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KENTUCKY FRUIT NOTES

FRUIT GROWING GOES FORWARD

The past ten years have witnessed many changes in the fruit business; some successes and many failures, and on the whole a downward trend in production which is expected to continue for at least five years. The future looks brighter now than for some time and the situation is stimulating interest in new plantings. We have had several periods of overplanting that were followed by overproduction and low prices. Surely, this mistake should be avoided and careful analysis made as to what extent fruit plantings should be expanded.

In so far as Kentucky is concerned over planting has not occurred to such an extent as in some other states. Never-the-less, many plantings have been made that for one reason or another were doomed to failure from the start. Such plantings result in loss to the individual and discourage many who are favorably situated from entering the business. It must be recognized that many farms are not suited to commercial growing of certain fruits. On the other hand, a good fruit farm usually will return larger profits from fruit than from most other crops.

He is a gambler, indeed, who starts in the fruit business without consideration of the outcome. No doubt, faulty judgment as to how well a given farm is adapted to fruit growing is responsible for many failures. While everyone is interested in gaining all the latest information on the subject, the long recognized essentials still determine the possibility of success. In the order of probable importance these may be listed as follows: A favorable locality, a good site, a deep well drained soil, an able and experienced manager, productive varieties and modern cultural methods.

In the planting season just ahead much loss can be avoided by attention to these factors: Good equipment and a thorough knowledge of such details as spraying, fertilizing, pruning and marketing are essential, but they avail little, if the location, site and soil are unsuitable. In the past there have been many large to very large plantings. Most of these have failed because few men possess the ability and capital to provide adequate care. In Kentucky there is room for expansion but past experience indicates that it should be made on a moderate scale.

THE STATE FAIR FRUIT EXHIBIT—1938

As a result of splendid cooperation from fruit growers and the management of the fair, a very creditable fruit exhibit was arranged for the fair which was held September 12 to 17.

The quantity of fruit entered in the different classes was greater than expected due to the light fruit crop this year, however the quality of the fruit, according to the report of the Judge, excelled that of former years, and gave evidence of a great deal of work having been

done in selecting the exhibits from the generally small crop of apples.

Credit for the success of the exhibit goes to the growers who made it possible. We wish to thank each exhibitor, however large or small for his or her part in building up the exhibit. Besides helping out with the exhibit the growers competed for and shared $570.00 of premium money. Several growers received over $100.00 in premiums for their winnings.

There were 4 entries in the county exhibit consisting of 40 trays and 40 plates, and also 4 entries in the 20 tray and 20 plate class. The county awards were as follows: Trimble County first, Graves County second, Henderson County third, and Jefferson County fourth. One of the best exhibits ever entered at the Kentucky State Fair was the 20 tray and 20 plate group grown and arranged by Joe Bray and Sons, Bedford, Kentucky. Starking, Jonathon, Stayman, Golden Delicious, and Grimes Golden varieties were used. The judge failed to find a defect in the entry. The three tray and single tray apple entries as well as the plate entries were more numerous than last year, and offered some keen competition.

The peach display was not up to par, probably due to the peach season being two weeks early this year. Several growers had placed their Fair peaches in cold storage, but they came out in bad condition.

The usual fine display of grapes added to the exhibit as a whole, together with the miscellaneous collections of plums, nuts, papaws, and persimmons.

The fruit exhibit was opened up, so to speak, this year so that the fair visitors could inspect the fruit at close range. The exhibit space for the trays and plates of fruit were arranged so that each plate of fruit and nuts entered could be seen and inspected by those interested.

The Large Fruit Basket

The feature of the decoration of the fruit show was a large fruit basket that was 15 feet long, 8 feet wide and 3½ feet high. This huge basket was placed on a stage and covered with an assortment of red and yellow apples, pears, peaches, and grapes. It offered a very colorful and beautiful display of fruit and was the object of a great deal of favorable comment. A small fountain at either end of the large basket was arranged so that the stream of water shot up out of a pyramid of red and green apples. A red ping pong ball played up and down on each of these fountains and attracted a world of attention.

Educational Exhibit

An educational exhibit dealing with common fruit insect and disease injuries was an interesting part of the fruit department. This exhibit showed the disease injury caused by Apple Bitter Rot, Blotch, Scab, Fire Blight, Brown Rot of peaches, Black Rot of grapes, and the insect injury caused by Codling Moth, San Jose Scale and Rosy apple aphis. Many people studied this exhibit and the printed cards describing the injury and control of each disease and insect; and many requested the Kentucky Experiment Station spray schedule for the control of fruit pests.

THE STRAWBERRY MULCH PROBLEM

The need for mulch is recognized by all strawberry growers in the shipping area. The use of Federal-State shipping point inspection has brought home to many of these growers the fact that U. S. No. 1

berries can be grown only with the aid of mulch—yet too little mulch is used by many growers.

During the season of 1938 the grower who had applied a very light mulch ("just a skift of straw" as it is commonly expressed) suffered unusually heavy losses from two sources. These plantings were most seriously injured by the late spring frost and produced too high a percentage of sandy berries. Just a few sandy berries in a crate automatically dropped the grade to No. 2 or cull. The crate then sold for 50 cents to $1.50 less than the price of No. 1's. The extremely light mulch was insufficient to prevent splashing by the very heavy rains.

The loss from frost varied from very little to as much as 30 per cent in individual Aroma plantings. The depth of the mulch and the time of removal of the mulch from over the plants controlled the amount of damage — unmulched and lightly mulched patches blossomed earlier and suffered greater damage.

In a drought season, the heavier mulch maintains lower average soil temperatures, permitting greater root activity and conserves moisture better. Whether the harvest season is rainy or dry, the grower who uses an adequate mulch is the one who fares best—except in the case of the unfortunate one who applies mulch containing much unthreshed grain. Guard against this calamity by using old straw, growing rye, wheat, sudan grass or similar crop and cutting it in blossom stage, or handling the fresh straw several times before applying it. Some growers use the fresh straw in the poultry house or run, allowing the birds to scratch over it for a few days (only a few) before applying it. If baled straw is used—haul it to the patch in September, break the bales and allow the rains to sprout the grain before spreading the straw in November.

In most areas, straw can be obtained if the grower hunts for it. Start hunting now, for straw is always most plentiful at threshing time. Move the straw to your own farm now (if you don't produce your own mulch) so there will be no excuse for not applying it during the latter half of November. My sugestion still is provide enough for a covering of about three inches of loose straw.

—Indiana Horticulture.

FRUIT GROWER, IS YOUR SPRAY MACHINE IN GOOD ORDER?

Each fruit grower that operates extensively or commercially is aware of the importance of keeping his spraying equipment in good operating order. Some of us are prone to let this overhauling and tuning up of our engine and spray pump go until the day before we intend to start spraying or in a greater number of cases until the very morning the spray operations are intended to start. Many sad experiences have resulted from such a delay in preparations.

The slack time which many fruit growers will soon have due to their fruit being out of the way offers an opportunity to start checking over the spray machine and ordinarily would give plenty of time for needed parts to be ordered and installed and the engine, pump, and tank put in first-class order before cold weather sets in. The grower that does this during the comfortable weather of our fall season will no doubt be very thankful that he has done so when the spray season rolls around later. In regard to available time the general light crop in most Kentucky apple or-

chards should make more time available for the checking over mentioned above.

Costly Delay

Practically every grower has experienced some loss of time at one time or another in his spraying and dusting equipment failing to work properly. This same delay or loss of time is of course often experienced with other farm machinery and equipment; however, at present we are dealing only with orchard equipment.

Here is a case of a delay that might be due to several factors; nevertheless, it kept a spray machine out of operation for over a month. As it happened, this delay caused no particular loss to the grower. However, had it happened at a different time of year, it could have meant the difference between a clean crop of fruit and one that was badly damaged by insects and disease. This is a true experience and could happen to most any grower.

The Story

Upon starting to do some spraying, it was impossible to start the spray engine. After an hour or so of futile efforts the best local gas engine mechanic was called upon. After his efforts failed to start the engine his check-up revealed that the magneto was not furnishing enough fire; and the conclusion was that it would have to be sent back to the factory for overhauling, as he was not prepared to do so. Accordingly, the magneto was shipped to a near-by electric machine shop where it had been reconditioned once before and in a few days was returned along with the bill for its repair. It was then placed on the engine, and again it was impossible to get it started.

The motor was then taken to the shop where it was diagnosed by the mechanic as needing an exhaust valve, piston rings, and the carbon removed. These materials were ordered from a near-by representative who in turn relayed the order to the factory. When these materials arrived a few days later the engine was put in shape, and again it failed to start. Lack of sufficient spark from the magneto was given as the reason, and a new magneto was decided upon to be the cure for the present condition. This in turn was ordered from the supply house, specifying the serial number and the make of the magneto and the name of the spray machine.

After another delay of several days a magneto was received from the factory manufacturing the engine. This was taken to a mechanic, and he proclaimed it to be of a different type and one that it was impossible to use on the engine without an adapter.

This magneto was returned, and several long distance calls were made in straightening out the matter. A workable magneto attachment was finally secured, and after a five-week's delay the machine was again in operation.

If this case is diagnosed carefully, one might say it was the fault of the mechanic in an improper diagnosis. One might also say it was due to the neglect of spray machine companies to stock parts for engines with which they equip their spray machines. It could also be attributed to the great distance that parts have to be shipped and the delay that is often experienced in relaying orders. And then again some would dismiss it with just calling it hard luck. Regardless of where the blame would be placed, or whether there is any blame or not, the fact remains that it is the wise fruit grower who sees that his spraying and dusting equipment is in good repair well

ahead of the operating season. He should also familiarize himself with the nearest possible source of repair parts and in general be as well prepared as possible for any emergency.

TOO MANY WINESAP AND RED DELICIOUS

W. W. MAGILL
Field Agent in Horticulture

I am looking for the orchard man who is making money growing Winesap and Delicious varieties. To that list I will also add the Black Twig. In my opinion these three varieties are greatly overplanted in Kentucky. If I were planting an orchard of my own, I would want just one tree each of these three varieties. This statement would hold true whether the planting consisted of one acre or fifty acres.

What varieties would I plant? In my present frame of mind 90 per cent of the planting would consist of Polly Eades, Paducah, Golden Delicious, Red Jonathon, Red Stayman, Black Ben, and for the Covington District, Red Wealthy, and for Eastern Kentucky add Rome and York.

I should call attention to the fact that the Paducah variety must be cross-pollinated with a late blooming variety, either Rome or Fall Beauty are satisfactory.

The Yellow Transparent should have consideration for commercial planting in Southwestern Kentucky, especially in Graves, Hickman, Fulton, and Calloway Counties.

COMMERCIAL HAND POLLINATION OF APPLES IN THE STATE OF WASHINGTON

In recent years the set of fruit in many Washington orchards has been poor because of solid blocks of Winesap and Delicious apples without pollinizers. To overcome this difficulty a system of hand pollination has been devised and practiced with profit. Some large operators employ from 150 to 200 men to collect pollen which is put thru a curing process and then applied to the blossoms by hand.

Kentucky growers can avoid the trouble and expense of hand pollination by providing good varieties to furnish pollen and bees to apply it. (Note the article on bees elsewhere in this issue.) While our pollination problem is not as acute as that in Washington, there is little doubt that some orchards are not adequately pollinated. Some of the good pollen varieties include Delicious, Golden Delicious, Jonathan, Grimes, York and Ben Davis. The pollinizer question should be settled when the orchard is planted. To be sure of good pollination in years when the flight of bees is restricted by the weather at blossom time pollen trees should be nearby. Probably pollen trees every third or fourth row is about the minimum for safety. It should be noted that the Winesap family which includes Stayman, Mammoth black twig, Arkansas Black and probably Turley are more or less inter sterile and cannot be depended to pollinate each other. Mature orchards that do not have adequate pollinizers may be provided for by top grafting or the setting of pollen varieties nearby. Since this procedure takes several years it may be advisable to distribute pollen flowers in bouquets thru the orchard each year until the grafts or new trees are of flowering age.

BEEKEEPING IN KENTUCKY

By W. A. PRICE

A new circular of the University of Kentucky Extension Service, Lexington, Kentucky

The importance of the honeybee in the orchard has long been recognized. Many fruit growers depend

on the wild bees to pollinate their fruit blossoms. With the cutting down of a great part of our native timber and the destruction by high winds of a great many of our old, hollow trees the supply of wild bees is gradually being driven further away from orchards.

Many fruit growers have found it very profitable to have a colony of bees to each acre of fruit trees scattered over the orchard at blooming time. This sort of arrangement has paid big dividends in orchards where the varieties are not particularly good pollinators. The benefits are chiefly the larger crops of fruit; however, the honey makes a good side-line.

This circular, Beekeeping in Kentucky, goes into the fundamentals of beekeeping and carefully describes the various operations throughout the year. Some of the problems covered are: Honey Regions of the State, Beginners' Equipment, Seasonal Management, Wintering, Hints on Spring Management, Swarming, Honey Production, Feeding, Robbing, Requeening, Comb Building, Removing Colonies from Trees or Houses, Stings and Remedies, and Diseases and Enemies. In commenting on getting started in beekeeping the following statement is made: "A two-pound or three-pound package of bees received ten days before fruit bloom should produce nearly as much surplus honey as a normal overwintering colony."

This circular would be a valuable reference for anyone interested in bees and should prove to be of great value to those who obtain it. It can be had through the county agents or by writing to the University of Kentucky, Lexington, and requesting Circular No. 288, "Beekeeping in Kentucky."

SHALL WE EXPAND THE COMMERCIAL PEACH PLANTINGS OF SOUTHWESTERN KENTUCKY?

W. W. MAGILL
Field Agent in Horticulture

Fifteen years ago or about 1923 many of you will recall several hundred acres of peaches were planted in Southwestern Kentucky, the plantings varying in size from one acre up to as high as fifty acres. Very little was known from past experience at that time about the commercial handling of peaches in the purchase district. Quite a number of orchards were planted by individuals who probably had never seen more than one or two peach orchards. At that time, from the best of our knowledge, we recommended that the peach orchard must receive annual cultivation throughout the season even to the extent of twelve or more cultivations during the season. The improved strains of lespedeza were unheard of. There were no highway systems in that section such that trucks could load out at 3 o'clock in the afternoon and deliver good tree-ripened peaches to the terminal markets by 4 o'clock the next morning.

The cooperative packing and marketing association for peaches is no longer an experiment. Ten years of packing and selling proves it has a place in the Paducah District. Especially is it valuable to the small grower who has had no experience in packing and marketing peaches.

True enough, many of these beginning peach orchard men have pulled up their orchards and are now growing other crops. Yet if we will take inventory and consult the men who are now raising peaches for the market, we will find a group of men who feel that peaches are an outstanding cash

crop for the district. As evidence of this statement most of the men who weathered the storm of the first five years are gradually increasing their acreage.

I have talked to a number of the men now growing a commercial acreage of peaches, and as a whole they welcome an expansion in acreage and feel that the district should be shipping from 300 to 400 cars annually, and feel this volume could be sold equally as successfully as their present volume of approximately 100 carloads annually.

Varieties

We feel that the Elberta variety should still constitute 90 per cent or more of a new expansion in peach planting. At one of the district educational fruit meetings held last summer a number of commercial peach growers of adjoining states were present. The peach variety issue was discussed. One visiting grower with a large commercial acreage said the last fifty acres he planted had been straight Elbertas. My observation has been that there are no varieties at the present time which can replace Elbertas. Some of the newer varieties which offer some promise are the Golden Jubilee, Sun Glo, and Halehaven, and probably no grower would make a mistake in growing 10 per cent to 15 per cent of Belle of Georgia variety, for beyond a question of doubt they are more hardy and can be depended upon for occasional crop years when the Elberta fails. The Hale variety has practically passed out of the picture, at least in the minds of the grower who has handled a commercial acreage of peaches for the past ten years.

The Size of Amateur Orchards

Peach orchards of less than 500 trees are usually not an economical unit and only a small per cent of Kentucky farmers can economically handle as much as 50 acres. One thousand trees well managed may return a profit where 3,000 trees given only fair care may be a financial loss.

Late November and December planting is to be preferred over spring planting. Although spring planting will in most years prove satisfactory. Buy either one-year-old peach trees or June Buds. Never accept two- or three-year-old trees. Never buy fruit trees from a stranger, passing through your neighborhood. Consult some successful orchard man as to where to get trees, or go to the dealer where you would buy your field seed or spray material. Good peach trees should not cost to exceed 15c to 18c each in lots of a few hundred.

KENTUCKY AGRICULTURAL EXPERIMENT STATION
LEXINGTON, KENTUCKY

I AM receiving Kentucky Fruit Notes, and wish to have my name left on mailing list. .....

I AM NOT receiving Kentucky Fruit Notes, but wish to have my name put on mailing list. .....

This bulletin is to be free of charge.

I am particularly interested in: Berries.....

Apples....., Peaches....., Other Fruits.....

Name.....

Address..... County.....

RECENT SPRAY WORK WITH SAN JOSE SCALE

The September issue of Kentucky Fruit notes carried considerable discussion of scale and the damage being done by San Jose scale to fruit trees.

With the advent of fall weather it will soon be time to be thinking of the winter sprays on our fruit trees. Those growers who know they have scale present should exercise great care in seeing that their trees receive at least one very complete dormant spray. In the case of severe infestations two thorough spray applications are often necessary to bring the pest under control.

The usual winter strength oil spray for scale is of 2½ to 3 per cent actual oil content. This is usually combined with a weak Bordeaux as a combination spray which will also control Peach Leaf Curl.

If dormant strength liquid lime sulfur is used, it will usually control both the scale and the leaf curl and is used at the rate of 12½ gallons of lime sulfur to 87½ gallons of water to make 100 gallons of spray. The use of dry lime sulfur cannot be recommended for scale control.

Summer-Oil Spray Tests on Peaches

Early in August several test sprays were applied near Paducah on the Elberta variety both in sod and in clean culture.

Summer-oil sprays were used at strengths of 1½ and 2½ per cent actual oil. All of the trees sprayed were badly infested with scale with the active crawling type present.

Ten days after the spraying was done an examination showed a very small amount of tip and marginal burning but no defoliation even where the strongest oil was used. A number of crawlers were also in evidence, but not as many were noticed on the sprayed trees as on unsprayed trees. The injury was not severe and not consistent. The same type of injury was found on nearby unsprayed trees; so we could not lay it all to the oil.

The fact that young crawler scale was found on the sprayed trees showed that the old mother scales had not been killed and that they were still multiplying. The question is whether or not enough of the young scale was killed to make the spray worth while.

This whole orchard was sprayed about two weeks after the first test spraying was done, using 2½ per cent strength summer-oil. An examination on September 3 showed the foliage to be in good condition and the trees in general seemed to have been injured less by the scale since spraying than they had during the three weeks previous to the spraying.

The grower was satisfied with his foliage condition and was of the opinion that considerable of the scale had been killed.

Additional check-ups will be made to study any injuries that might show up later. If the spraying has checked the scale enough to allow the trees to go into the winter season with more strength than would otherwise be the case, it has been worth while.

So far that is about all that can be expected from summer-oil on San Jose Scale. This practice followed by a good dormant spray program should materially aid in checking the losses from this insect.