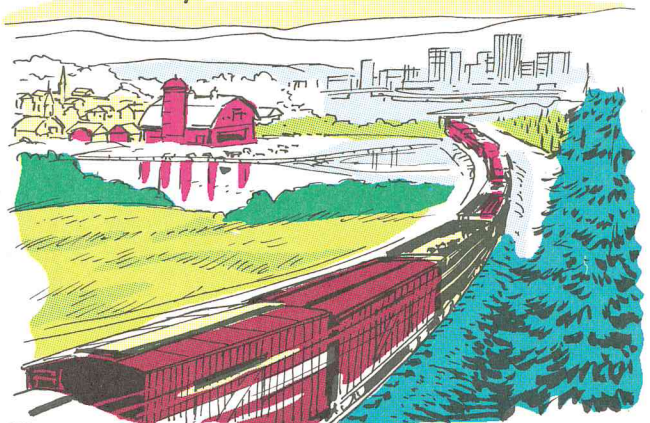
AS DO COTTON, LINEN, PLASTICS, LUMBER, AND PAPER ...



WHILE MEAT, MILK, WOOL, LEATHER, AND MANY OTHER PRODUCTS COME FROM ANIMALS THAT LIVE OFF PLANTS, SO THEY INDIRECTLY COME FROM THE SOIL ...

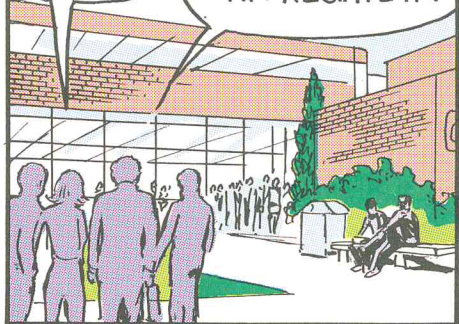


WHICH SUPPLIES RAW MATERIALS FOR ABOUT TWO-THIRDS OF AMERICAN INDUSTRY — ALL FROM FARMS, RANCHES, AND FORESTS.



I NEVER REALIZED HOW VALUABLE LAND IS TO OUR EVERY-DAY LIFE.

THAT'S NOT SURPRISING. IT TOOK PEOPLE A LONG TIME TO LEARN THE TRUE VALUE OF LAND. MANY STILL DON'T APPRECIATE IT.



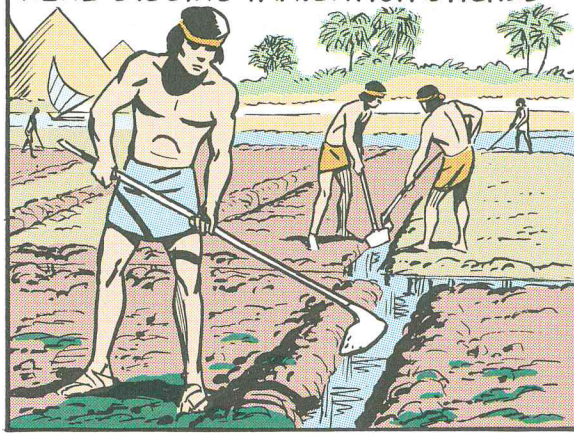
WHEN PEOPLE LEARNED THAT PLANTS GREW FROM SEEDS, THEY BEGAN TO FARM. THEY USED STICKS TO PLANT AND HOE THEIR CROPS. BUT THE MOST PRODUCTIVE SOIL WASHED FROM SLOPES, AND THEY WERE FORCED TO MOVE OFTEN, UNTIL...

BY 5000 B.C., THEY FOUND THAT CROPS GREW BETTER WHEN PLANTED ALONG THE BANKS OF RIVERS, LIKE THE NILE, WHERE THE SOIL WAS IRRIGATED BY ANNUAL OVERFLOWS.

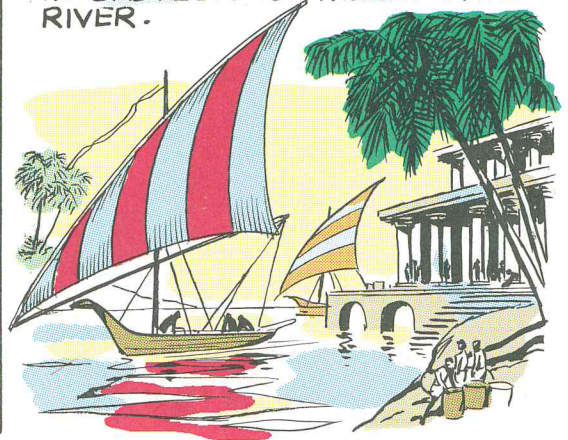




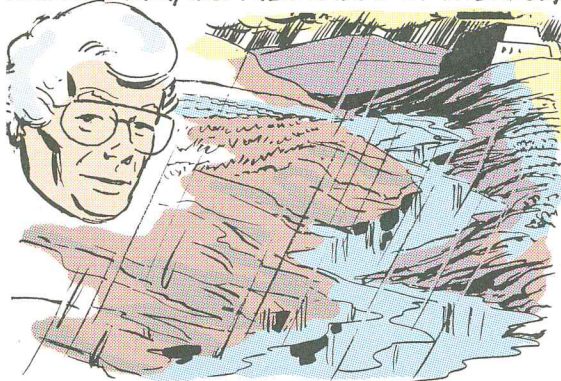
BY 4500 B.C., FARMERS HAD INVENTED WOODEN PLOWS AND OTHER IMPLEMENTS. BY 4000 B.C., THEY WERE DIGGING IRRIGATION DITCHES.



MEANWHILE, GREAT CIVILIZATIONS DEVELOPED IN COUNTRIES LIKE EGYPT, ON THE RIVER NILE, AND IN BABYLON ON THE EUFRATES RIVER.



BY 2000 B.C., THE HILL LANDS OF LEBANON, SYRIA, AND PALESTINE WERE BEING CULTIVATED



THERE, RAINS FURNISHED WATER FOR THE CROPS, BUT ALSO WASHED AWAY THE MOST PRODUCTIVE SOIL.



SOME PHOENICIAN FARMERS BUILT ROCK WALLED TERRACES BUT MOST LET THE LAND SLIP AWAY.

BETWEEN 1000 B.C., AND 400 B.C., GREECE DEVELOPED A BRILLIANT CIVILIZATION DEPENDENT ON COMMERCE, GRAIN, OLIVES, AND GRAPES.



THE LAND IS LIKE THE SKELETON OF A SICK MAN, ALL THE SOFT EARTH HAVING WASHED AWAY, LEAVING ONLY THE BARE FRAMEWORK.

AGAIN, SOIL EROSION WORKED ITS RUIN. IN 380 B.C., THE PHILOSOPHER PLATO COMMENTED ON THIS FACT.

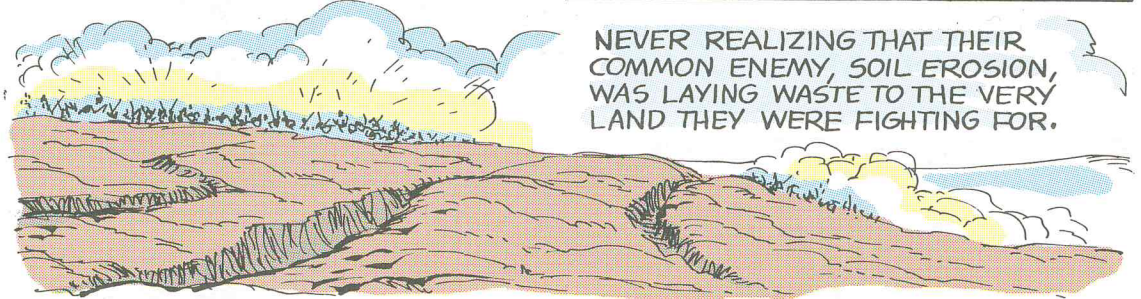
CIVILIZATION, MEANWHILE, SPREAD WESTWARD TO THE FERTILE LANDS OF ITALY AND NORTHERN AFRICA





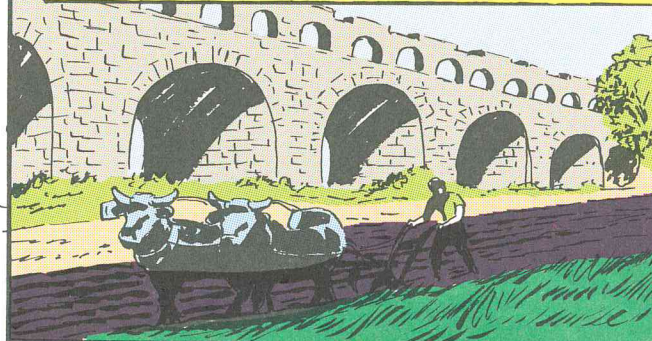


THERE, TWO GREAT NATIONS, ROME AND CARTHAGE, FOUGHT FOR THE LAND...

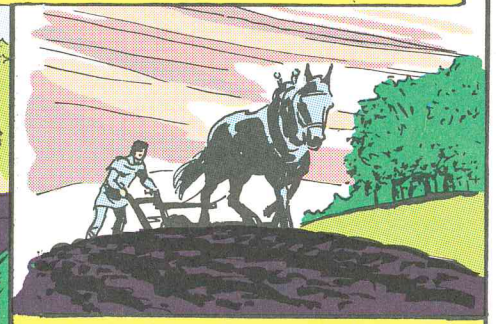


NEVER REALIZING THAT THEIR COMMON ENEMY, SOIL EROSION, WAS LAYING WASTE TO THE VERY LAND THEY WERE FIGHTING FOR.

THE DEPLETION OF SOIL AND OTHER RESOURCES CONTRIBUTED TO THE FALL OF THE ROMAN EMPIRE. IN THE MIDDLE AGES, NEW CIVILIZATIONS GREW IN WESTERN EUROPE.



THERE, FARMERS TILLED THE LAND OF FEUDAL LORDS IN THE SHADOW OF ANCIENT ROMAN RUINS.

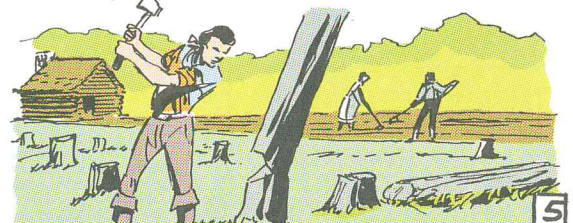


THE INVENTION OF THE HORSE COLLAR, ABOUT 800 A.D., ENABLED THEM TO TILL MORE LAND THAN WITH OXEN.

EROSION WAS NOT A MAJOR PROBLEM ON THE MORE LEVEL LAND IN EUROPE, WHERE RAINFALL IS GENTLE AND WHERE GOOD CROP ROTATIONS HELPED TO PROTECT THE SOIL.... THEN, COLUMBUS DISCOVERED AMERICA.



SETTLERS FOUND THAT MOST NATIVE AMERICANS HUNTED AND FISHED FOR FOOD. FARMING WAS CONFINED TO SMALL, SCATTERED PATCHES.



BUT THE SETTLERS WANTED TO FARM THE WAY THEY KNEW BEST, SO THEY CLEARED THE HEAVILY WOODED LAND, NOT THINKING ABOUT THE FUTURE.



A FEW MEN IN COLONIAL DAYS WERE CONCERNED ABOUT THE LAND AND DETERMINED TO PROTECT IT.



CONNECTICUT'S JARED ELIOT (1685-1763), ONE OF AMERICA'S EARLIEST CONSERVATIONISTS, PLOWED GREEN CROPS BACK INTO THE SOIL TO ENRICH IT. HE ALSO PLANTED GRASSES AND LEGUMES TO MAKE BETTER PASTURES FOR LIVESTOCK.



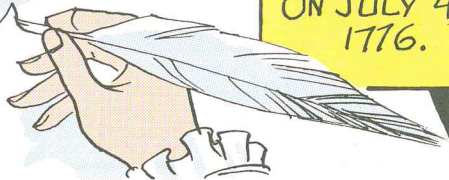
SAMUEL DEANE OF MAINE (1733-1814) WROTE THE FIRST BOOK ON AMERICAN AGRICULTURE. HE URGED FARMERS TO PLOW ON THE CONTOUR TO PREVENT SOIL EROSION, AND HE EXPERIMENTED WITH CROP ROTATIONS TO KEEP SOIL FERTILE.



THOMAS JEFFERSON (1743-1826), VIRGINIA FARMER, INVENTOR, AND THE THIRD PRESIDENT OF THE UNITED STATES, PRACTICED WHAT HE PREACHED...

*In a farm horizontally and deeply plowed, scarcely an ounce of soil is now carried off from it.*

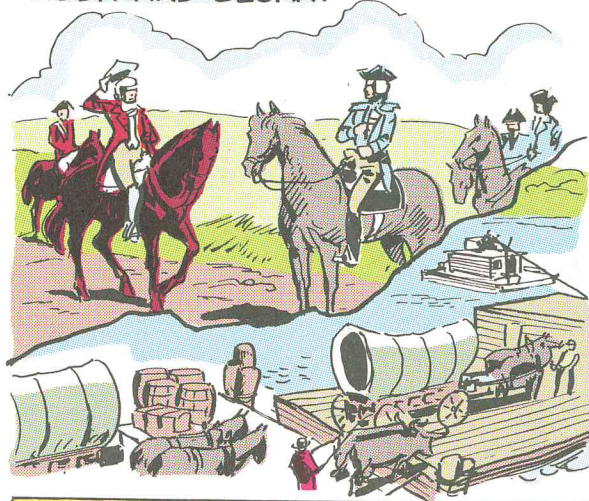
*In point of beauty nothing can exceed that of the waving lines and rows winding along the face of the hills and valleys*



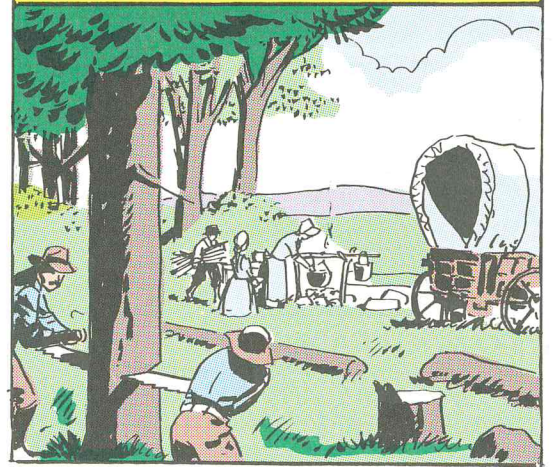
THE SAME HAND THAT WROTE SO WELL ABOUT THE LAND ALSO WROTE THE FIRST DRAFT OF THE AMERICAN DECLARATION OF INDEPENDENCE, WHICH WAS SIGNED ON JULY 4, 1776.



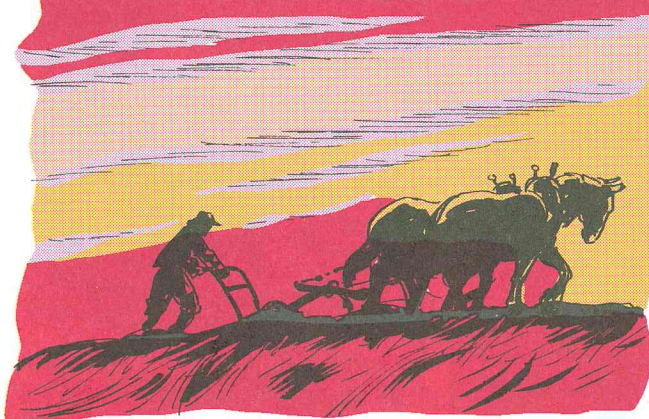
AFTER THE REVOLUTIONARY WAR ENDED IN 1781, THE EXPANSION WESTWARD BEGAN.



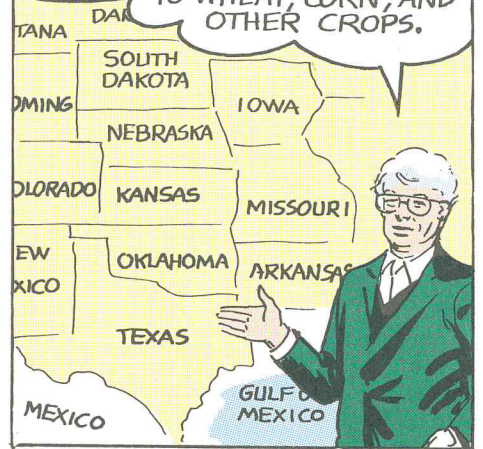
FORESTS WERE CLEARED, WETLANDS DRAINED, AND GRASSLANDS PLOWED TO PERMIT FARMING.



FORTY YEARS AFTER THE REVOLUTION, MUCH OF THE LAND EAST OF THE MISSISSIPPI RIVER WAS IN CULTIVATION.



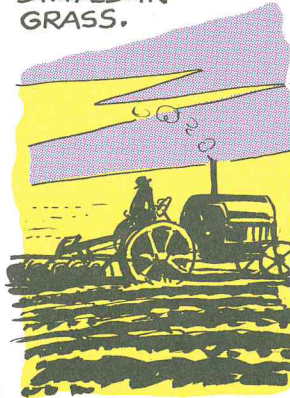
BY 1860, THE TALL GRASS PRAIRIE WEST OF THE MISSISSIPPI HAD BEEN PLANTED TO WHEAT, CORN, AND OTHER CROPS.



BY 1900, CATTLE AND SHEEP RANCHERS IN THE SHORT GRASS COUNTRY OF THE PLAINS WERE GIVING WAY TO FARMERS.



MILLIONS OF ACRES WERE PLOWED BY 1930— ACRES THAT SHOULD HAVE STAYED IN GRASS.

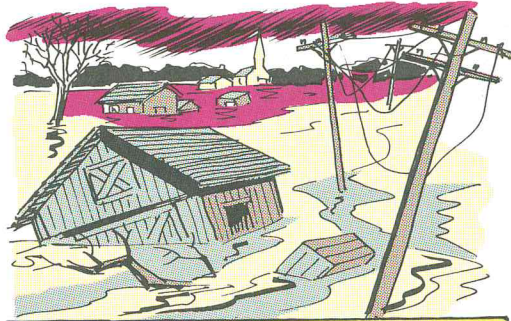


WITHOUT PROTECTIVE COVER, SOIL BEGAN TO BLOW AWAY DURING THE DROUGHT OF THE 1930s.





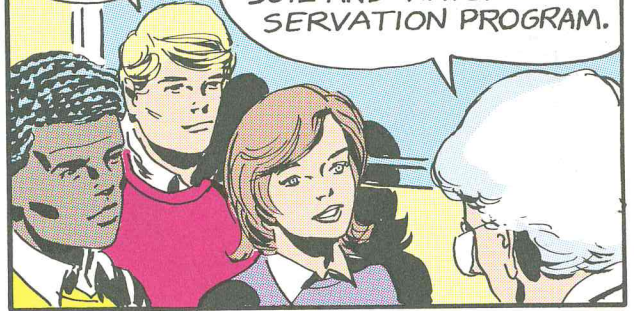
WHILE STREAMFLOW WAS LOW DURING THE DROUGHT...



TOO MUCH RAIN AT OTHER TIMES IN OUR HISTORY WASHED SOIL FROM FARMS, AND FLOODING DAMAGED FARMS AND CITIES ALIKE.

PROFESSOR, COULDN'T SOMETHING BE DONE ABOUT SOIL EROSION AND FLOODING, TOO?

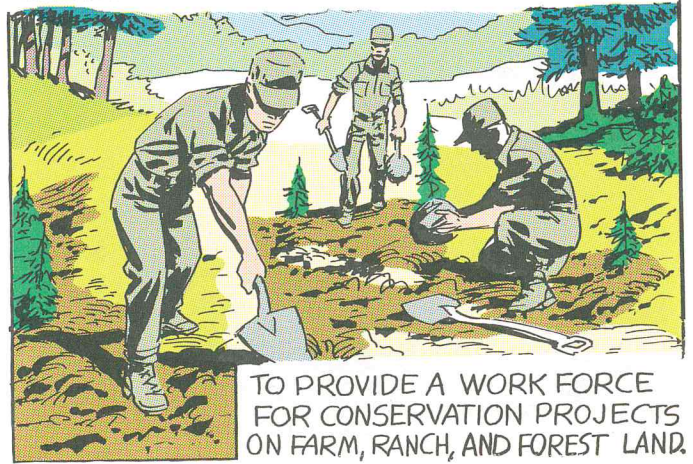
SOMETHING WAS DONE. IN 1933, SOIL EROSION WAS RECOGNIZED AS A NATIONAL PROBLEM IN THE UNITED STATES, AND THE FEDERAL GOVERNMENT STARTED A SOIL AND WATER CONSERVATION PROGRAM.



DEMONSTRATIONS WERE GIVEN SHOWING HOW TO PLAN AND APPLY SOIL AND WATER CONSERVATION PRACTICES.



UNEMPLOYED YOUNG PEOPLE WERE HIRED TO WORK IN CIVILIAN CONSERVATION CORPS CAMPS THROUGHOUT THE COUNTRY...

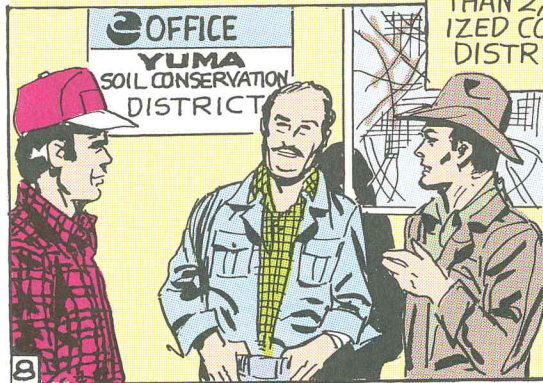


TO PROVIDE A WORK FORCE FOR CONSERVATION PROJECTS ON FARM, RANCH, AND FOREST LAND.

IN 1937, STATE GOVERNMENTS BEGAN TO PASS LAWS THAT PERMITTED FARMERS AND RANCHERS TO ORGANIZE THEIR OWN CONSERVATION DISTRICTS.

TODAY, EVERY STATE HAS SUCH A LAW, AND 99 PERCENT OF THE NATION'S FARMLAND IS INCLUDED IN MORE THAN 2,900 ORGANIZED CONSERVATION DISTRICTS...

AND MORE THAN 2 MILLION FARMERS AND RANCHERS HAVE INSTALLED OR ARE PLANNING TO INSTALL SOIL AND WATER CONSERVATION PRACTICES.







WASN'T THAT INTERESTING, WHAT PROFESSOR WHARTON TOLD US?

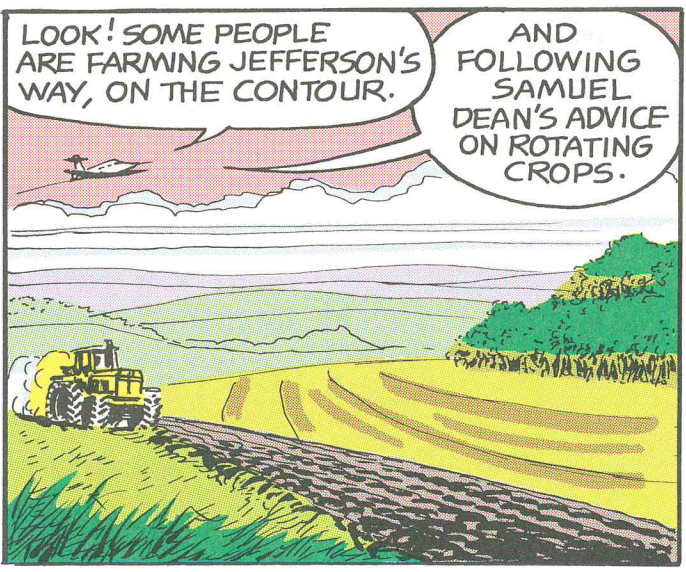
I'VE REALLY BEEN TAKING LAND FOR GRANTED.



I CAN'T WAIT TO BEGIN THE AIR AND GROUND TOUR OUR SCIENCE CLASS IS GOING TO TAKE THIS YEAR.

PROFESSOR WHARTON SAYS THAT WAY WE'LL REALLY BE ABLE TO SEE WHAT'S HAPPENING TO THE LAND.

SO THE TOUR BEGINS...



LOOK! SOME PEOPLE ARE FARMING JEFFERSON'S WAY, ON THE CONTOUR.

AND FOLLOWING SAMUEL DEAN'S ADVICE ON ROTATING CROPS.

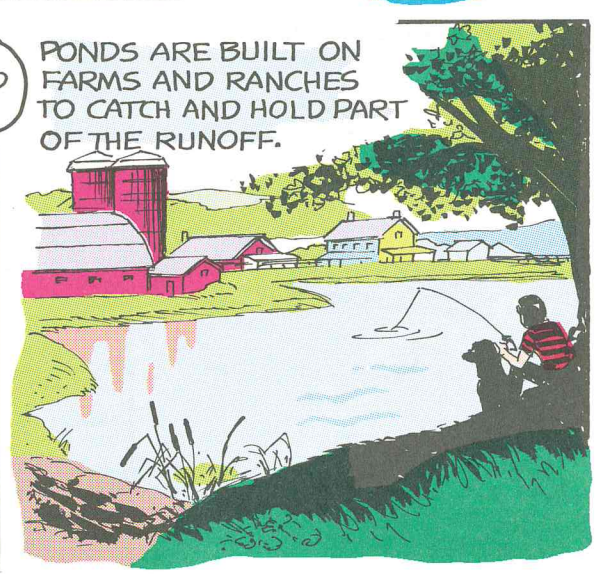
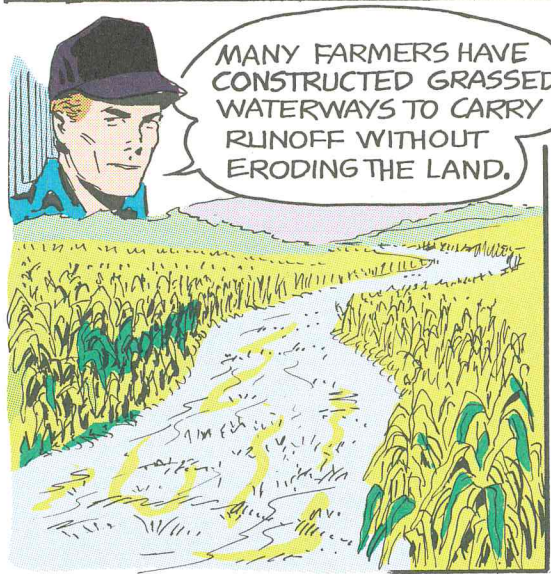


YES, BUT THERE HAVE BEEN MANY AGRICULTURAL ADVANCES SINCE THOSE DAYS. YOU'LL SEE AT OUR FIRST STOP.



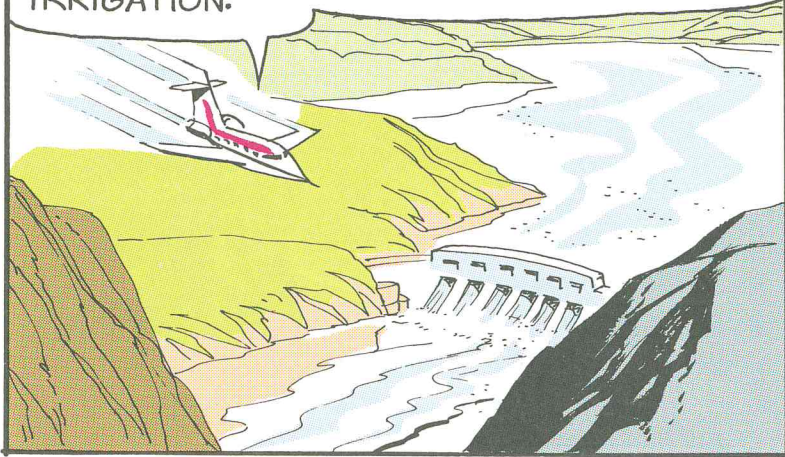
THESE TERRACES ARE DESIGNED TO LEAD RUNOFF SAFELY FROM THE FIELD WITHOUT ERODING THE SOIL.







LARGER DAMS WERE BUILT ON RIVERS TO REDUCE FLOOD DAMAGE EVEN FURTHER AND TO STORE WATER FOR ELECTRIC POWER AND IRRIGATION.



BUT IMPROPER IRRIGATION CAN ALSO CAUSE SOIL EROSION AND WASTE WATER. NEW WAYS HAVE BEEN FOUND TO APPLY IRRIGATION WATER... AS WE WILL SEE AT OUR NEXT STOP.

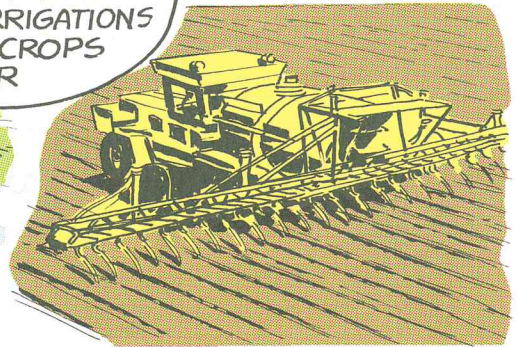


MANY FARMERS USE SPRINKLER IRRIGATION, WHICH CAN REDUCE SOIL EROSION ON SLOPING LAND. LAND LEVELING AND CONTOUR FURROW IRRIGATION SAVE WATER AND SOIL ON FLATTER LAND.

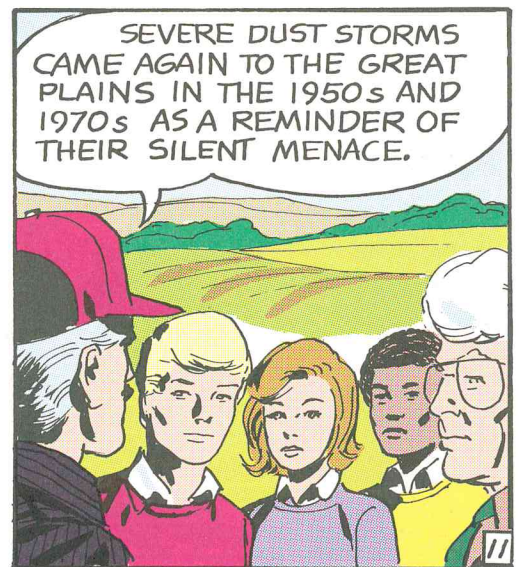


NEW DRIP IRRIGATION SYSTEMS SAVE EVEN MORE WATER AND SOIL, AND FARMERS NOW SCHEDULE IRRIGATIONS FOR WHEN THEIR CROPS NEED THE WATER MOST.

PROPER USE OF FERTILIZERS HASTENS GROWTH OF SOIL-BUILDING AND SOIL-PROTECTING CROPS.



BUT MUCH MORE MUST BE DONE TO CONSERVE SOIL AND WATER. TOO MANY FARMERS STILL LET SOIL WASH OFF THEIR FIELDS....



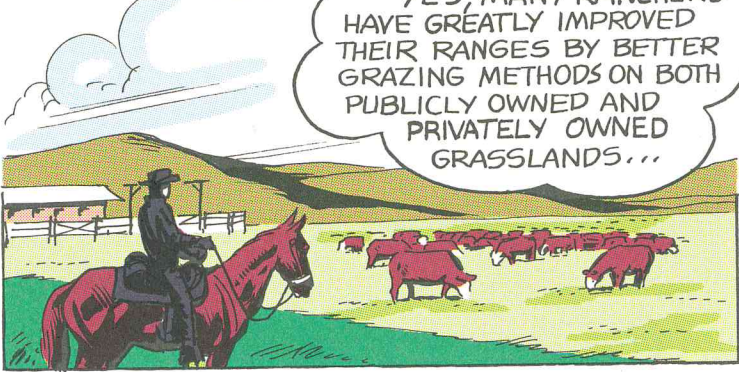
SEVERE DUST STORMS CAME AGAIN TO THE GREAT PLAINS IN THE 1950s AND 1970s AS A REMINDER OF THEIR SILENT MENACE.



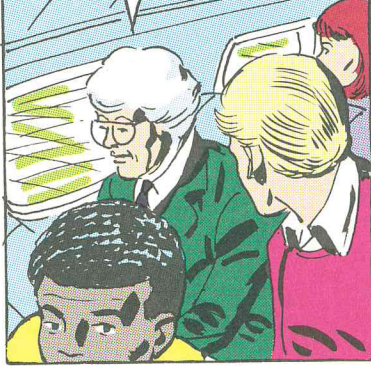
ONCE MORE OUR "AIR CLASS" IS ON ITS WAY

LOOK, PROFESSOR, HOW WONDERFULLY GREEN THAT LAND IS.

YES, MANY RANCHERS HAVE GREATLY IMPROVED THEIR RANGES BY BETTER GRAZING METHODS ON BOTH PUBLICLY OWNED AND PRIVATELY OWNED GRASSLANDS...



AS WELL AS BY RESEEDING, WATER DEVELOPMENT, AND OTHER CONSERVATION PRACTICES.



MODERN EQUIPMENT SPEEDS UP CONSERVATION WORK ON FARMS AND RANCHES...

AND ON LAND USED FOR AIRPORTS, HIGHWAYS, PARKS, AND OTHER NONAGRICULTURAL PURPOSES.



WHAT A BEAUTIFUL FOREST! ARE THERE MANY MORE LIKE IT, PROFESSOR?

YES, 180 MILLION ACRES IN NATIONAL FORESTS ARE GETTING GOOD MANAGEMENT AND TREATMENT.

AND MANY PRIVATE FORESTS ARE BEING MANAGED WELL, BUT WE STILL NEED MORE TIMBER PRODUCTION TO KEEP UP WITH GROWING NEEDS.



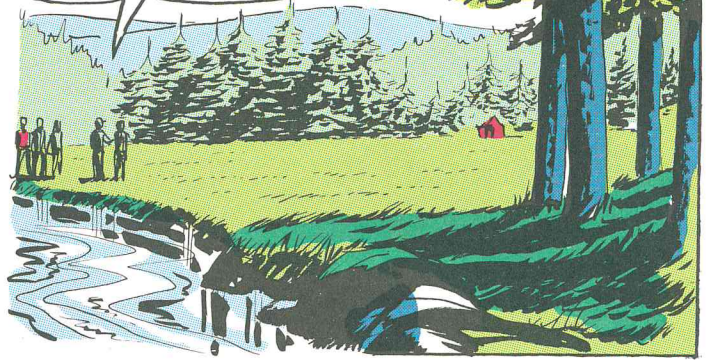


NEXT, THE CLASS VISITS A FOREST AREA.

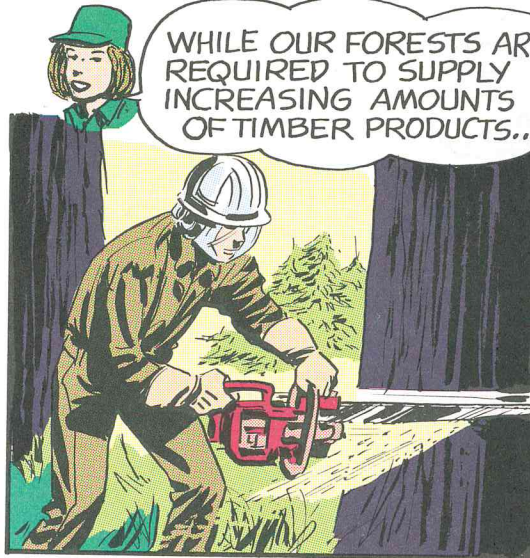
YES, THE PROFESSOR IS RIGHT. WE NEED TO PLANT MORE TREES ON OUR PRIVATELY OWNED LANDS,



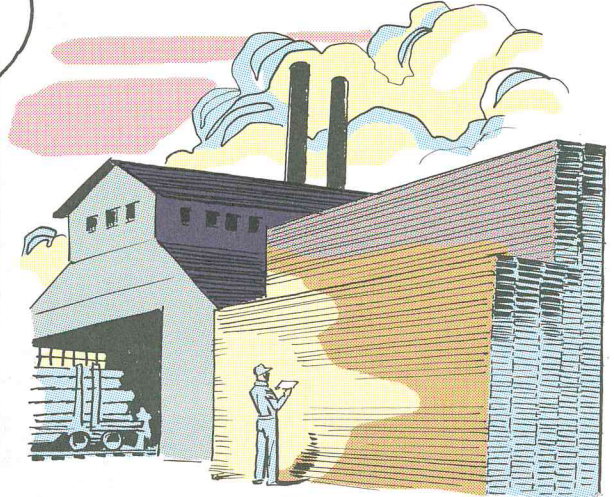
THERE IS MORE AND MORE NEED FOR WOODED LAND FOR RECREATION...



WHILE OUR FORESTS ARE REQUIRED TO SUPPLY INCREASING AMOUNTS OF TIMBER PRODUCTS...



TO MEET THE GROWING DEMANDS OF OUR INDUSTRIES.



ONLY BY BETTER PRODUCTION, GOOD MANAGEMENT, AND MORE PLANTING CAN WE MAKE THE FOREST PRODUCE THE TIMBER WE NEED.



AND THE KEY TO SUCCESSFUL CONSERVATION IS LOCAL INITIATIVE AND LEADERSHIP.





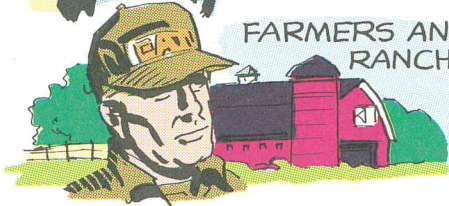
MANY GROUPS SUCH AS EDUCATORS...



BUSINESS MEN AND WOMEN...



FARMERS AND RANCHERS...



AND YOUTH ORGANIZATIONS...



SEE THEIR STAKE IN CONSERVATION AND ARE LENDING SUPPORT. TECHNICAL, EDUCATIONAL, COST-SHARING, AND CREDIT AID IS AVAILABLE FROM FEDERAL AND STATE GOVERNMENTS.

PROFESSIONAL SOCIETIES AND OTHER CONSERVATION GROUPS HELP CALL THESE NEEDS TO PUBLIC ATTENTION...



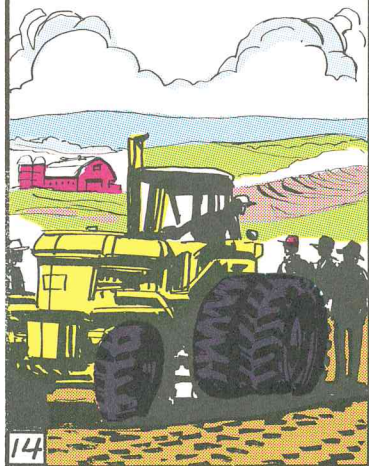
WHILE CONSERVATION DISTRICTS, IN COOPERATION WITH OTHER GOVERNMENTAL AGENCIES AND GROUPS, ACT TO MEET THESE NEEDS LOCALLY THROUGHOUT THE UNITED STATES.



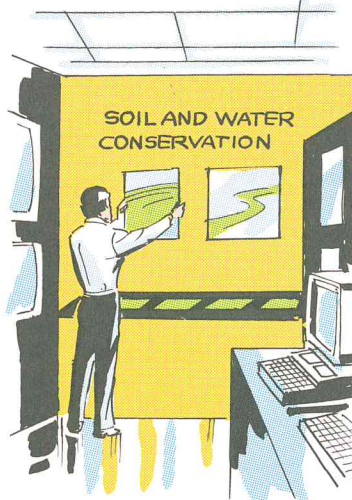
GROUPS AND ORGANIZATIONS OF MANY KINDS SUPPORT SOIL AND WATER CONSERVATION BY PRINTING EDUCATIONAL MATERIALS...



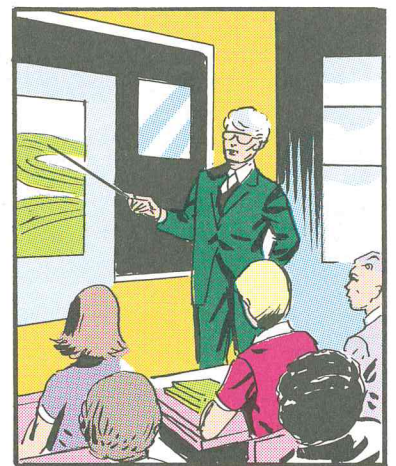
BY HELPING ARRANGE SPECIAL TOURS OR DEMONSTRATIONS...



BY BUILDING EXHIBITS...

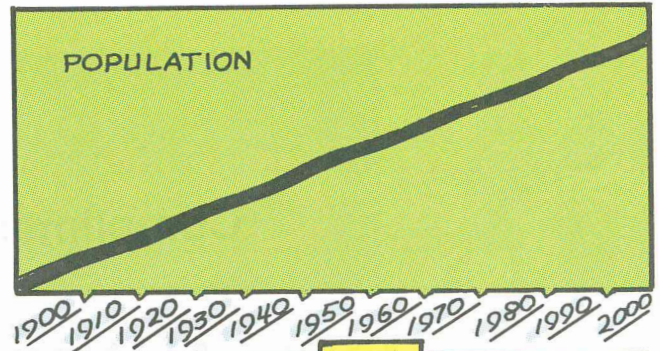


AND BY HELPING WORK CONSERVATION INTO THE SCHOOL CURRICULUM.

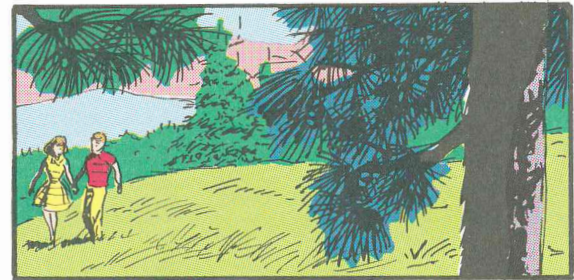
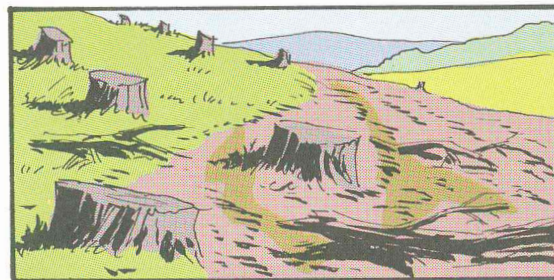
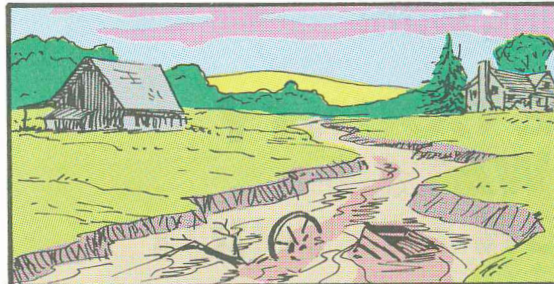
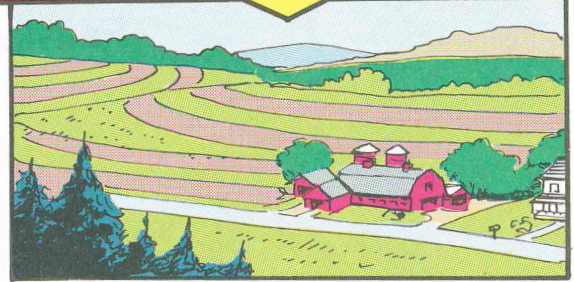
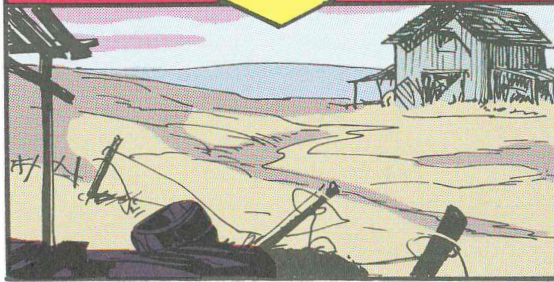




**WE** MUST STOP EXHAUSTING OUR SOIL, WATER, RANGE, FORESTS AND WILDLIFE. WE MUST REPLENISH AND IMPROVE THESE ASSETS TO KEEP PACE WITH THE GROWTH OF OUR NATION AND ITS DEMANDS UPON THE LAND.



**THIS... WHICH WILL IT BE? OR THIS**



**WHAT WE LEARNED...**



**GOOD LAND USE BRINGS GREATER PROSPERITY. FOOD, CLOTHING, SHELTER, AND RECREATION ARE PRODUCTS OF THE LAND. SOIL AND WATER CONSERVATION IS EVERYBODY'S BUSINESS.**



Compliments of:

**FREESTONE COUNTY  
FARM BUREAU**

Fairfield, Texas

Cooperating with:

**FREESTONE COUNTY  
SOIL & WATER  
CONSERVATION DISTRICT**

This booklet was published by the Soil and Water Conservation Society with the support of the U.S.D.A. Natural Resources Conservation Service and Forest Service. For a free brochure describing SWCS's other Environmental Adventures, write: SWCS, 7515 N.E. Ankeny Road, Ankeny, Iowa 50021-9764. Or call 1-800-THE-SOIL.