

Benefit to Be Derived by Growth of Plants Between Trees.

If Fertility of Soils is Kept Up Loss of Plant Food Must Be Replaced by Stable Manure or by Vegetable Growth.

The subject of cover crops in both the young and the old orchards is receiving more attention than ever before. There is no question but that nearly all orchards, particularly in the arid districts, might be benefited by the growth of certain plants between the trees, writes E. R. Bennett in Desert Farmer. In order to understand the necessity for cover crops, and the way they benefit the land, it is necessary to understand how plants grow.

The growth of plants that comes from the soil does not come from the soil particles themselves, but from the soluble plant food that is mixed with the soil. In speaking of soil in this connection we mean the particles of rock of which the soil is composed. A large part of this plant food that is mixed with the soil is the result of decayed vegetable matter. Our soils are naturally deficient in this vegetable matter, and by constant cultivation what little fiber was in the soil is being broken down and turned into plant food, or oxidized, or, as we say, burned out.

If we are to keep up the fertility of our soils, we must either replace this loss by adding stable manure to the soil or by plowing in some vegetable matter. This would seem comparatively easy, for nearly any one can grow a grain crop, or some of the hay crops in the orchard in the spring and plow them in the fall.

We cannot recommend this system, however, for we must remember that tree growth takes place between early spring and the middle of July, or at least tree growth should cease in July. For this reason the trees should be allowed to take up all the plant food that is made available during the growing season.

There is considerable tendency in the irrigated districts for trees to make growth later than this, and as a result go into winter with immature or soft tissue. This is largely because our conditions are, to a great extent, unnatural. In the natural state the trees become more or less affected by drought during July and August so that in the east the growth of trees naturally stops at the right time. Where water and cultivation are both given during the entire season this condition is reserved. Consequently, our cover crops should be growing during the late summer and early fall months.

Many people have said that this could not be done. Yet, the writer has seen some of the finest cover crops the last few days that were sown in July of last year.

We believe that, where water is available, a cover crop may be sown during July, and made to grow during the fall months, so as to protect the soil from the hot sun of late summer and the drying winds of winter, and then be plowed early in the spring so as to be a great advantage to the orchard. In fact, we believe this system, if followed, would soon increase our orchard growth and decrease the tendency toward winter killing of trees.

Few experiments have been made in the irrigated districts, so that we are not sure as to which will prove the better plant for this purpose, but we believe that the red, or June clover is going to be as satisfactory as anything that has so far been used. Where this is to be used, the ground should be disked, the seed sown at the rate of from eight to twelve pounds an acre, then the ground should be lightly harrowed and irrigated.

In some cases it may be desirable to sow oats and rye with the clover to stop the growth of the trees during the fall months. The clover crop may be left in old orchards for a year or two with profit, but for the young orchard we think this would be detrimental as the trees, as we have said before, need clean culture during the early part of the season.

Excess Water and Alkali.

Fully ten per cent. of the irrigated lands of this country has been ruined by excess water and alkali. The waterlogging of land has appeared here and there all along the bottoms and even on the mesas. Some farmers seem to have been trying to see how much water they could possibly put on a given area of land, instead of ascertaining the amount that would give the best results. Certain lands must either be abandoned or expensive artificial drainage systems installed. While irrigation is something over which the irrigator has control he is not directly responsible for causes outside of his farm, such as seepage from higher lands and from canals.

Variegated Bug.

In some parts of the west this season a bug with variegated wings, slightly smaller than the potato bug, has destroyed these pests in large numbers, so that in many cases these bugs have been sent to the experiment stations for investigation.

Care Means Profit.

Profit in the orchard largely depends upon the perfection of the fruits raised and the quantity. And the trees cannot produce their full capacity unless well cared for.

On Land That is to Be Irrigated Ground Should Be Carefully Smoothed.

Inasmuch as a large acreage of fruit trees will be planted next spring a few suggestions in regard to preparing land for orchard planting may be of value to the prospective planters, writes R. W. Fisher in Field and Farm. Much of the semi-arid land in the West has a small amount of humus in it and for that reason it is not the best plan to set out trees on newly broken sod. By plowing the land from 8 to 10 inches deep one or two years in advance of planting time and growing some crop in the meantime, it will be put in much better condition for tree growth than if the trees are set out immediately after plowing.

On land that is to be irrigated the ground should be carefully leveled and smoothed before any crops are planted. This leveling is very essential to good results in irrigating. On most of the soil in this country a leveler ten or twelve feet wide and from sixteen to eighteen feet long with three cross pieces of three by six inch material will give good service. This leveler can be so made that it will cut the dirt from the high spots and deposit it in the low places, and by going over the ground two or three times the surface can be put in good condition for irrigation. Leveling should be done immediately after plowing when the soil can be harrowed and planted to some grade crop.

A good crop to be grown on the land that is to be planted to orchards is oats and red clover. The oats and clover seed are sown in the spring; the oats harvested in the fall when there will be a growth of six or eight inches of clover. This will afford pasture during the winter months and the following year one crop of clover hay can be cut and the second crop plowed under. This clover and oat crop should provide humus that is very necessary for tree growth. On many of our soils an orchard planted on land prepared a year or two in advance of tree planting will make as large a growth in eight or ten years as trees that were planted one or two years previous on land that had not received the preliminary preparation.

The depth of plowing orchard soils depends somewhat upon the character of the soil and the subsoil. In very loose soil underlain with light subsoil it is not necessary to plow so deeply as on soil underlain with heavy clay. Light soils may be plowed as shallow as six inches and still give good results. Heavy soils should be plowed from eight to twelve inches deep and in some cases subsoiled to a depth of eighteen or twenty inches. If the soil is dry at planting time the trees should be irrigated immediately after they are set out. This irrigation should be done by making a small furrow near the tree row and turning the water from the furrow into the tree hole.

Tree Peculiarities.

Did you ever take notice that the sassafras tree has a leaf like a mitten? That the seeds of the white elm look like earrings? That the bark of the buttonball peels off once a year? That the sweet gum tree has a leaf like a starfish? That the swamp maple has blossoms like bunches of grapes? That the honey locust has most tiny leaves, but a very long thorn? That the Linden tree has a broad leaf and a narrow leaf, and that the seed grows out of the midrib of the narrow leaf?

Keep Garden Clean.

Keep the garden clean. Remove all rotting or overripe vegetables and gather up the withered plants and other trash so that no harbor may be left for insects.

LIVE STOCK NOTES.

If the sow is given filthy feed the effect is quickly seen in the pigs. In feeding bran scald it well with milk or water and feed the same day. Rape makes a great green feed. Better try it if you are short of pasture.

The sow that nurses a large litter of hungry pigs needs plenty of nourishing feed.

A small, clean runway just outside the farrowing pen is a valuable asset in pig raising.

The price of one good ewe will sell a good-sized flock of sheep. Buy the bells and sell the sheep.

An understanding of how to breed and feed for profit is of great importance in raising hogs.

Don't make the mistake of leaving the colts out on the pasture after the grass has been frosted.

A warm barn wash given occasionally will keep the bowels of the horse from becoming constipated.

Furnish plenty of proper rations and start the sheep through the winter in good shape, for it will pay.

The hog that has to divide his time between making pork and fighting lice usually slights the former.

Fresh cows will enter the winter season with more vigor than those which dropped calves last spring.

The breeding ewes should be separated from the rest of the flock at breeding time and gotten in good condition by some extra feeding and care.

Good farmers today are turning their lambs into the cornfields, where they will eat weeds and still not disturb the ear, only eating the lower leaves of the stalk.

In feeding soft corn one must take into consideration that it contains a greater amount of water than ripe corn, so that the amount of dry matter fed may be the same in both cases.

Odd News From Big Cities
Stories of Strange Happenings in the Metropolitan Towns

The Pursuit of the Tricky Smuggler



NEW YORK.—What is the psychology of the smuggler? Is he actuated by greed? Does he love the game for its excitement? Does he look upon the government as so impersonal a thing that to steal from it is not a sin? Is the rich man instinctively a greater smuggler than the poor man, and is the American a greater sinner than his alien brother? These questions surely must have occurred to everyone who has been watching the extraordinary recent happenings at the New York custom house; who has made note of the millionaires and their wives who have been caught red-handed in attempts to cheat the government in the most brazen fashion; who has read of the tremendous frauds upon the customs perpetrated by the sugar trust and other great importers.

steadily developed through many, many years, until the sophisticated traveler knew perfectly that a ten or twenty dollar bill, laid on the top-tray of a trunk, would, when that trunk was opened on the dock, insure immunity from actual search, and that the money would be missing, later when the trunk was opened at hotel or home. A ten or twenty dollar bill so placed, in these days, would be like a spark to set a whole train of official powder burning—a train of powder which would lead to an explosion beyond doubt. It might blow the culprit into jail; it certainly would blow a heavy fine out of his pocket.

Dozens of explosions have occurred of late and it is, in a way, refreshing to run through the list of victims—although, of course, this also has its melancholy aspect. The rich smuggler gets no more mercy than the poor one—and the smuggler offender is rich than poor.

Plundering a City's Philanthropists



PITTSBURG, PA.—"So-called 'Philanthropy' has become one of the leading crimes of Pittsburgh—a crime to which we have found it necessary to apply heroic treatment."

Peter Hry Shevlin, a Pittsburgh detective, who has been given the task of running down "Philanthropic crooks" in Pittsburgh, made this remark:

"The good people of Pittsburgh are virtually sandbagged each year out of more than enough to keep our poor in luxury," he continued, "and yet of each dollar given through the honest philanthropic promoter only about forty per cent of it reaches the point for which it was intended. As for the dishonest promoter who is now infesting Pittsburgh—well, he gets it all, and in most cases comes back with an expense account to collect—and collects it."

It has been proved that a man with a good suit of clothes and a good address can, by gaining an audience with some of the social leaders in Pittsburgh and getting a name or so signed to a paper, start out and collect from \$1,000 to \$10,000 with little trouble. The amount of money he gets depends largely on the nature of the scheme.

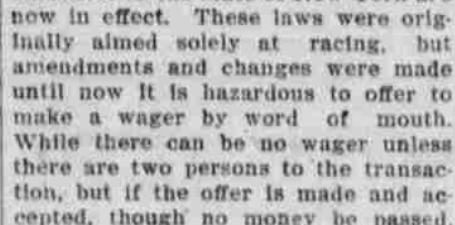
The first of the alleged high-class philanthropic crooks to be taken in by the Pittsburgh police through Shevlin's work is one named Silverman, who, it is alleged by the police, has already cleaned up \$25,000 through the laxness of method in giving, by the rich of Pittsburgh. Silverman has been in the toils in Pittsburgh at least twenty times, but each time, until the present, he has been helped out by very rich relatives of his wife. Now the postal authorities have him.

Detective Shevlin went to arrest him some days since. The detective grabbed Silverman, put his stenographers out of the offices, locked the rooms, and proceeded with the indignant Silverman to the police station, where he registered as a "philanthropic promoter."

Shevlin then rushed back to open up the rooms and get what data he could from the books. In his absence the mail carrier had come to the office of Silverman, and not being able to gain entrance, had shoved under the doors letters containing checks to the amount of more than \$1,000. And this from but one trip of the mailman!

The police claim Silverman is but one of the gang that has been in the habit of collecting an aggregate of \$1,000,000 per year out of rich people in Pittsburgh on the "charity game," then not turning over anything, or at least a small percentage, to charity.

All Betting Now Illegal in New York



ALBANY, N. Y.—All of the several laws prohibiting betting of every character in the state of New York are now in effect. These laws were originally aimed solely at racing, but amendments and changes were made until now it is hazardous to offer to make a wager by word of mouth. While there can be no wager unless there are two persons to the transaction, but if the offer is made and accepted, though no money be passed, the law is violated.

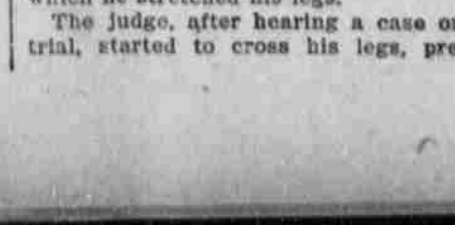
Directors and managers of race tracks are made liable for any violations that may occur within their grounds. Just as long as the blame was not fixed on them directly they were willing to race, and those desiring to bet on the races could find ways of their own to evade the law.

The fixing of the liability on the race track directors themselves put things in an entirely different light.

The laws apparently leave no loop hole and several of the poolrooms and handbook men, who have done a thriving business in New York, have put up the shutters and others have intimated that they will make no further fight for a play when it may mean arrest and a jail term. If any plan has been devised to evade the law it is not generally known. Of course there are many who will continue to bet as they have before, but the handbook men are looking for new customers. There is fear and trembling all along the line.

Though horse racing is a favorite medium for bettors, there is another sport that will feel the effects of the new law. It is boxing. At all of the club affairs there has been plenty of bets made on the result, and it has been the custom to make them openly. Now it will have to be done under cover, and then in violation of the law. "Orally or otherwise," as the law reads, puts up the bars just about as tightly as could be imagined.

Bent Pin Upsets Dignity of the Court



Incidentally launching his judicial dictum, when an explosive "Ouch!" from the judicial lips startled the crowded courtroom and stopped the proceedings.

The judge quickly uncrossed his legs and tenderly rubbed the right one, while a pained and indignant expression possessed his features. He stooped underneath the desk and arose a moment later with a bent pin in his hands, which he held up for inspection.

ST. LOUIS.—Judge William Jefferson Pollard of the Dayton street police court is sore as a result of the action of an undiscovered enemy who wounded his dignity and nether limbs by inserting a bent pin into his anatomy while he was sitting on the bench.

The bent pin was fastened in a board underneath the desk under which he stretched his legs.

The judge, after hearing a case on trial, started to cross his legs, pre-

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MAN WHO HELPS HIS BROTHER

His "Boys" Call Him the "General Adviser Without Pay"—He is Partial to None.

When a man loves to live he usually can go among men who care little whether they live or not and do good. Such a man is Augustus E. Vaughan, immaculate in dress and of heart venerable in years and usefulness, whom one may see almost any day either on Boston Common or at the Young Men's Christian Union.

His specialty is helping his fallen and discouraged brother, whether he be a cigarette smoking boy or a rum-soaked and disheartened derelict of a man. His creed is cheerfulness and his passion is books.

Often one may see him, tall and straight, faultlessly attired in a frock coat, with his flowing white beard and his long and carefully trimmed white locks, standing with or sitting beside some ragged and unkempt victim of circumstances who has sought the only place where the police will not tell him to move on, the Common, and then one is sure to be struck by the contrast. Many a man he has met there has later become as clean of body and heart as himself, and all through his infectious good nature and brotherly comradeship.

Among the younger men with whom this old young man of 75 unceasingly labors he is known as "the general adviser without pay," and he is as interested in their ambitions as they can be, and so youthful is he in their presence that he is always one of them.

Mr. Vaughan is not engaged in active business this summer, but he comes to Boston every day, rain or shine, to talk with his "boys," as he calls them. Some of these have never before known a real friend. He is highly educated, and counts among his friends many college presidents and professors.

He was born in Middleboro, nearly seventy-five years ago, and traces his lineage back to Peregrine White of Mayflower fame.

"I love to live," says he to me, "and I want to help 'the boys' to enjoy living, too."

His Means.
"You are charged with vagrancy, prisoner at the bar."
"What's that, judge?"
"Vagrancy? Why, you have no visible means of support."
"Huh! Heah's mah wife, judge; Mary, is you visible?"

Asking Too Much.
"The count has promised that he will never beat or kick me if I will marry him," said the beautiful heiress.
"But has he promised to work for you?" her father asked.
"Oh, papa, don't be unreasonable."

To Oblige Him.
Mr. Dorkins—You're always bound to have the last word, anyway.
Mrs. Dorkins—Yes; that's because you always wait to hear me say it.

EAGER TO WORK.
Health Regained by Right Food.

The average healthy man or woman is usually eager to be busy at some useful task or employment.

But let dyspepsia or indigestion get hold of one, and all endeavor becomes a burden.

"A year ago, after recovering from an operation," writes a Michigan lady, "my stomach and nerves began to give me much trouble.

"At times my appetite was voracious, but when indulged, indigestion followed. Other times I had no appetite whatever. The food I took did not nourish me and I grew weaker than ever.

"I lost interest in everything and wanted to be alone. I had always had good nerves, but now the merest trifle would upset me and bring on a violent headache. Walking across the room was an effort and prescribed exercise was out of the question.

"I had seen Grape-Nuts advertised, but did not believe what I read at the time. At last when it seemed as if I was literally starving, I began to eat Grape-Nuts.

"I had not been able to work for a year, but now after two months on Grape-Nuts I am eager to be at work again. My stomach gives me no trouble now, my nerves are steady as ever, and interest in life and ambition have come back with the return to health."

Read "The Road to Wellville," in pgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.