

Farm and Garden

WHAT'S INSIDE AN APPLE?

Structure of Fruit is More Complex Than is Generally Supposed.

The inside of an apple is to most people merely a delicious whitish pulp and a few brown seeds in a more or less edible core wrapped up in a pretty colored skin. The real structure of the apple is by no means so simple. A scientific examination shows it to be far more complex. The accompanying photograph shows a cross section of a Baldwin apple. It has been treated first with alcohol and then with cedar oil to make the structure of the different parts show up better in the photograph.

The outer part, marked A, which is the part generally considered the fruit, the part that is eaten, is really corresponding to the outer wood of a tree or the stem of a plant, while the real fruit is the part marked D, known scientifically as the carpel, the dark triangular marks in the middle of the photograph.

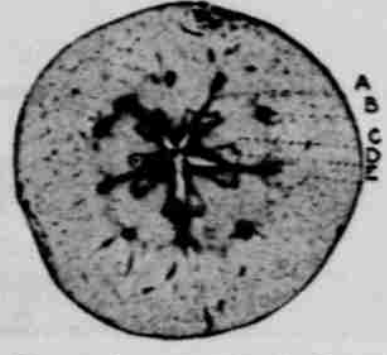


Photo by Oregon Agricultural College
CROSS SECTION OF AN APPLE

The dark spots, marked B, are the main arteries, of which there are ten, that carry the food through the network of veins seen in the outer section. This system of arteries and veins is entirely separate from that which feeds the fruit in the middle. The five sections marked C might be likened to five plums set down close together with a stem grown up around them (the fleshy part of the apple). These the horticultural scientist now calls "drupes." The outer part, with the pretty skin, is furnished by wise Dame Nature to make the apple attractive so it will be carried about and the seeds distributed.

The picture is taken from a bulletin on "Gross Morphology of the Apple," by E. J. Kraus, the first of a series on "The Pollination of the Pomaceous Fruits" to be issued from the research laboratories of the Oregon Agricultural college experiment station. Mr. Kraus treats the subject in a thoroughly scientific manner, going into careful detail as to the structure of the different parts of the apple and their relation with a view to establishing his contention that pollination, for instance, of a yellow apple with pollen from a red apple affects the inner fruit rather than the exterior.

PLANT BREEDING ON FARM.

The cry is becoming more general for better seeds. How are we to get them? As the situation is, says a correspondent of the American Agriculturist, I believe the answer to the question is to breed them ourselves. We often see in horticultural and agricultural periodicals articles that have a tendency to throw a wet blanket over this proposition, claiming that seed breeding is a business of its own, requiring special training to do it properly. This may be true, viewed from a scientific standpoint, and yet there are few market gardeners or truck farmers who cannot breed and grow what seeds they require for their individual plantings.

Root Crops For Dairy Cow.

No matter what some people tell you, turnips and other roots make fine milk producing feed. Turnips will not affect the flavor of milk if fed at the right time. If turnips are fed in large quantities, and two or three hours before milking, they are likely to give the milk an unpleasant taste, but if fed directly after milking no flavor whatever will be noticed.—Farm Progress.

ALL SORTS OF ANIMALS.

Great care should be used in watering the horses. A little and often is the best way.

Moldy or filthy grain is one of the worst things that can be given the lives, as it is productive of numerous active ailments.

Cows that are on pasture should have free access to salt. The dairy feeds this all the year around, but only just at this season.

Frequently hear the question "What is the best size of flock for an average farm?" Generally from forty to sixty ewes is the best size of flock for a quarter farm.

are not situated so that you can dig out draw a load of and throw it into the pens now. The hogs will work it over a lot of comfort doing it. nem grow faster too.

CITY BONDS SOLD TO WAGE EARNERS

Experiments at St. Paul, Minn., and Baltimore Successful.

CIVIC INTEREST AROUSED.

Personal Hearings Invested in Municipal Stock—The Cities Aided in Troublesome Times and Securities Widely and Wisely Distributed.

The idea of buying at home has been carried one step further by at least two American cities which have recently sold their goods at home. These goods consisted of municipal bonds, usually disposed of in some foreign market and money center. While cities are selling their bonds in distant centers and sending the interest away annually, there remains at home thousands and thousands of dollars hoarded up by local people who are willing and anxious to invest in the bonds if given the opportunity. This has been demonstrated in St. Paul and Baltimore.

Back of the experiments in St. Paul lies an interesting bit of history. That city some time ago discovered that it could secure better work or street improvement by day labor than by contract, and its charter was so amended so as to admit the desired change. The amended charter still provided that improvement bonds should be sold after bids had been received and contracts let, but before work had begun. It did not cover the conditions for day labor on the bond side apparently. Therefore when \$300,000 worth of 6 per cent paving bonds were issued there arose a question as to their legality, and brokers were rather shy of them.

A bank inquired into the matter, obtained expert advice and found that the bonds were legally all right. It therefore purchased freely and, to see what could be done in the way of interesting the small investors, put before one of the leading department stores of the city a plan to dispose of the bonds over its counter. The store's heads fell into the plan at once, took the bonds, announced a sale on a certain day, the bonds to be sold at the price paid for them and guaranteed so that no investor need have any fear about getting his money back at any time. A limit of \$1,000 to each purchaser was fixed. In all \$300,000 worth of bonds were disposed of in five hours. The purchasers were for the most part women, and the average purchase was about \$250. The money came from local savings banks, from the postal savings banks and from personal holdings.

Shortly after this another issue of \$250,000 worth of bonds for a municipal playground was offered. A bank took the entire issue and announced to the public that it would sell, with these bonds as security, trust certificates in denominations of \$10, no purchaser to receive above \$100 worth. The sale of these certificates was quite as successful as that at the department store.

In the city of Baltimore the finance commissioners opened bids for an issue of \$5,500,000 of 4 per cent city stock which had been duly advertised for sale. The bids received totaled only \$550,000. By rejecting bids below 90 and accrued interest the commissioners were enabled to award but \$427,000. The sale was a distinct failure. Within ten days, however, the whole issue had been disposed of at 90 and interest. A direct appeal to the people and a sale over the counter to small investors, proposed and carried into effect by a Baltimore newspaper, accomplished this end.

During those ten days the money market was in the worst condition it has been in since 1907. With that in mind the paper anticipated the failure of the city to dispose of the full issue and had announced that it would place a small block of the bonds stock on sale in denominations of \$100 and multiples of that amount. For this purpose it secured \$10,000 worth and placed it on sale. In two hours it was gone, and more was sent for. The first day's sale amounted to \$43,500. On the second day \$73,000 was disposed of and on the third \$121,400. Orders were pouring in by every train. A week after the sale was announced the city made it known that it had all the money it needed and would withdraw the unsold portion of the stock and hold it for a better market. But it allowed two days of grace to intending purchasers, and in that time the whole issue was disposed of.

Customers included farmers and preachers, teachers and mechanics and men and women in every grade of life. One mechanic brought \$5,000 in bills, which he had been keeping for years in his house. A priest bought five shares of stock "to provide for his funeral." A woman came hatless and in gingham apron having to leave her home in that way to avoid suspicion on the part of her son, who wanted to take away from her the money she proposed to invest. Many fathers invested in the stock for their children.

The object, apart from helping out the city in a troublesome time and getting hoarded money into circulation, was to distribute the city's securities as widely as possible in the hope that possession of the stock would arouse in the owners a civic interest and make for efficiency and economy in the municipal administration.

Court Proceedings

Continued from Page 3

and after January 1st, 1914, R S Hattan, the duly elected qualified and acting treasurer of Columbia county, Oregon, did by operation of law, become the tax collector for said county and state, it is therefore hereby ordered by the court that that certain bond of the United States Fidelity and Guaranty Company on behalf of A E Thompson as tax collector, bearing date of March 4th A D 1913, and being numbered 49045, in the sum of \$10,000.00, be and the same is hereby cancelled, and declared to be of no effect from and after said January 1st, 1914.

Matter of petition of Carl Hesse for payment for burned clothing.

On this day Carl Hesse represents to the court that while employed as a cook for Columbia Highway Engineer, certain clothing and personal property of the approximate value of the sum of \$55.00 were destroyed by fire, and petitions the court for reimbursement in such sum, and the court being advised in the matter, it is ordered by the court that said petition be, and the same is hereby denied.

Matter of petition of John P Loberg et al for a county road.

On this day this matter coming on to be heard upon the second reading of the report of the board of county road viewers, which said report was publicly read on two different days of this term of court, said report assessing damages in the sum of \$25.00 in favor of Nels P Olson, and damages in the sum of \$35.00 in favor of Joseph Erickson, Sr.

And no remonstrance or petition for damages being filed, and the court being satisfied that such road will be of public utility, and the report of the viewers being favorable thereto, it is ordered by the court that on the payment by the petitioners herein, within 60 days from this date, of the sum of \$25.00 damages so assessed and the filing of the receipt of Nels P Olson, for such payment, that the said report, survey, profile and plat be recorded in suitable books kept for that purpose, and from thenceforth said road shall be a public highway, and that the road supervisor in whose district said road is located, shall open the same for public travel.

Matter of petition of J E Gilmour, et al for county road.

On this day this matter coming on to be heard upon the second reading of the report of the board of county road viewers, which said report was publicly read on two different days of this term of court, and the court not being fully advised in the matter, it is ordered by the court that said petition be, and the same is hereby continued.

Matter of supplies for county sealer of W and M.

On this day it is ordered by the court that the clerk be, and he is hereby instructed to issue a general fund warrant in the sum of \$10.00 in favor of Fairbanks, Morse and Co., as a compromise settlement of claim heretofore rejected by the court.

Matter of cash account of U S Depain, road supervisor for 1913.

It appearing to the court that U S Depain, as road supervisor of Road District No. 3, for the year 1913 turned over to the treasurer the sum of \$4.80, in excess of actual cash on hand, as shown by cash account heretofore rendered, it is ordered by the court that the clerk be and he is hereby instructed to issue a general road fund warrant in the sum of \$4.80, in favor of said U S Depain.

Matter of county judges and commissioners' convention:

On this day it is ordered by the court that the clerk be and he is hereby ordered to issue a general fund warrant in the sum of \$10.00, in favor of county judges and commissioners convention, in payment of dues of Columbia county.

Whereupon, court adjourned until Friday, February 6, 1914.

Friday, February 6, 1914, 6th judicial day.

court came pursuant to adjournment. Officers all present.

Due proclamation being made, the following proceedings were had.

Matter of resignation of Fred Watkins as constable of St Helens precinct:

On this day Fred Watkins tenders to the court his written resignation of the office of constable of St Helens precinct and the court being advised in the matter, it is ordered by the court that said resignation be and the same is hereby accepted.

Matter of claims against the county.

On this day it is ordered by the court that the clerk of this court be, and he is hereby instructed to file no claims against the county for supplies or other service, until properly approved

by the officer for whom the supplies or service was furnished.

Matter of deeds for county road:

On this day J S Weeks and Jeremiah White present to the court their separate deeds for a certain strip of land for road purposes, situated in ne qr of Sec 11, 3-2, and the court being advised in the matter, it is ordered by the court that the clerk be and he is hereby instructed to file said deeds for record.

In the County Court of the State of Oregon, for Columbia County.

In the matter of the special bond election held February 2, 1914.

Whereas, at a special election duly and regularly held on the 2nd day of February, A D 1914, within Columbia County, State of Oregon, pursuant to the provisions of that certain act of the Legislative Assembly of the State of Oregon, passed at its regular session held in the year 1913, being Chapter 163, Laws of 1913, there was submitted to the legal voters of said county, the question of the issue of Columbia county bonds to the amount of Three Hundred Sixty Thousand Dollars, due in five, ten, fifteen and twenty years, with interest at the rate of five per cent per annum, to provide for permanent road construction;

And it appearing to the court from the certified return of such election, as prepared by the clerk for the information of the court, that at such election so held, 1695 votes were cast in favor of such bond issue and 1162 votes were cast against such bond issue, it is therefore hereby ordered, and the county court of Columbia county, State of Oregon, does hereby proclaim that the majority of all votes cast at such election were cast in favor of issuing such bonds.

And it further appearing to the court, from the records and from the statement prepared by the clerk for the information of the court, and the court being fully advised in the matter does hereby declare that the total assessed valuation of all the property within the county is the sum of \$18,067,830.00; that there are no bonds heretofore issued and outstanding; that the financial condition of the general road fund of said county is as follows:

Cash in hands of county treasurer	\$1 018 03
Due road fund on 1912 delinquent tax roll	3 515 78
Due road fund on 1913 current tax roll	168 353 98
Warrants outstanding and unpaid	\$9 816 31

Whereupon court adjourned until Saturday, February 7, 1914.

Saturday, February 7, 1914, 7th judicial day.

Court came pursuant to adjournment. Officers all present.

Due proclamation being made, the following proceedings were had.

Matter of contract with A and M J Seffert for rock for county road:

On this day it is ordered by the court that a contract be entered into with A and M J Seffert for the purchase of rock for road purposes to be taken from ne qr of nw qr and nw qr of ne qr of Sec 36, T 6 N R 2 W of W M for the period of five years, at and of the agreed price of five cents per load for first 100 loads and two and one half cents per load for all taken thereafter, each of said loads to consist of 2 1-2 yds. of rock, and to be paid for monthly, as rock is removed.

Matter of apportionment of general road fund:

On this day it is ordered by the court that the following named amounts be, and they are hereby apportioned to the various road districts for the year 1914.

Road district No 1	\$23 341 21
Road district No 2	15 462 29
Road district No 3	9 750 57
Road district No 4	6 446 03

Matter of drawing jury list for 1914.

On this day the court selects 200 names from the tax rolls to make up the jury list for the year 1914, as by law provided.

Matter of appointment of county sealer of weights and measures:

On this day it is ordered by the court that W G Pomeroy be and he is hereby appointed sealer of weights and measures for Columbia county, State of Oregon.

Matter of claims against the county:

On this day the claims against the county, as heretofore filed with the county clerk, were audited by the court and allowed in the various sums as endorsed by the court on the face of said claims, being as follows:

A E King, witness, state vs Adams	8 00
R Sesseman, same	18 40
J L Wooden, same	13 20
Elia McPherson, same	8 00
C W Mellinger, same	20 40
S A Wilkinson, same	14 40

U M Beehly, same	14 40	John Holdorf, same	35 20
Newell Wood, same	14 40	Charles Herms, same	33 40
H J Duncan, same	20 40	R Kappier same	26 00
J W Reed, same	19 60	F W Wilson, same	36 40
Louis Boeck, same	20 00	D R Fowler, same	28 00
Martha Magill, same	19 80	eter Mayer, same	25 00
A Schillipelt, same	19 80	Eli Davis, same	31 20
S Conklin, same	70 40	Frank Bishop, same	25 00
W C Eichman, same	19 60	A H George, same	21 00
L B Stuart, same	20 40	W A Ketel, same	12 00
O O Donelson, same	14 40	J S Mowry, same	2 00
Wm Hicker, same	14 40	T N Nichols, same	2 00
J J Purney, same	19 60	Fred Abbott, same	12 00
R E McPherson, same	13 60	J H Urie, same	9 00
Win Mellinger, same	14 40	L C Halstead, same	2 00
Perry Mellinger, same	16 40	Wm Koskar, same	2 00
May Mellinger, same	16 40	U S Depain, supervisor R D No 1	16
Myrtle Derebery, same	12 00	D C Kirby supervisor R D No 2	16
Wm Placke, same	20 40	J E Van, supervisor R D No 3	60
James Adams, same	20 40	U S Mellinger, supervisor R D No 4	31
Mrs S B Rose, same	74 60	Wm Pringle, road viewer	28 00
Ed Webster, same	16 40	F H Adams, fence for road	16 00
Hattie Webster, same	16 40	Wm H Davies, team for roadmaster	4 00
C S Ross, juror in circuit court	4 00	Wm H Davies team for sheriff	1 00
Carl Wilson, same	12 00	L G Titus, expense roadmaster	14 00
T E Gravel, same	26 40	F J Freeman, surveyor for road	8 00
L C Boeck, same	35 40	L J Van Orshoven, surveyor for road	28 00
W E Harding same	28 80		
G P Hatt, same	28 40		
CW Emerson, same	21 40		
O J Nickerson, same	31 40		
G C Beavers, same	25 60		

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Some Suggestions.....

KODAKS, CAMERAS, XMAS BOOKLETS, LETTERS, POST CARDS, BOOKS FOR OLD and YOUNG, GUITARS VIOLINS, BANJOS, LADIES HAND BAGS, MUSIC ROLLS, GENTLEMENS CARD AND BILL BOOKS, PERFUMERY AND TOILET WATERS, CALENDERS AND N.W YEAR CARDS

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