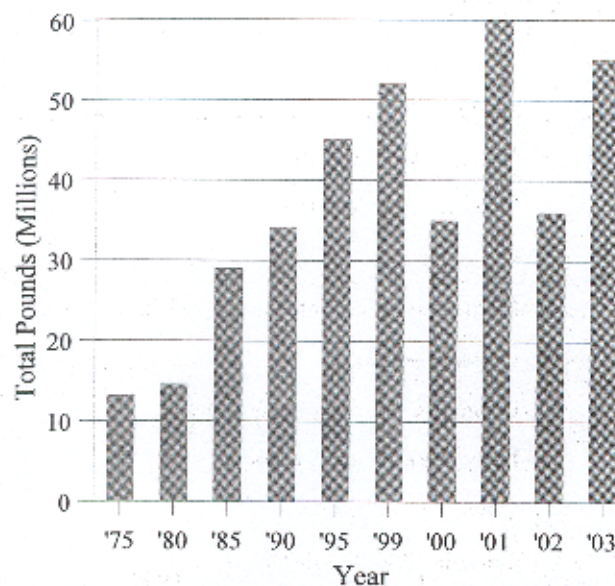


PECANS

New Mexico Pecan Production

Total In-Shell Production, 1975-2003



Pecans: Production, Price, and Value

Crop Year	Production (in shell)	Price Per Pound	Value of Production
	1,000 Pounds	Dollars	1,000 Dollars
1975	13,100	.57	7,467
1980	14,500	.85	12,325
1985	29,000	.88	25,520
1990	34,000	1.53	52,020
1995	45,000	1.24	55,800
1999	52,000	1.20	62,400
2000	35,000	1.37	47,950
2001	60,000	.64	38,400
2002	36,000	1.25	45,000
2003	55,000	1.28	70,400

PECANS: Pecan production in New Mexico totaled 55 million pounds in 2003, a high bearing year in the alternating cycle of the trees. This was a 53 percent increase over 2002's 36 million pounds, but 8.3 percent less than 2001's production, the previous high-bearing year in the cycle. Price per pound increased \$0.03 from the previous year to \$1.28. Production in 2003 was valued at \$70.4 million, compared to \$45 million the year before, and \$38.4 million in 2001.

Pecans: Orchards, Acres, and Production by County

District/County	2002 Census ^{1/}		Production	
	Bearing Acres	# Of Farms	2002	2003
	-----Number-----		-----1,000 Pounds-----	
DISTRICT 70	2/	65	1,250	2,350
Luna	2/	22	900	1,700
Sierra	514	43	350	650
DISTRICT 90	2/	1,425	34,630	52,500
Chaves	3,414	81	4,000	5,800
Doña Ana	23,745	1,056	26,000	40,500
Eddy	2,415	119	3,100	4,200
Lea	2/	35	330	400
Otero	2/	134	1,200	1,600
OTHER DISTRICTS^{3/}	2/	46	120	150
STATE	33,123	1,536	36,000	55,000

^{1/} Orchards of 20 or more trees.

^{2/} Withheld to avoid disclosing data for individual farms.

^{3/} Includes Grant, Hidalgo, and Lincoln counties.



Name _____

New Mexico Agriculture
Read and Learn About Pecans

The pecan is a kind of hickory nut. It is the only Native American nut; however, it is not native to New Mexico. The first pecans were brought to New Mexico from Texas and Mexico.

Dona Ana County has the second largest pecan orchard in the world. The largest pecan tree in the state is also in Dona Ana County in the town of Mesilla. New Mexico is third in the United States in pecan production. There are 16 states that produce pecans as a commercial crop. New Mexico produces over 30 million pounds in a good year. The crops are valued at millions of dollars.

Pecan trees can grow 70 to 100 feet tall. Their branches can spread from 50 to 100 feet wide. There are over 20 different varieties of pecans.

Pecans like to grow together in orchards. Farmers must take care of the orchards. They must cultivate, fertilize, water, control insects and weeds; and harvest the pecans. In orchards, they are mechanically harvested.

Besides being good to eat, pecans are high in protein, vitamins A, E, and B. The shells are also used for such things as "gravel" and mulch.

Answer these questions about what you have read.

- 1) The pecan is a kind of _____ nut.
- 2) New Mexico has the _____ largest pecan orchard in the world.
- 3) New Mexico is _____ in the United States in pecan production.
- 4) Pecans like to grow together in _____.
- 5) Name two of the things farmers must do to help their pecan trees grow: _____ and _____.

PECANS--New Mexico ranks 3rd in Nation

Pecan trees are grown in orchards. Average tree spacing in New Mexico is 30 ft. x 30 ft. or 48 trees per acre. (1 acre = 43,560 square feet) Trees are spaced to prevent competition for nutrients and sunlight. A fast growing tree is more resistant to disease.

Pecan trees have long central tap roots. They are river bottom trees by nature and their tap roots can reach up to 20 feet in length. However, their surface roots are used to feed and fill the nut.

Pecan orchards are flood irrigated. This occurs approximately 8 times per year in three-week intervals during their growing season (April-September). Irrigation is very important to pecans. If a tree becomes too dry, it will shed its nuts. Pecans can require up to 6 acre feet of water per year (325,900 gallon/acre foot x 6) and 150 gallons a day when in full leaf.

Pecan trees need to be pruned to shape the tree. This removes dead wood and broken branches.

Pecans take several years to become productive. Cash investments are long term, maybe as long as 15 years. Pecans are mechanically harvested. Average production is 40-50 pounds per tree. Production per acre is 2000-2500 pounds on the average and can reach 3000 pounds per acre.

Insect and weed control is important. Insects can weaken a tree and even kill it. Farmers today use Integrated Pest Management practices. If there are good bugs eating the bad bugs we leave them alone. Scouting is done to determine the population of each insect. Weeds compete with the trees for water and nutrients. Unchecked weed populations can slow the growth of the tree and cost the farmer more in fertilizer and water.

Pecans require fertilizers such as Nitrogen, Phosphorus, Potassium, Zinc, Sulfur, and Iron. Proper levels are important for the tree's health. Soil and tissue tests are done to help the farmer determine how much fertilizer is needed.

ACTIVITY: Pretend you are a pecan farmer. You own 100 trees.

1. Draw a diagram of your orchard with proper spacing.
2. How many acres do you need to properly space your trees?
3. Record your irrigation schedule below:

# of times irrigated	dates	# acre feet required
----------------------	-------	----------------------

NEW MEXICO AGRICULTURE

PECAN FACTS



<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>
1	2	3	4	5	6	7	8	9	10
<u>K</u>	<u>L</u>	<u>M</u>	<u>N</u>	<u>O</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>
11	12	13	14	15	16	17	18	19	20
<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>				
21	22	23	24	25	26				

1) 7 5 15 18 7 5 23 1 19 8 9 14 7 20 15 14

16 12 1 14 20 5 4 16 5 3 1 14

20 18 5 5 19 1 20 13 15 21 14 20

22 5 18 14 15 14 9 14 1774.

2) 19 16 1 14 9 19 8 5 24 16 12 15 18 5 18 19

3 1 12 12 5 4 16 5 3 1 14 19

14 15 7 21 12 5 19

Pecan Facts (continued)

3)

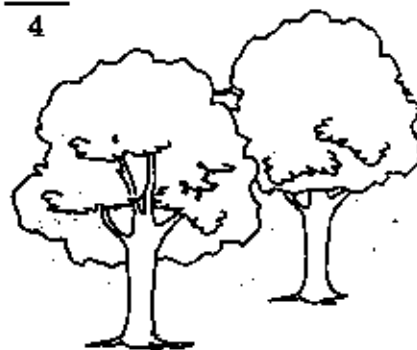
$$\begin{array}{cccccc} \hline 5 & 1 & 18 & 12 & 25 & \\ \hline \end{array} \quad \begin{array}{cccccc} \hline 1 & 13 & 5 & 18 & 9 & 3 & 1 & 14 \\ \hline \end{array}$$

$$\begin{array}{cccccc} \hline 9 & 14 & 4 & 9 & 1 & 14 & 19 & \\ \hline \end{array} \quad \begin{array}{cccc} \hline 21 & 19 & 5 & 4 \\ \hline \end{array}$$

$$\begin{array}{cccccc} \hline 16 & 5 & 3 & 1 & 14 & 19 & \\ \hline \end{array} \quad \begin{array}{cc} \hline 1 & 19 \\ \hline \end{array} \quad \begin{array}{c} \hline 1 \\ \hline \end{array}$$

$$\begin{array}{cccccc} \hline 13 & 1 & 10 & 15 & 18 & \\ \hline \end{array} \quad \begin{array}{cccccc} \hline 19 & 15 & 21 & 18 & 3 & 5 \\ \hline \end{array}$$

$$\begin{array}{cc} \hline 15 & 6 \\ \hline \end{array} \quad \begin{array}{cccc} \hline 6 & 15 & 15 & 4 \\ \hline \end{array}$$



4)

$$\begin{array}{cccccc} \hline 16 & 5 & 3 & 1 & 14 & 19 & \\ \hline \end{array} \quad \begin{array}{cccc} \hline 23 & 5 & 18 & 5 & \\ \hline \end{array} \quad \begin{array}{cccc} \hline 21 & 19 & 5 & 4 \\ \hline \end{array}$$

$$\begin{array}{cc} \hline 1 & 19 \\ \hline \end{array} \quad \begin{array}{cccc} \hline 19 & 14 & 1 & 3 & 11 & 19 & \\ \hline \end{array} \quad \begin{array}{cc} \hline 15 & 14 \\ \hline \end{array} \quad \begin{array}{ccc} \hline 20 & 8 & 5 \\ \hline \end{array}$$

$$\begin{array}{cccc} \hline 13 & 15 & 15 & 14 & \\ \hline \end{array} \quad \begin{array}{cccccc} \hline 6 & 12 & 9 & 7 & 8 & 20 & 19 & \\ \hline \end{array} \quad \begin{array}{cc} \hline 2 & 25 \\ \hline \end{array}$$

$$\begin{array}{ccc} \hline 20 & 8 & 5 \\ \hline \end{array} \quad \begin{array}{cccc} \hline 1 & 16 & 15 & 12 & 12 & 15 \\ \hline \end{array}$$

$$\begin{array}{cccc} \hline 1 & 19 & 20 & 18 & 15 & 14 & 1 & 21 & 20 & 19 \\ \hline \end{array}$$

NAME _____

NEW MEXICO AGRICULTURE



Learn about _____

Fill in the blanks below with these words.

Nut

Pies

Eat

Candy

Agriculture

Shell

Pecans are used to make P _____.

They are good to E _____.

Pecans are also used in C _____.

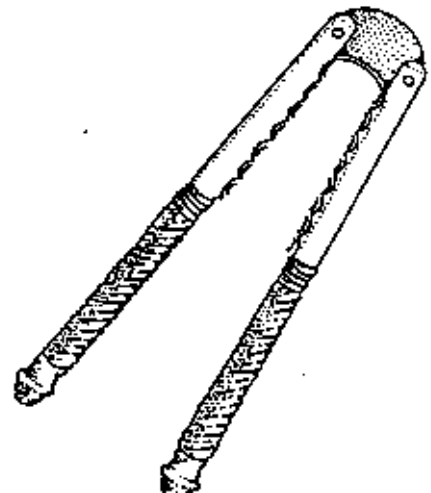
They are a major crop in New Mexico's

A _____.

Pecans are a N _____.

Pecans have a S _____.

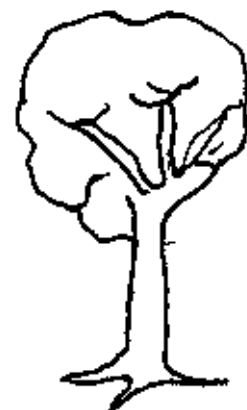
Now take the first letter from each word to fill in the title.



PECAN SEARCH

Search down and across for the words listed below. All the words relate to pecans.

B	D	M	O	N	H	F	X	G	M	S
H	G	J	O	G	A	F	S	C	C	M
P	N	O	L	O	R	C	H	A	R	D
A	C	P	X	O	V	X	E	N	U	J
Y	C	I	Y	D	E	S	L	D	A	W
T	R	E	E	T	S	Z	L	Y	S	D
A	A	X	L	O	T	D	B	C	P	M
C	C	L	P	E	C	A	N	H	O	O
A	K	Q	M	A	D	L	U	I	C	L
N	Z	S	S	T	D	Z	T	E	Q	H



Pecan

Good to eat

Nut

Orchard

Shell

Harvest

Tree

Pie

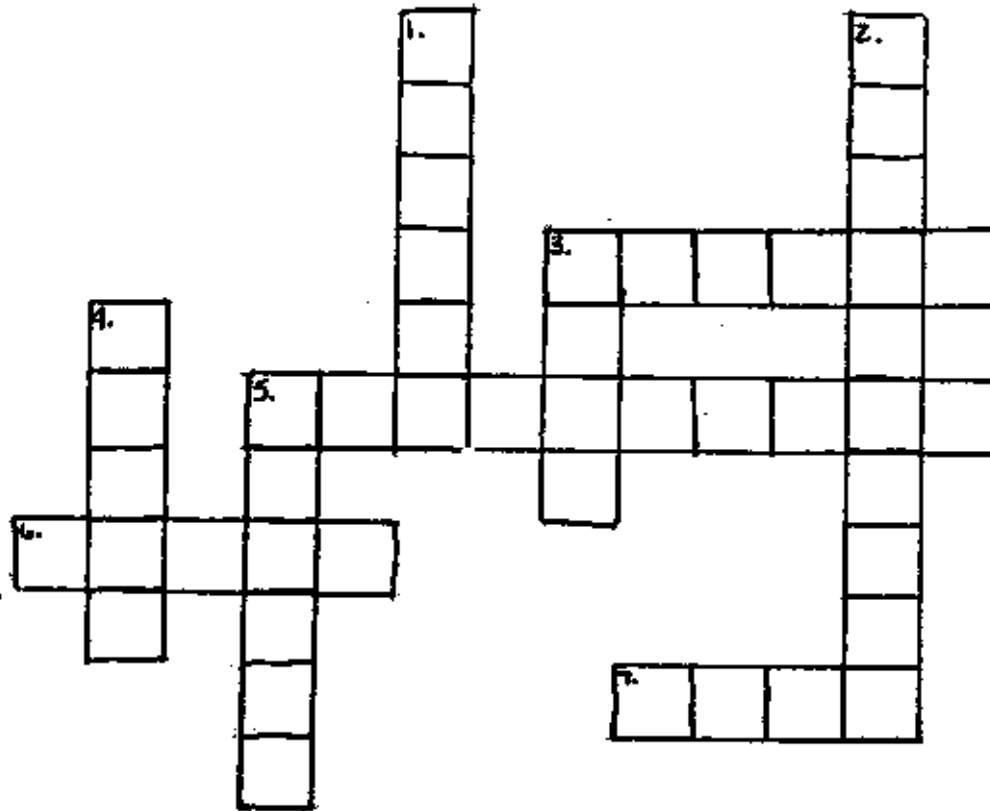
Candy

Crack



PECANS AND THEIR SHELLS

Pecans are an important part of New Mexico agriculture. Pecans are used mainly as a food. The by-product or shells are used for "gravel" for drives and walks, fuel and mulch. They are also ground to a flour and are used to clean airplane parts, an ingredient in rug cleaners and to provide filler for insecticides, fertilizers, veneer wood and polyesters.



DOWN

1. Pecan shells are used for "_____" on driveways and walks.
2. Ground shells are used in _____.
3. Shells are used to make _____.
4. Ground shells make a _____ and can be used to clean airplane parts.
5. _____ are an important part in New Mexico agriculture.

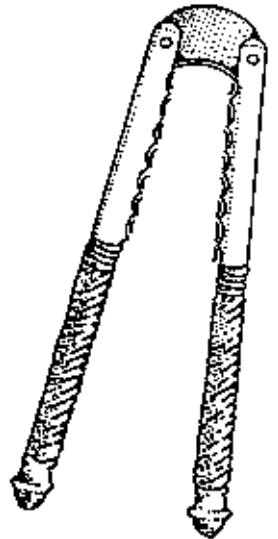
ACROSS

3. Ground pecan shells provide a _____ for insecticides and fertilizers.
5. _____ are also made with these fillers.
6. Shells are also used for _____.
7. Pecans are used mainly for _____.

Name _____

Pecan Varieties
Search and Find

C F G M O M E S I L L A O
B S H A W N E E A R E P Z
B A R T O N S S T I U V D
M P N U A E O I H N C Y W
I A P F C O M A N C H E O
G C C L Q F L S T O Q I P
R H A R P E R G P N D D G
W E S T E R N S C H L E Y
I T O T T O I T H J S A T
C H E Y E N N E E C F L M
H L P X O K O W R B S B U
I U S I O U X P O S O Z S
T S U H C H I C K A S A W
A P B U S G J M E D P O F
S H O S H O N I E Y W X P
P D R K W K N M O H A W K
C H O C T A W K F P G O M
G G O W H S B U R K E T T



There are many different varieties of pecans. The first four are the most common. Search down & across for the ones listed below:

Western Schley
Wichita
Cheyenne
Ideal
Apache
Barton
Burkett
Cherokee
Chickasaw

Choctaw
Comanche
Harper
Mesilla
Mohawk
Rincon
Shawnee
Shoshoni
Sioux



Name _____



Pecan Scramble



Pecans are a kind of hickory nut. They have a hard shell and must be cracked. They are a major crop in New Mexico. Pecans grow on trees and the trees are planted together in orchards. Sometimes pecans are used in pies and candy. There are also many uses for the shell. Pecans are high in protein and vitamins.

Unscramble the following to make words about pecans.

RDOCRHA

ORPC

EPIS

NYCDA

LHESL

EERTS

UTN

SPACEN

RCKAC

MSITAVNI

Name _____

Pecan Finger Prints

Color the pecan tree, nut and leaves.



The pecan tree



The nut is brown with black patterns.



The leaves are dark green. They do not change color much in the fall.

Draw a cluster of pecan trees full of nuts.

What season is it? _____

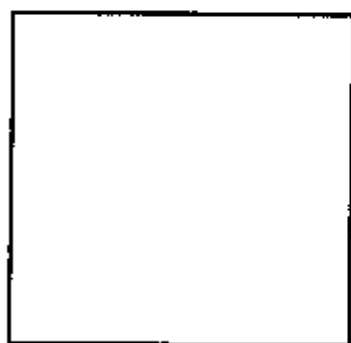


Name _____

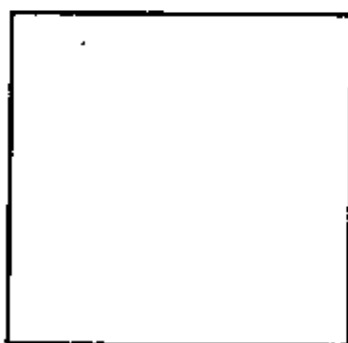
Pecan Finger Prints

Unique - one of a kind, matchless. A person's fingerprints are unique to that individual. The pattern on a pecan shell is also unique.

Make prints of both your thumbs on tape, and stick them here. Then design your own pattern on the pecan shell.



left thumb



right thumb



pecan print

Investigate. Write yes or no to answer these questions.

1. Can you see a pattern in the lines of your thumb print? _____
2. Are the two prints alike? _____
3. Could you redraw the pecan pattern and make it a perfect match? _____

Classify. All fingerprints can be divided into three pattern classes. The three classes are called arch, loop and whorl. Compare your thumb prints to these.



arch



loop



whorl

Which looks most like your print? _____



