

## TRAINING GRAPEVINES

by

James J. Kissler, U.C. Farm Advisor

In the development of young vines, the grower must know the shape (form) required for the mature vine. The actual training follows a definite procedure. Pruning and disbudding are done to direct the growth into the parts of the vine to be retained. Tying to the stakes and trellis is done to maintain the vine in the desired position.

### First Summer

The object during the first year is to develop a good root system. No training is done the first growing season.

At the end of the first growing season the vine should have a well established root system and a well matured top growth.

## TRAINING HEAD-TRAINED VINES

### Second Year

Follow the steps as shown on the attached diagrams.

Diag. I, Step a. Prune the tops back to two or three well formed buds positioned next to the stake (own-rooted vines).

Diag. IV, Steps A, B. This is the procedure for resistant rootstocks that were fall-budded the first year. When the tips of the rootstock begin to grow and the scion buds are swelling, then cut the resistant rootstock off 1 inch above the scion bud. Slant the cut away from the bud so that the vine does not bleed directly onto the bud. Place a paper sleeve around the vine to protect the new shoot that will develop.

Diag. I, Step b. Disbud or rub off all the new shoots that began to grow except for one strong shoot that is positioned for growing vertically up the stake.

Diag. I, Step c. Tie the shoot when it is 8 to 12 inches long. Retie it two or more times as the shoot grows up the stake. Top the main shoot after it has grown 12 to 16 inches above the height you want to establish your head. Topping will encourage the growth of the side laterals.

### Third Year

Diag. II, Step d. (Winter) Dormant pruning consists of removing all the growth from the cane trained up (the future trunk). However, if the vines are excessively strong, retain 3 to 4 top laterals and prune them back to one or two buds. These will act as fruiting spurs and will help to develop the head rapidly. Remove all laterals on the lower portion of the trunk where no permanent arms are desired. The cane should be cut off at the first node above the level where the head is desired. Make this cut through the node in a way it will destroy the bud but retain an enlarged

knob which facilitates tying. Use a clove hitch around the top of the cane and tie securely to the stake using a square knot. Make two or three more loose ties to hold the vine to the stake.

Diag. II, Step e. (Spring) Break out the lower shoots and disbud the lower portion of the trunk. Retain all the upper laterals for future head development.

Diag. II, Step f. (Summer) Remove suckers and clean up lower portion of the trunk by breaking out unwanted shoots. The first crop of 2 to 4 tons will be born.

#### Fourth Year

Diag. III, Step g. Dormant pruning consists of leaving 4 or 5 well placed spurs. Continue to sucker and remove unwanted shoots during the spring and summer.

You have now developed the framework for a mature vine.

### TRAINING BILATERAL CORDON VINES

Follow steps as shown on attached diagrams.

#### First Summer

Use same procedure as described under Head-Training.

#### Second Year

Diag. I, Step a. See Head-Training.

Diag. IV, Steps A,B. See Head-Training.

Diag. IV, Step C. Tie shoots when they are 8 to 12 inches long. Retie two more times as the shoot grows up the stake. Don't place any ties above the cordon wire.

After the main shoot has grown 12 to 18 inches above the cordon wire, top it at the cordon wire.

Diag. V, Step D. Select two strong laterals placed 6 to 12 inches below cordon wire. Let these laterals grow upward until they are 18 to 24 inches long. Remove all other laterals on the lower portion of the trunk.

Diag. V, Step E. Tie these 24-inch laterals to the cordon wire, one in each direction. As they continue to grow, keep them straight by tying them loosely to the cordon wire. DO NOT tie the portion of the shoot that is elongating a foot or more from the tip.

Cut back the ends of these laterals after they have grown about 18 inches beyond the halfway point to the next vine. Shorten each lateral so it will be within 3' to 6' from the midpoint. This is your future fruiting cordon.

### Third Year

Diag. VI, Step F. (Winter) Dormant pruning consists of cutting off all the lateral growth from the cordon branches. If vines are very vigorous you can leave spurs on the cordon branches. Space these spurs 6 to 8 inches apart. Be sure these spurs are on the top side of the cordon. The length of the cordon depends on the previous year's growth. Strong cordons can be left to about the halfway point between vines (leave 6 to 12 inches between cordons), providing summer shoot removal is carried out to control crop the next spring (Diag. VI, G). If no summer shoot removal is planned, then cut the cordons back to 2 or 2½ feet to keep from overcropping the vines the next year.

Tie the new cordons onto the wire.

Diag. VI, Step G. (Spring) Remove all shoots from the bends of the cordons. Remove all shoots and disbud the lower trunk area. If long cordons are retained, remove all the shoots on the bottom of the cordons. Space out the upper shoots at about 6 inches apart by removing unwanted shoots.

### Fourth Year

Diag. VII, Step H. (Winter) Retain 4 to 6 two- or three-bud spurs on each side of the cordon. Remove all other growth. Be sure spurs are placed on the upper part of the cordon (if possible).

Spring - Continue to remove shoots from the bends of the cordons and from the trunk.

Note: Amount of bearing wood retained varies as to variety.

HEAD TRAINING

Second Year

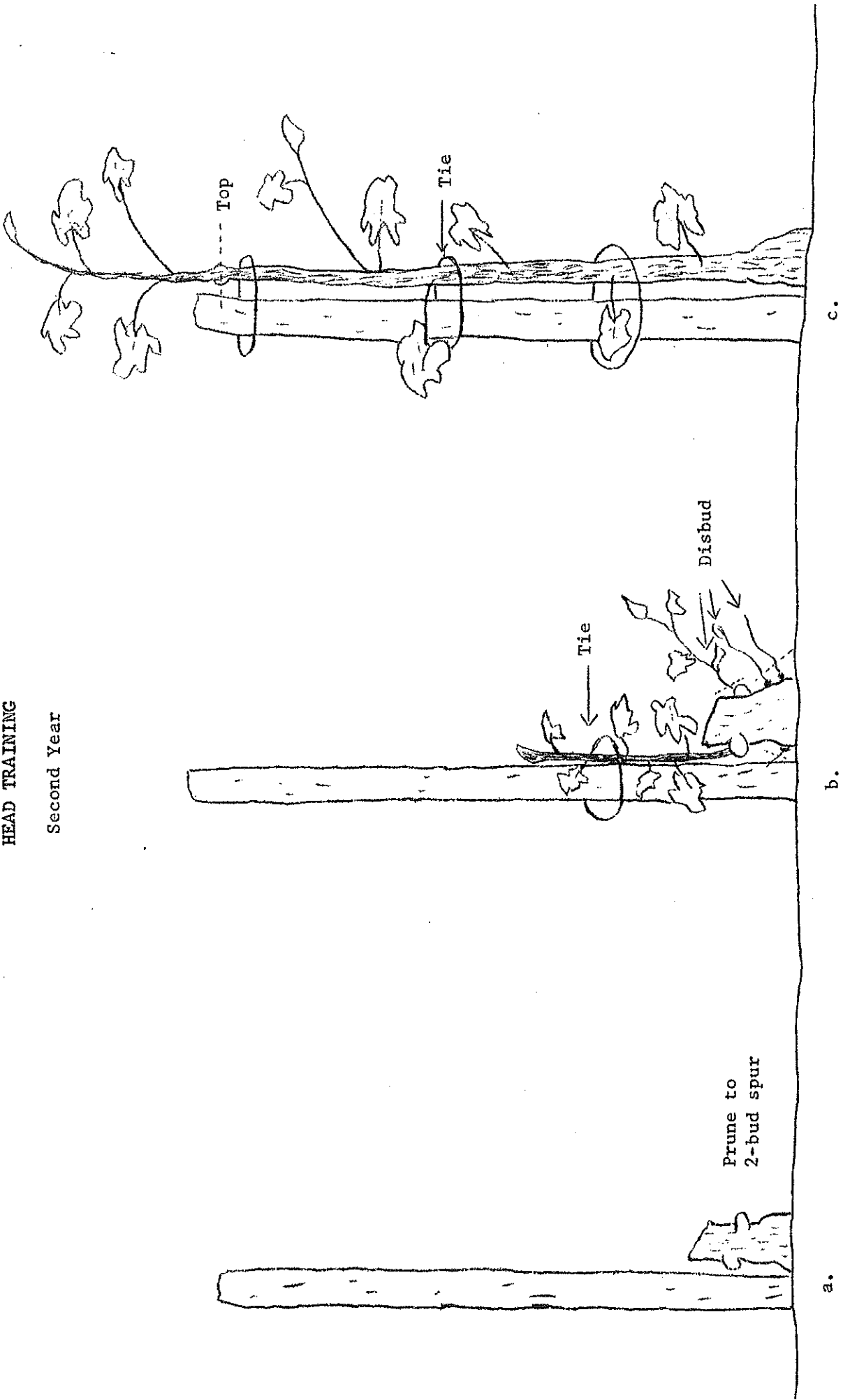


DIAGRAM I

HEAD TRAINING

Third Year

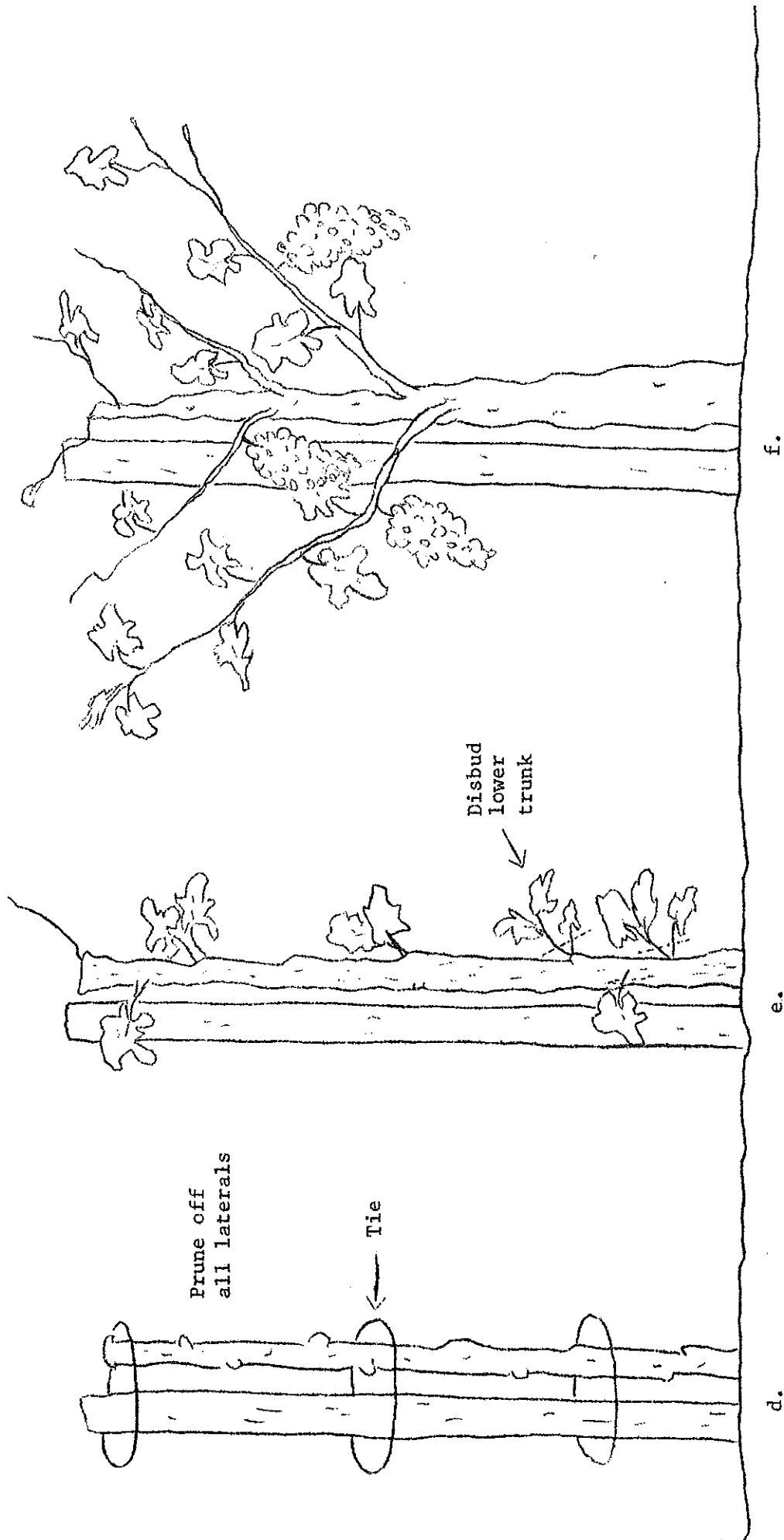
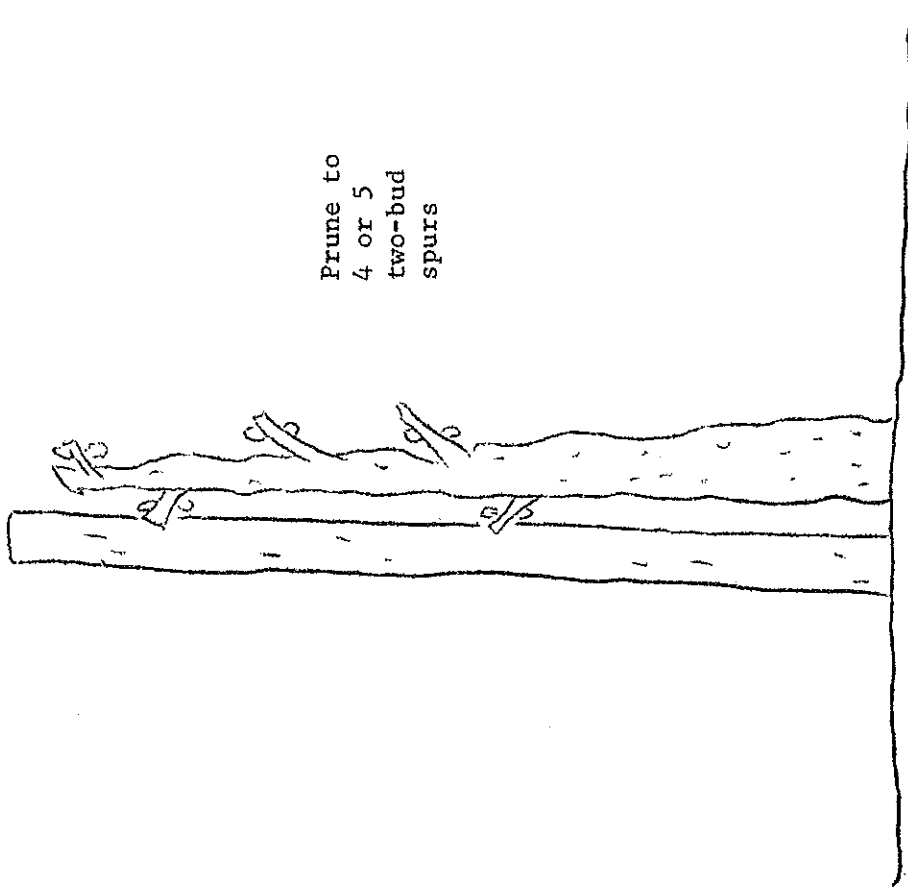


DIAGRAM II

HEAD TRAINING

Fourth Year



8.

DIAGRAM III

BILATERAL CORDON TRAINING

Second Year

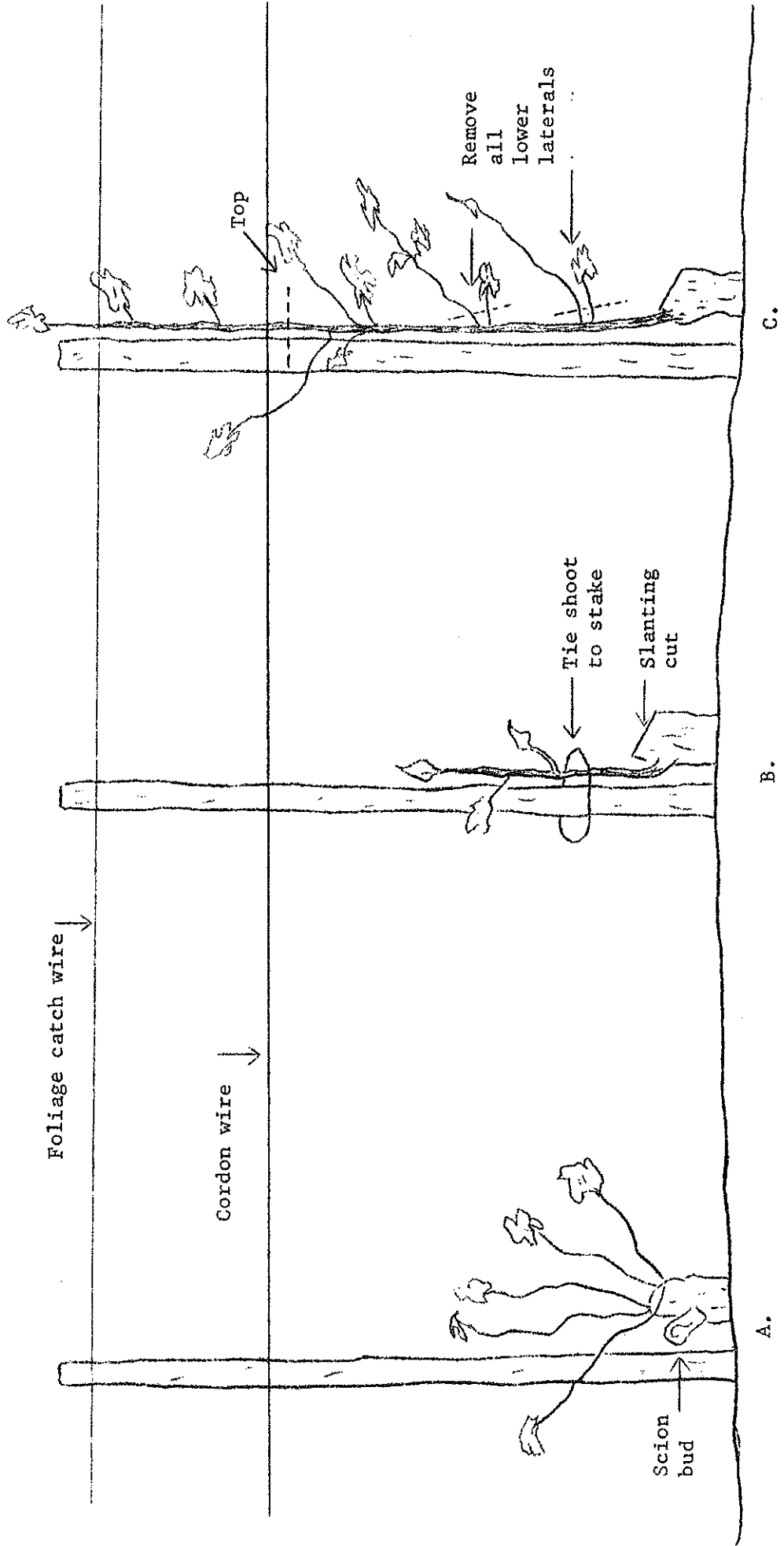
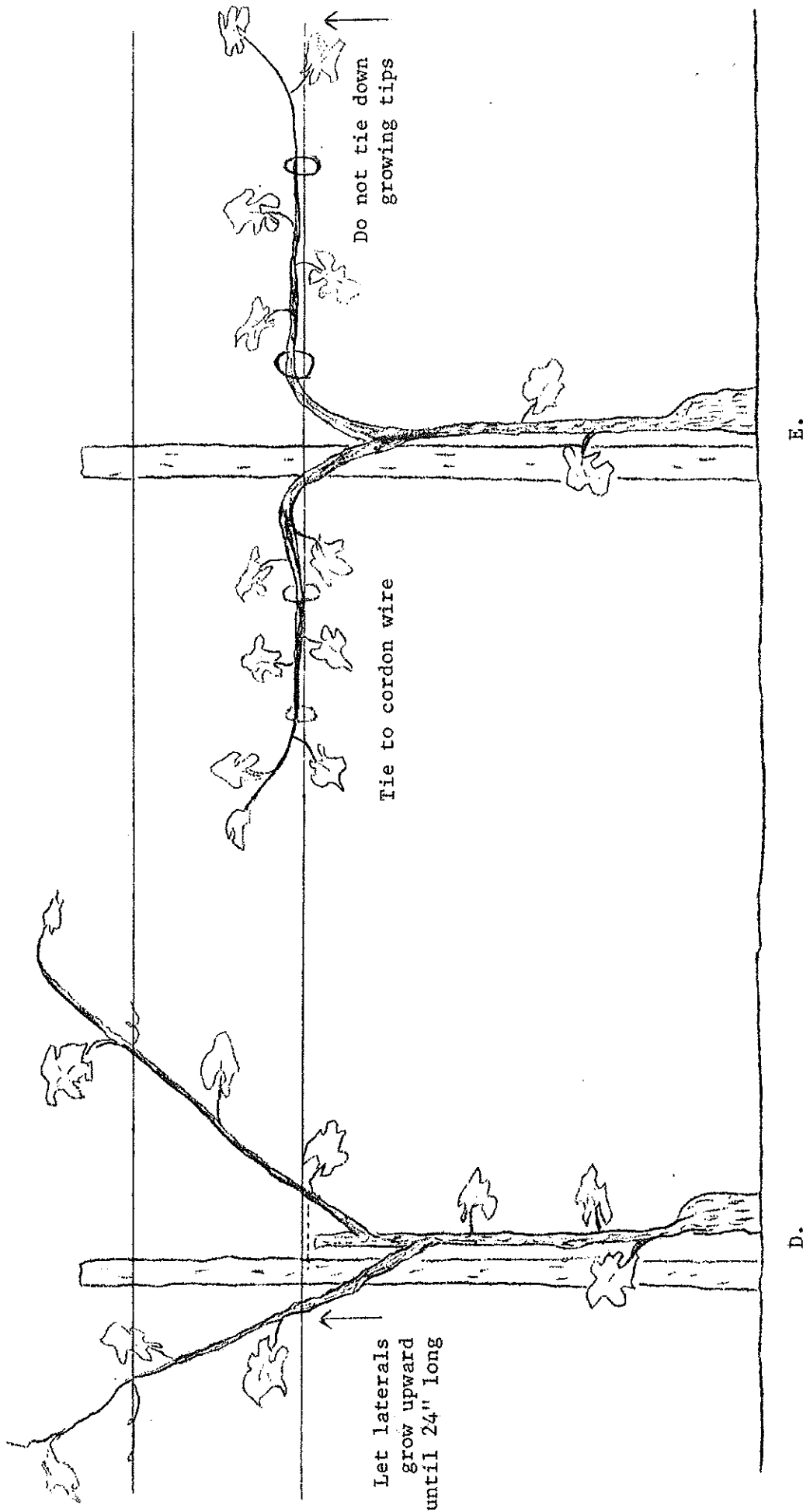


DIAGRAM IV

BILATERAL CORDON TRAINING

Second Year



Let laterals  
grow upward  
until 24" long

Tie to cordon wire

Do not tie down  
growing tips

D.

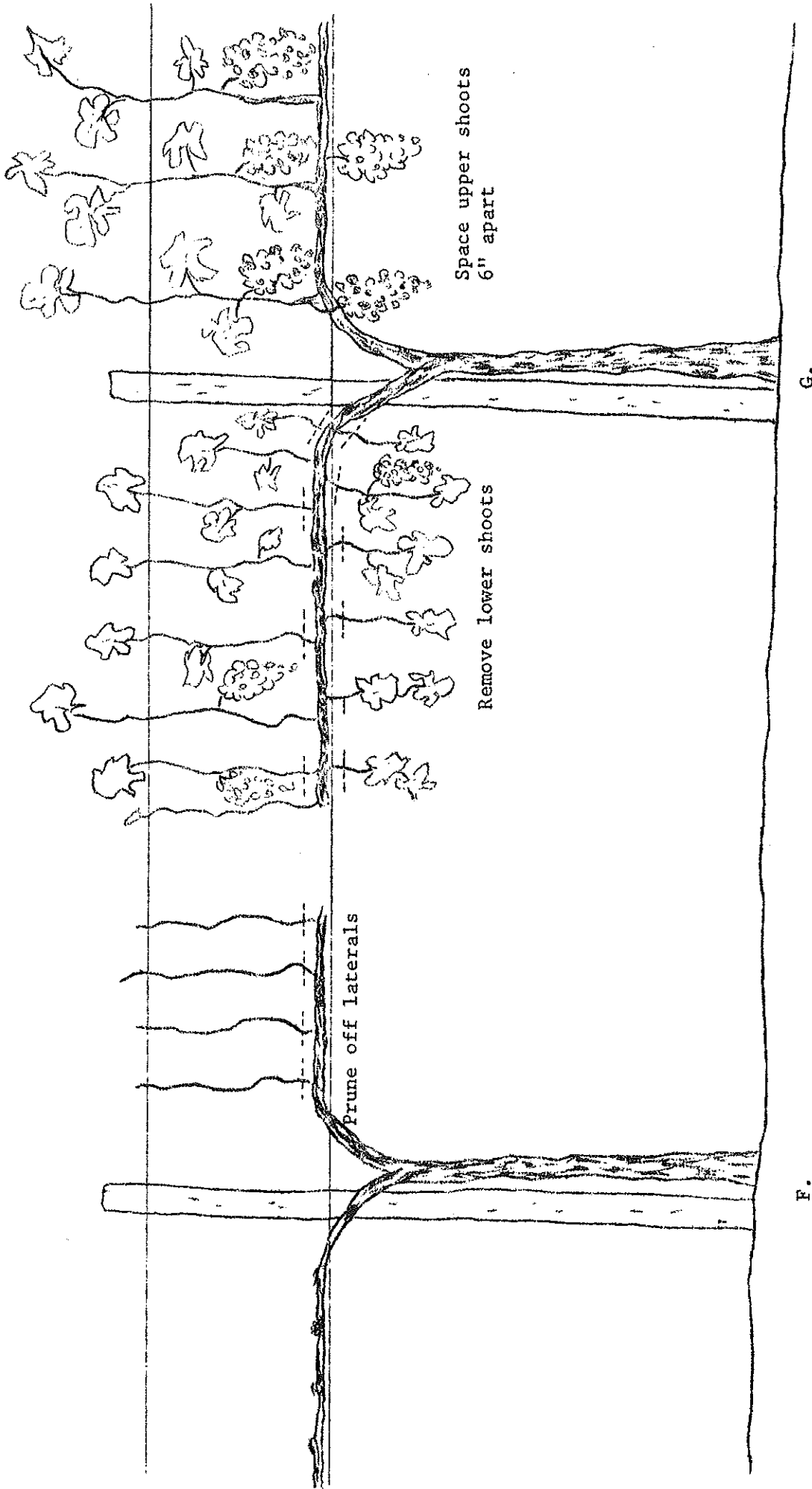
E.

DIAGRAM V



BILATERAL CORDON TRAINING

Third Year



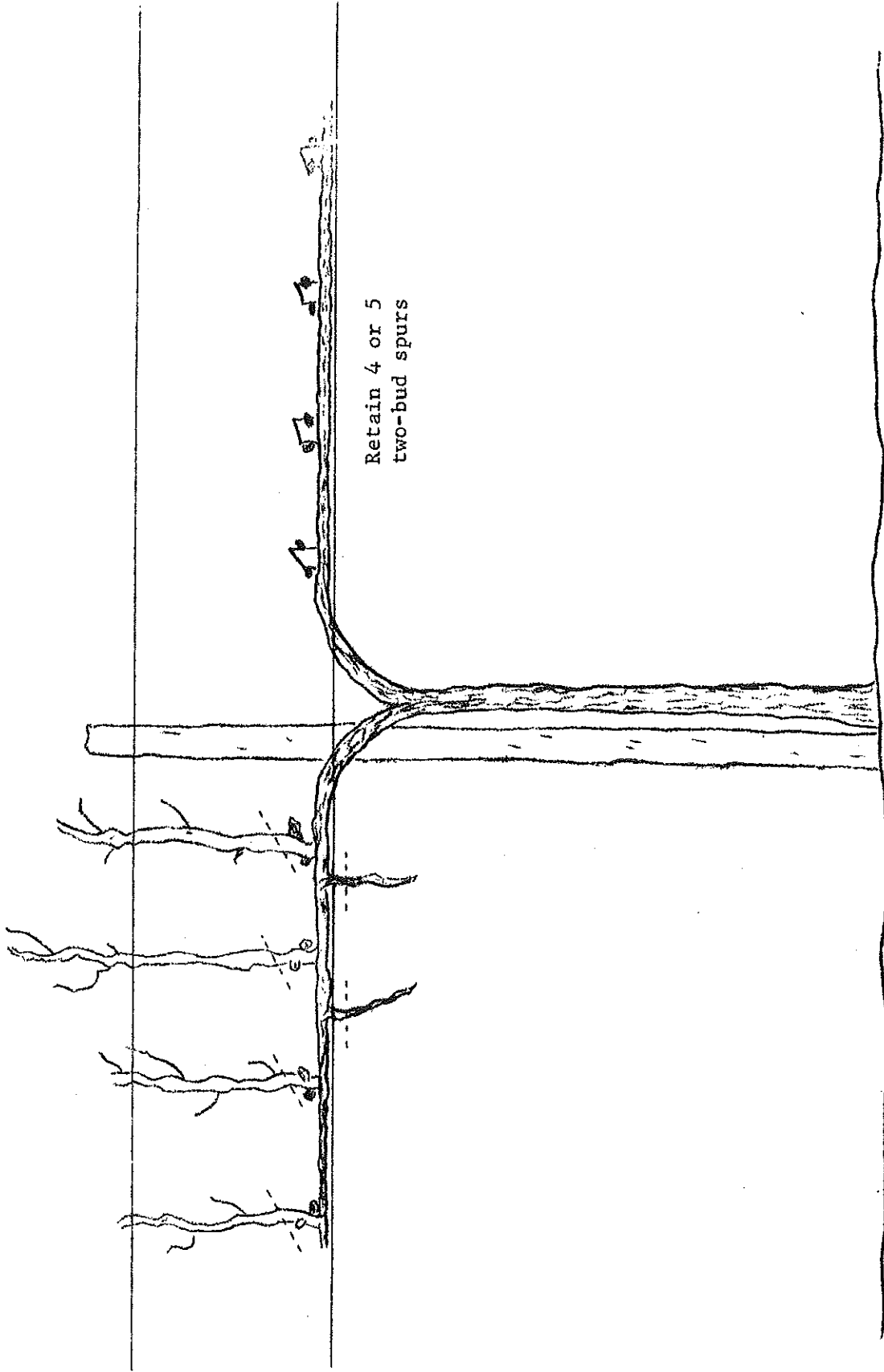
F.

G.

DIAGRAM VI

BILATERAL CORDON TRAINING

Fourth Year



H.

DIAGRAM VII