CALENDAR FOR 1950

JANUARY
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CALENDAR FOR 1951

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FARMER'S YEAR BOOK

Ford TRACTOR

Dearborn FARM EQUIPMENT

HEDINGER
Tractor & Implement Co.
PHONE 27 -- HARRISONVILLE, MO.

THE
FARMER'S
YEAR
BOOK

THE FARMER'S LEDGER AND YEAR BOOK is presented in the hope that it will be an aid in keeping a daily record of your farming operations.

In addition, there are several pages which contain special information of value and ofttimes of immediate need.

This handy reference book and miniature ledger will be just what the name implies if you will let it. Read it over now . . . familiarize yourself with at least a part of the wealth of information it contains.

FOR SPECIAL INFORMATION

U. S. GOVERNMENT LAND MEASURE

A township—36 sections, each a mile square.

A section—640 acres.

A quarter section—half a mile square—160 acres.

An eighth section—half a mile long, north and south, and a quarter of a mile wide—80 acres.

A sixteenth section—a quarter of a mile square—40 acres.

The sections are all numbered 1 to 36, commencing at the northeast corner.

The sections are divided into quarters, which are named by the cardinal points. The quarters are divided in the same way. The description of a forty-acre lot would read: The south half of the west half of the southwest quarter of section 1 in township 24, north of range 7 west, or, as the case might be, and sometimes will fall short and sometimes overrun the number of acres it is supposed to contain.

NOTE—In most of the Western states, where all of the land was laid out by the Government, all titles, except in city lots, are passed by description, as under the Government survey, and there a square of 6 miles, or 36 square miles, is one township.

To find the number of Acres in a tract of Land. Rule: Divide the number of square rods by 160, or number of square chains by 10.

How many sq. rods, also acres, in a field 80 rods long and 62½ rods wide?

$80 \times 62\frac{1}{2} = 5000$ sq. rods; $5000 \div 160 = 31\frac{1}{4}$ acres. Ans.

In tract, 79 chains 84 links (79.84 ch.); by 41 chains 25 links (41.25 ch.)?

$79.84 \times 41.25 = 3293.4$ sq. ch.: $3293.4 \div 10 = 329.34$ acres. Ans.

ACREAGE PER MILE OF VARIOUS WIDTHS

Width	Acres	Width	Acres
1 foot	0.121	15 feet	1.815
5 feet	0.605	16 feet	1.936
8 feet	0.968	18 feet	2.178
10 feet	1.21	20 feet	2.42
12 feet	1.452	24 feet	2.904
14 feet	1.694	25 feet	3.025

One Side of a Square Tract of Land Containing

1	Acre, is	208.7 ft.	=	43560	sq. ft.
1½	" "	255.6 "	=	65340	" "
2	"	295.2 "	=	87120	" "
2½	"	330 "	=	108900	" "
3	"	361.5 "	=	130680	" "
5	"	466.7 "	=	217800	" "
10	"	660 "	=	435600	" "
1/10	Acre, is	66 ft.	=	4356	sq. ft.
1/8	" "	73.8 "	=	5445	" "
1/6	" "	85.2 "	=	7260	" "
1/4	" "	104.4 "	=	10890	" "
1/3	" "	120.5 "	=	14520	" "
1/2	" "	147.6 "	=	21780	" "
3/4	" "	180.8 "	=	32670	" "

A Lot 25 feet by 125, contains nearly 1/14th of an acre; 50 feet by 218, ¼ of an acre.

Dividing the area by one side, gives the other side if unknown. Thus, a lot, in order to contain 1/10th of an acre, must be (4356÷25) 174¼ feet deep.

LAND MEASURE

To find the number of acres in a body of land, multiply the length by the width (in rods) and divide the product by 160. When the opposite sides are unequal, add them, and take half the sum for the mean length or width.

AMOUNT OF BARBED WIRE REQUIRED FOR FENCES

	One Line	Two Lines	Three Lines
1 sq. acre	50⅔ lbs.	101½ lbs.	152 lbs.
1 sq. mile	1,280 lbs.	2,564 lbs.	3,840 lbs.
1 side of sq. mile	320 lbs.	640 lbs.	960 lbs.
1 rod in length	1 lb.	2 lbs.	3 lbs.
100 rods	100 lbs.	200 lbs.	300 lbs.
100 feet	6₁₆ lbs.	12½ lbs.	18₁₆ lbs.

MILES TRAVELED IN PLOWING AN ACRE

Width of Furrow, Inches	Miles
10	9-9/10
11	9
12	8-1/4
13	7-1/2
14	7
15	6-1/2
16	6-1/6

DUTY OF FARM MACHINES

Probably the simplest method of approaching the duty of a tractor or horse-drawn implement in acres covered per 10-hour day is to multiply the effective width in feet by the rate of travel in miles per hour.

Width cut in feet × miles per hour = acres per day.

Example: 2 m.p.h. × 1 ft. cut = 2 acres per day.

The average speed of mules is 2 miles per hour. The average speed for tractors: Plowing, 3 miles per hour; harrowing, 4 miles per hour; cultivating, 2 to 4 miles per hour; mowing, 3 to 4 miles per hour; combining, 3 to 4 miles per hour.

DRAINS REQUIRED FOR ACRE OF LAND

The following Table shows the number of tiles, of the different lengths made, which are required for an acre, and will be useful to those who may desire to purchase just enough for a particular piece of ground:

DISTANCE APART			12-in. Tiles	13-in. Tiles	14-in. Tiles	15-in. Tiles
Drains 12 ft. apart require			3,630	3,351	3,111	2,934
"	15	" "	2,904	2,681	2,489	2,323
"	18	" "	2,420	2,234	2,074	1,936
"	21	" "	2,074	1,914	1,777	1,659
"	24	" "	1,815	1,675	1,556	1,452
"	27	" "	1,613	1,480	1,383	1,291
"	30	" "	1,452	1,340	1,245	1,162
"	33	" "	1,320	1,218	1,181	1,056
"	36	" "	1,210	1,117	1,037	968

In reference to tile-pipe drain, it must be remembered that the ditch may be much narrower than when stones are used, thus making a considerable saving in the expense of digging. The upper part of the earth is taken out with a common spade, and the lower part with one made quite narrow for the purpose, being only about 4 in. wide at the point.

TO MEASURE CORN IN THE EAR

The number of bushels of shelled corn in any space filled with corn on the cob can be only approximately determined, owing to various conditions affecting the kernel and cob. The following simple rules are, however, recognized by custom in nearly all sections of our country.

Rule—To find the number of bushels multiply cubic feet by 9 and divide by 20, or multiply cubic feet by .45, or divide cubic inches by 3840.

To find the number of Tennessee barrels (5 bushels each).

Rule—Multiply cubic feet by .09.

Examples—A crib 10 feet long, 8 feet high and 5 feet wide is filled with corn on the cob. How many bushels of shelled corn does it contain?

45 = capacity of one cubic foot corn measure.

400 = cubic feet.

180.00 bushels. Ans.

TO MEASURE CORN IN CRIBS

Corn in the ear, of good quality, measured when settled, will hold out at 2¼ cu. ft. to bu. Inferior quality, 2⅜ to 2½ cu. ft.

At 2¼ cu. ft. to bu. × 4 and ÷ 9; at 2⅜ cu. ft. × 8 and ÷ 19; at 2½ cu. ft., × .4.

Find the capacity of a corn-crib 16 ft. long, 7½ ft. wide, and 10 ft. high.

16×7½×10=1200 cu. ft. 1200÷2¼ (9/4)=533⅓ bu. Ans.

TO MEASURE A ROUND CRIB OF CORN

Circumference × Height Equals A.
Circumference × .8 Equals B.
A × B × .04 Equals Bushels.

EXAMPLE
Round Crib

Cir. 53' Height 6'
53 × 6 equals 318
53 × .8 equals 42.4
318 × 42.4 equals 13483.2
13483.2 × .04 equals 539.32
539 bushels to crib.

STACK — Oblong Shape

RULE: Multiply the average length, width and height together. Thus, a stack 22½ by 12 by 10 ft. contains 2700 cu. ft., ÷400=6¾ tons. Ans.

RULE FOR MEASURING HAY

Accuracy in the measuring of hay in the stack is very difficult to obtain on account of the great variation in settlement. Therefore, the quantity in a mow or stack can only be approximately ascertained by measurement.

The laws of North and South Dakota state that a ton of hay by measurement shall consist of 343 cubic feet, after the same shall have been stacked thirty days, or such time as may be agreed upon by the parties.

Hay stack, round—to find contents in cubic feet:

(.04 x over *) Minus (.012 x circumference).

Multiply this by circumference squared for cu. ft.

*"Over" means over measurement and is the length of a line run from the ground on one side of the stack, over the stack to the ground on the other side.

To determine the contents in tons:

Cu. ft. ÷ 450 (wild hay)

or

470 (alfalfa hay)

These figures assume hay to have been in stack 90 days or longer.

Example: over measurement 38 ft.
circumference 52 ft.

$$\frac{(.04 \times 38)}{(1.52)} \text{ minus } \frac{(.012 \times 52)}{(.624)} = .896$$

.896 × 2704 (52²) = 2422.78 cu. ft.

2422.78 ÷ 450 (wild hay) = 5.38 tons.

Though this is a U. S. Department of Agriculture rule, some states have statutes covering this question and such statutes should be observed. U. S. Department of Agriculture Leaflet No. 72 carries a table showing tons of hay in various sizes of stacks and may be had by writing to the Department in Washington—or your own state department.

COAL

Hard coal averages about 80 lbs. per cu. ft., or 25 cu. ft. to a ton, in the solid state. Chestnut size averages about 56 lbs. per cu. ft. Hence, a bin of (4×3×3) 36 cu. ft. will hold a ton of 2,000 lbs.

ANIMAL DISEASES AND THEIR REMEDIES

Abscess—Hot poultices; incision; antiseptic washes.

Big Jaw—Cut out tumor. Give potassium iodide for a week in daily doses of 1 to 2 drams, then another week after an interval of a week.

Anemia—Better diet; iron; gentian, or cod-liver oil.

Appetite, Loss of—Change of diet; gentian and other tonics.

Azoturia—Light feeds when not at work; Epsom salts; soda, aloes.

Bites of Insects—Ammonia.

Bots in Horses—Cathartics; carbon bisulphide in gelatine capsules.

Bog Spavin—Rest; high-heeled shoe; blister; cold water.

Bone Spavin—Same treatment as for bog spavin; actual cautery if necessary.

Broken Wind—Linseed Meal; strychnine.

Bronchitis—Warm blankets, mustard poultice; nitre; aconite; belladonna.

Burns—Cover with 2 per cent solution carbolic acid in linseed oil or vaseline.

Capped Hock—Hot and cold applications; blister.

Colic—Laudanum, chloral hydrate, cannabis indica, or soda; change diet.

Constipation—Linseed oil, aloes, or castor oil.

Convulsions—Chloral hydrate or bromide of potash.

Curb—Hot applications; blister; high-heeled shoe.

Diarrhoea—Linseed oil and laudanum; boiled linseed jelly.

Distemper—Good diet; quinine; strychnine; belladonna; dry quarters.

Dysentery—Calomel; opium, creolin.

Eczema—Tar, ichthyol, iodine, or boric acid.

Enteritis—Linseed oil; laudanum; chloral hydrate.

Fever—Aconite, acetanilid, quinine, or nitre.

Flatulence—Stomach tube; charcoal, soda or chloroform.

Fleas—Wash with creolin or carbolic soap.

Foot Rot—Remove loose tissue; apply tar, blue vitriol, or other antiseptic.

Founder—Cold applications; poultices, aconite.

Frost Bite—Ichthyol; oil of turpentine.

Garget—Hot applications; belladonna or gum camphor ointment.

Gastritis—Opium; lime water; subnitrate of bismuth.

Heaves—Moisten the food; give Fowler's solution of arsenic.

Hemorrhage—Ice opium; ergot or iron salts.

Herpes—Apply lead acetate, iodine, silver nitrate, or creolin.

Influenza—Inhalation of carbolic acid fumes in steam; nitre; quinine; belladonna.

Knuckling—Attention to shoeing.

Lice—Kerosene; creolin; lysol; white-wash.

Mange—Dip sheep and cattle in a lime-sulphur wash, or spray them with a crude oil emulsion. Use carbolic soap, creosote, or creolin, on dogs.

Megrims—Rest; laxatives.

ANIMAL DISEASES AND THEIR REMEDIES
—Continued

Milk Fever—Pump udder full of air ; or inject the udder with a solution of iodide of potash, creolin, or lysol.

Poisoning—For plant poisoning, give potassium permanganate and aconite or atropine, according to symptoms. For mineral poisoning, give linseed oil, lard, or milk, followed by laudanum or a stimulant, according to symptoms.

Pneumonia—Avoid drafts ; give nitre ; aconite digitalis.

Quarter Crack—Draw crack together ; fasten with nails ; apply tar.

Rheumatism—Apply stimulating lotions ; give salicylic acid and bicarbonate of potash.

Rickets—Better diet ; cod-liver oil ; lime water.

Ringbone—Rest ; blister ; cautery ; neurotomy.

Ringworm—Iodine ; silver nitrate ; creolin ; carbolic acid.

Roaring—Surgical operation removing the arytenoid cartilage.

Saddle Galls—Cleanse ; apply antiseptic washes.

Sand Crack—Bind hoof ; apply tar ointment.

Scab—(See Mange).

Sores—Cleanse ; open ; apply antiseptics.

Spavin—(See Bog and Bone Spavin).

Splint—Rest ; cold applications ; blister.

Scours—Add formalin to the calves' milk at the rate of one part to 4,000, or dilute milk with one-fourth lime water.

Sore Mouth—Wash with solution of permanganate of potash, boric acid or chlorate of potash.

Sunstroke—Ice or cold water on the head ; give whiskey or other stimulants.

Swollen Legs—Laxatives ; saltpeter ; moderate exercise.

Strangles—Inhalations of steam ; open abscess under throat.

Tapeworms—Treat dogs frequently with vermifuges and prevent them from eating infected parts of other animals.

Texas Fever—Preventive vaccination and extermination of ticks.

Ticks—Dip or spray cattle with crude oil ; starve ticks by rotation of pastures.

Thoroughpin—(See Bog Spavin).

Thumps—Morphine ; belladonna.

Tuberculosis—Test cows with tuberculin ; separate reactors from healthy animals ; sterilize milk from tuberculosis cows before using as human food or giving to calves or pigs ; disinfect premises and vaccinate all calves.

Tympanitis—(See Colic).

Vomiting—Hot water ; lime water ; morphine.

Whistling—(See roaring).

Worms—For round-worms in horses areca nut, aloes, or creolin ; for lung-worm in calves and lambs, sulphurous inhalations, turpentine ; for stomach worms in calves and lambs, benzine, gasoline or turpentine in milk.

Wounds—Cleanse ; apply solution of corrosive sublimate, carbolic acid, creolin, formalin, boric acid, lysol, hydrogen dioxide, creosote, silver nitrate, or permanganate of potash. Keep flies away from wound by bandage, or the use of iodoform or some other deterrent.

POUNDS OF FERTILIZER PER 100 FT.

Lbs. per Acre	Distance Between Rows (Stalk to Stalk)				
	28 in.	32 in.	34 in.	36 in.	40 in.
200	1 lb. 1 oz.	1 lb. 4 oz.	1 lb. 5 oz.	1 lb. 6 oz.	1 lb. 8 oz.
300	1 " 8 "	1 " 13 "	1 " 15 "	2 " 1 "	2 " 5 "
400	2 " 2 "	2 " 7 "	2 " 10 "	2 " 12 "	3 " 1 "
500	2 " 11 "	3 " 1 "	3 " 4 "	3 " 7 "	3 " 13 "
600	3 " 3 "	3 " 11 "	3 " 14 "	4 " 2 "	4 " 9 "
800	4 " 4 "	4 " 14 "	5 " 3 "	5 " 8 "	6 " 2 "
1000	5 " 6 "	6 " 2 "	6 " 8 "	6 " 14 "	7 " 10 "
1500	8 " 0 "	9 " 3 "	9 " 12 "	10 " 5 "	11 " 7 "
2000	10 " 11 "	12 " 4 "	13 " 0 "	13 " 12 "	15 " 4 "

DRESSING WEIGHTS OF SLAUGHTERED ANIMALS

Cattle | Percentage
Dairy Cows 40–50
Prime Cattle .... 60 up
Average for Cattle... 55

Hogs
Prime Heavy 82–84
Medium Butchers 78–80
Shipper Hogs 72–76

Sheep
Wide Range 40–65
Average Lamb 48–52

Chickens
Cocks 76
Hens 76
Pullets 74

WATER REQUIREMENTS OF ANIMALS

HORSE—7 to 10 gallons daily, average about 8½ gallons

COW —6 to 10 gallons daily, average about 8½ gallons

HOG —2 to 3 gallons daily, average about 2½ gallons

SHEEP—1 to 2 gallons daily, average about 1½ gallons

SILOS, SHOWING CAPACITY AND NUMBER OF CATTLE FED FOR SIX MONTHS

DIAM. 10 FT.			DIAM. 12 FT.		
High	Tons	Cattle	High	Tons	Cattle
24	34	9	24	54	15
26	38	10	26	61	17
28	43	12	28	69	19
30	48	13	30	76	21
32	52	14	32	84	23
34	57	16	34	91	25
36	62	17	36	98	27
38	66	18	38	106	29
40	71	19	40	113	31
44	80	22	44	128	35
48	90	25	48	144	39

DIAM. 14 FT.			DIAM. 16 FT.		
High	Tons	Cattle	High	Tons	Cattle
24	75	21	24	95	26
26	85	23	26	108	30
28	95	26	28	121	33
30	105	29	30	134	37
32	115	32	32	147	40
34	126	35	34	160	44
36	136	37	36	172	47
38	146	40	38	185	51
40	156	43	40	198	54
44	176	48	44	224	61
48	198	54	48	252	69

DIAM. 18 FT.			DIAM. 20 FT.		
High	Tons	Cattle	High	Tons	Cattle
24	116	32	24	136	37
26	132	36	26	154	42
28	147	40	28	175	47
30	163	45	30	191	52
32	178	49	32	209	57
34	194	53	34	228	62
36	210	58	36	246	67
38	225	62	38	265	73
40	241	66	40	283	78
44	272	75	44	320	88
48	306	84	48	360	99

SILO—DIAMETER 10 FT., HEIGHT 24 FT., HOLDS 34 TONS, FEEDS 9 CATTLE 6 MONTHS, 40 LBS. EACH DAILY

TO ASCERTAIN THE AMOUNT OF SILAGE IN SILOS

The most accurate way to buy or sell silage would be by actual weight. If scales are conveniently located they should by all means be used and each load weighed or at least occasional loads weighed and the number of loads noted. Where this is not possible, the following rule will give approximate results: Diameter squared × .7854 × depth of settled silage will give the number of cu. ft. of silage. With silage less than 30 feet in depth, 35 pounds per cu. ft. can be used; from 30 to 35 feet in depth, 37 pounds per cu. ft. and from 35 to 40 ft. in depth 40 pounds to the cu. ft. In silos with silage between 40 to 50 feet in depth, 45 pounds per cu. ft. may be used. The number of cu. ft. of silage times the weight per cu. ft. divided by 2000 will give tons of silage.

TANKS — Square
To Find Contents, in Gallons

RULE: Multiply cu. ft. by 7½ (exact 7.48). For contents in barrels, multiply cu. ft. by .2375.

Find the capacity of an oblong tank 10 ft. long, 3 ft. wide and 1⅔ ft. deep. 10×3×1⅔=50 cu. ft. × 7½=375 gals. 50 cu. ft. × .2375=11⅞ barrels.

TABLES CONVENIENT FOR TAKING INSIDE DIMENSIONS

A box 24 x 24 x 14.7 inches will hold a barrel of 31½ gallons.

A box 15 x 14 x 11 inches will hold 10 gallons.

A box 8¼ x 7 x 4 inches will hold a gallon.

A box 4 x 4 x 3.6 inches will hold a quart.

A box 24 x 28 x 16 inches will hold five bushels.

A box 16 x 12 x 11.2 inches will hold a bushel.

A box 12 x 11.2 x 8 inches will hold a half bushel.

A box 7 x 6.4 x 12 inches will hold a peck.

A box 8.4 x 8 x 4 inches will hold a peck, or four dry quarts.

A box 6 x 5.6 x 4 inches deep will hold a half-gallon.

WEIGHTS AND MEASURES

Commercial Weight

16 drams (dr.)	=	1 ounce (oz.)
16 ounces	=	1 pound (lb.)
2000 pounds	=	1 ton (T.)

Dry Measure

2 pints (pt.)	=	1 quart (qt.)
8 quarts	=	1 peck (pk.)
4 pecks	=	1 bushel (bu.)

Long Measure

12 inches (in.)	=	1 foot (ft.)
3 feet	=	1 yard (yd.)
16½ ft.	=	1 rod (rd.)
320 rd. (5280) ft.	=	1 mile (mi.)

Time Measure

60 seconds (sec.)	=	1 minute (min.)
60 minutes	=	1 hour (hr.)
24 hours	=	1 day (da.)
365¼ days	=	1 year (yr.)

Square Measure

144 square inches	=	1 square foot
9 square feet	=	1 square yard
30¼ sq. yards	=	1 square rod
272¼ sq. feet	=	1 square rod
160 square rods	=	1 acre (A.)
640 acres	=	1 square mile

Troy Weight

24 grains (gr.)	=	1 pennyweight (pwt.)
20 pennyw'ts	=	1 ounce (oz.)
12 ounces	=	1 pound (lb.)

Circular Measure

60 seconds (")	=	1 minute (')
60 minutes (')	=	1 degree (°)
360 degrees	=	1 circle

Surveyors' Linear Measure

7.92 inches (in.)	=	1 link (lk.)
25 links	=	1 rod (rd.)
100 l'ks (66 ft.)	=	1 chain (ch.)
80 chains	=	1 mile (mi.)

Liquid Measure

4 gills (gi.)	=	1 pint (pt.)
2 pints	=	1 quart (qt.)
4 quarts	=	1 gallon (gal.)
31½ gallons	=	1 barrel (bbl.)

Measure of Length

4 In.=1 Hand.
7.92 In.=1 Link.
18 In.=Cubit.
12 In.=1 Foot.
6 Feet=1 Fathom.
3 Feet=1 Yard.
5½ Yds.=1 Rod or Pole.
40 Poles=1 Furlong.
8 Fur.=1 Mile.
69⅛ Miles=1 Degree.
60 Geographical Miles=1 Degree.
1760 Yards or 5280 Feet=1 Mile.

Measure of Surface

144 Sq. Inches=1 Sq. Foot.
9 Sq. Feet=1 Sq. Yard.
30¼ Sq. Yards=1 Sq. Rod, Perch or Pole.
40 Sq. Rods=1 Sq. Rood.
4 Sq. Roods=1 Sq. Acre.
Gunter's Chain=22 Yards or 100 Links.
10 Sq. Chains=1 Sq. Acre.
640 Sq. Acres=1 Sq. Mile.
272¼ Sq. Ft.=1 Sq. Rod.
43,560 Sq. Feet=1 Acre.

Lumber Measure

To find the Contents of Boards, in square feet. Rule: Multiply the length (in ft.), by the width (in in.), and divide the product by 12.

Find contents of 16 foot board, 9 in. wide.

9×16=144÷12=12 sq. ft. Ans.

Of 18 foot board, 13 in. wide.

13×18=234÷12=19½ sq. ft. Ans.

To find the Contents of Scantlings, Joints, etc., in square ft. Rule: Multiply the length, width and thickness together, and divide product by 12.

Find contents of 18 foot joists, 2 by 8.

2×8×18=288÷12=24 sq. ft. Ans.

Of a 20 foot sill, 8 by 8.

8×8×20=1280÷12=106⅔ sq. ft. Ans.

Cubic Measure

231 cubic inches = 1 gallon
2150.4 cu. inches = 1 bushel
1728 cubic inches = 1 cubic foot
27 cubic feet = 1 cubic yard
128 cubic feet = 1 cord (wood)
24¾ cubic feet = 1 perch (stone)

Measure of Solidarity

1,728 Cubic Inches = 1 Cubic Foot.
27 Cubic Feet = 1 Cubic Yard.

MEASUREMENT OF RECTANGULAR AND CYLINDRICAL BODIES

Rectangular Bodies are reduced to cubic feet or cubic inches, by multiplying the length, width and height together. Thus, a bin 8 ft. long, 5 ft. wide, and 4 ft. high contains 8×5×4=160 cubic ft.

Cylindrical Bodies are reduced to cylindrical feet, or inches, by multiplying the square of the diameter, by the depth; and to cubic ft., by multiplying the cylindrical ft. by .7854. Thus, a tank, diam. 5 ft., depth 4 ft., contains 5²×4=100 cylindrical feet; and 100×.7854=78½ cubic ft.

A Cubic Foot, or 1728 cu. inches, equals 7½ (7.48) gallons; .8 (.8036) of a bushel; .2375 of a barrel (of 31½ gal.). 1¼ cubic ft. = a bushel nearly.

A Cylindrical Foot (78½% of a cu. ft.) is 1 ft. in diameter, 1 ft. deep, contains 1357 ⅙ cu. in., and = 5⅞ gals.; *⅝ of bu.; ⅛ (.1865) of a barrel. (*Diminish Ans. 1%.)

TO FIND THE VALUE OF ARTICLES SOLD BY THE TON

Multiply the number of pounds by the price per ton, point off three places and divide 2.

BARRELS — CASKS
To Find Contents, in Gallons

RULE: Multiply the square of the mean diameter by the depth, and the product by .0034.

Find the capacity of a barrel whose mean diameter is 20 in., depth 32 in.

20²×32=12800; 12800×.0034=43½ gal. Ans.

Cask, diameter, 12½ in., depth 20 in.

12½²×20×.0034=10⅝ gal. Ans.

Note: The U. S. standard gallon contains 231 cubic inches. The English imperial gallon contains 277.274 cu. in., which is practically 1¼ times 231. Hence, to reduce U. S. gallon to English gallon, multiply by ⅚. 100 U. S. gal. (100×⅚)=83⅓ Eng. gal. English gal. to U. S. gal., multiply by 1⅕. 100 Eng. gal. (100×1⅕) =120 U. S. gal.

A can 7 in. in diam. and 6 in. deep, holds 1 gal. A gal. of pure water weighs 8⅓ lbs.

GRANARIES — WAGON-BEDS
To Find Contents, in Bushels

RULE: Multiply the number of cubic feet by .8. (For greater accuracy by .8036.)

Find the contents of a granary or bin 14 ft. long, 7½ ft. wide and 6 ft. high. 14×7½×6=630 cu. ft.; 630×.8 =504 bu. Exact, 630×.8036=506¼ bu. Of wagon bed, 10×3×1½ ft. 10×3×1½=45 cu. ft. 45×.8=36 bu. Ans.

A wagon bed 3 ft. wide and 10 ft. long will hold 2 bushels for every inch in depth.

CISTERN CAPACITY

A cistern ten feet in diameter and nine feet deep will hold 168 barrels.

A cistern five feet in diameter will hold five and two-thirds barrels for every foot in depth.

A cistern six feet in diameter will hold six and three-fourths barrels for every foot in depth.

A cistern eight feet in diameter will hold nearly twelve barrels for every foot in depth.

A cistern nine feet in diameter will hold fifteen and one-half barrels for every foot in depth.

A cistern ten feet in diameter will hold eighteen and three-eighths barrels for every foot in depth.

TO FIND HEIGHT OF TREE OR BUILDING

Set up a stick and measure its shadow. Measure length of shadow of tree. Length of shadow of tree, times height of stick divided by length of shadow of stick equals height of tree.

COMMODITY WEIGHTS AND MEASURES

A pint's a pound—or very nearly—of the following: Water, wheat, butter, sugar, blackberries.

A gallon of milk weighs 8.6 pounds; cream, 8.4 pounds; 46½ quarts of milk weigh 100 pounds.

Cotton in a standard bale weighs 480 pounds. A bushel of coal weighs 80 pounds.

A barrel of cement contains 3.8 cubic feet; of oil, 42 gallons.

A barrel of dry commodities contains 7,056 cubic inches, or 105 dry quarts.

A bushel leveled contains 2,150.42 cubic inches; a bushel heaped—2,747.7 cubic inches. (Used to measure apples, potatoes, shelled corn in bin.)

A peck contains 537.605 cubic inches. A dry quart contains 67.201 cubic inches.

To evaporate one cubic foot of water requires the consumption of 7½ lbs. of ordinary coal, or about 1 lb. of coal to 1 gallon of water.

A board foot = 144 cubic inches; a cord contains 128 cubic feet.

CORD WOOD. A cord of wood is a pile 4 feet wide, 4 feet high and 8 feet long, and contains (4×4×8) 128 cubic feet. Hence,

To find the Contents of a Pile of Wood, in cubic feet and cords. Rule: Multiply the length, width and thickness together, and divide by 128.

Find cubic feet in load, 4 by 2⅔ by 12. 4×2⅔×12= 128 cu. ft.=1 cord.

In a pile 4 by 4, 70 ft. long, 4×4×70=1120÷128=8¾ cords. Ans.

TO FIND NUMBER OF BOARD FEET IN A LOG

Subtract 4 inches from the diameter and square the remainder. The result will be the number of board feet in a 16-foot log. Add ⅛ for 18-foot logs, ¼ for 20-foot logs. Subtract ⅛ for 14-foot logs, ¼ for 12-foot logs.

MISCELLANEOUS TABLES

200 lbs. flour make 1 bbl.
200 lbs. beef or pork make 1 bbl.
135 lbs. potatoes make 1 bbl.
135 lbs. apples make 1 bbl.
280 lbs. salt make 1 bbl.
350 lbs. sugar make 1 bbl.
100 lbs. nails make 1 keg.
2150.42 cu. in. make 1 bu.
231 cu. in. make 1 gal.
43,560 sq. ft. make 1 acre.
5,280 ft. make 1 mile.
128 cu. ft. make 1 cord.
1 gal. water about 8⅓ lbs.
1 gal. milk about 8⅗ lbs.
1 gal. kerosene about 6½ lbs.
1 cu. ft. water about 62½ lbs.
⅓ in. equals 1 size in measuring shoes.
4 in. equals 1 hand in measuring horses.
1 link equals 7.92 in.
1 rod equals 25 links, 16½ feet.
1 chain equals 4 rods, 66 ft.
1 mile equals 80 chains, 5280 feet.
Wall paper is usually 18 inches wide.
A single roll is 24 ft. long.
A double roll is 48 ft. long.
100 sq. ft. of surface, 4 inches to weather, requires about 1,000 shingles.
1000 shingles require 5 lbs. of nails.
70 yards of surface will require about 1,000 laths.
1,000 laths will require 11 lbs. of nails.
A barrel of fish weighs 200 lbs.
A keg of powder weighs 25 lbs.
A stone of lead or iron equals 14 lbs.
A pig of lead or iron equals 21½ stone.
Anthracite coal, broken, cu. ft. averages 54 lbs.
A ton loose occupies (Anthracite) 40 to 43 cu. ft.
Bituminous coal, broken, cu. ft. averages 49 lbs.
A ton loose occupies (Bituminous) 40 to 48 cu. ft.

AVERAGE PERIOD OF INCUBATION

Chickens	20-22 days
Geese	28-34 days
Ducks	28 days
Turkeys	27-29 days
Guinea fowls	28 days
Pheasants	25 days
Ostriches	40-42 days

USEFUL INFORMATION FOR CONTRACTORS

One thousand shingles, laid four inches to the weather, will cover one hundred square feet of surface, and five lbs. of shingle nails will fasten them on.

One-fifth more siding and flooring is needed than the number of square feet of surface to be covered because of the lap in siding and flooring.

Eight bushels of good lime, sixteen bushels of sand and one bushel of hair will make enough good mortar to plaster 100 square yards.

One cord of stone, three bushels of lime and a cubic yard of sand will lay one hundred cubic feet of wall.

Cement one bushel, and sand two bushels, will cover 3½ square yards, one inch thick; 4½ square yards ¾ inch thick, and 6¾ square yards ½ inch thick.

One bushel of cement and one bushel of sand will cover 2¼ square yards one inch thick; 3 square yards ¾ inch thick, and 4½ square yards ½ inch thick.

COST BY PERCENTAGES

Items	Frame Building	Brick Dwelling
Excavating, brick and cut stone	16%	36%
Plastering and materials, including lathing	8	6
Millwork, including glass and glazing	21	20
Lumber	19	12
Carpentry Labor	18	10
Hardware	3½	3
Tinwork and Galvanized Iron	2¼	4½
Plumbing and Gas Fitting and Materials	7	3
Painting and Materials	5	5½
Heating (not included)		
Total	100%	100%

NAILS REQUIRED IN CARPENTER WORK

To case and hang door, 1 pound.
To case and hang one window, ¼ pound.
Base, 100 lineal feet, 1 pound.
To put on rafters, joists, etc., 3 pounds to 1,000 feet.
To put up studding, 3 pounds to 1,000 feet.
To lap a 6-inch pine floor, 15 pounds to 1,000 feet.

NUMBER OF NAILS TO THE POUND

Size	No. per lb.
6 penny fence, 2 inches	80
8 penny fence, 2½ inches	50
10 penny fence, 3 inches	34
12 penny fence, 3¼ inches	39
3 penny fine, 1⅓ inches	760
3 penny, 1¼ inches	480
4 penny, 1½ inches	300
5 penny, 1 inches	200
6 penny, 2 inches	160
7 penny, 2¼ inches	128
8 penny, 2½ inches	92
9 penny, 2 inches	72
10 penny, 3 inches	60
12 penny, 3¼ inches	44
16 penny, 3½ inches	32
20 penny, 4 inches	24
30 penny, 4¼ inches	18
40 penny, 5 inches	14
50 penny, 5½ inches	12

HOW TO FIGURE PLASTERING

Multiply the distance around the four sides of the room in feet by the height of the room in feet. Multiply the product by the price per square yard, and divide this product by 9, because there are 9 square feet in a square yard. For the ceiling, multiply the length of the room by the width of the room in feet and then by the price per square yard, and divide by 9 as before. Add these two results and you have the entire cost of plastering the room.

To every barrel of lime estimate about ⅝ of a cubic yard of good sand for plastering.

One-third of a barrel of stucco will hard finish 100 square yards of plastering.

Six bushels of lime, 40 cubic feet of sand and 1½ bushels of hair will plaster 100 square yards with two coats of mortar.

In plastering, no deductions are made for openings, because it is considered that the extra work in finishing around them balances the material saved.

TO FIND THE NUMBER OF LATH REQUIRED FOR A ROOM

Find the number of square yards in the walls and ceiling and multiply by 16, the number estimated to a square yard. The result will be the number of lath necessary to cover the room.

Most lath are 4 feet long and 1½ inches wide, and they are put up in bunches of 50. The weight of 1,000 pine laths is approximately 450 pounds.

At 16 lath to the square yard, 1,000 lath will cover 63 yards of surface, and 11 pounds of lath nails will nail them on.

STONE AND BRICK WORK

A cord of stone (128 cubic feet), 3 bushels of lime (there are about 1¼ cubic feet in a bushel), and a cubic yard of sand will make 156 cubic feet of wall.

To find the number of cords of stone needed to build a foundation wall, multiply together the length, height and thickness in feet and divide by 156.

A cubic yard of sand is called a load.

Five hundred bricks make a load.

A bricklayer's hod will hold 20 bricks. An ordinary bricklayer can lay 1,500 bricks in a day of ten hours, where the joints are left rough; about 1,000 bricks a day when both faces are to be worked fair; and not more than 500 a day when carefully joined and faced with picked bricks of a uniform color.

Type of Work	Cement	Sand	Gravel
Surface of Walks	1 Part	2 Parts	
Surface of Floors	1 Part	2 Parts	
Garden Accessories	1 Part	2 Parts	
Garden Pools	1 Part	2 Parts	3 Parts
Walls	1 Part	2 Parts	3 Parts
Foundations	1 Part	2 Parts	3 Parts
Steps	1 Part	2 Parts	3 Parts

CONCRETE

The proper proportions for concrete sidewalks and floors, are 1 part cement to 6 parts sand. For finishing and wearing surface, 1 part cement and 2 parts coarse sand. A common floor for a cellar should be about 3 inches thick.

Proportions for concrete walls or foundations for heavy construction are 1 part cement to 7 parts gravel.

Concrete blocks to be properly made should be proportioned 1 part cement to 4 parts of fine gravel. This will give a block which, when properly cured, will be as strong as a solid concrete wall.

A concrete block to be properly cured should be well protected from the sun and dry winds. Blocks should not be removed from under cover until at least seven days after making. All blocks should be separated by pieces of lath for protection and for convenience in spraying.

Blocks should never be placed in a building until they are at least from 24 to 30 days old. Green blocks placed in a wall will crack from shrinkage.

PIPE DIMENSIONS

Nom. Inside Dia.	Actual Outside Dia.	Actual Inside Dia.	Nom. Inside Dia.	Actual Outside Dia.	Actual Inside Dia.
⅛	0.405	0.270	3	3.5	3.067
¼	0.540	0.364	3½	4	3.548
⅜	0.675	0.494	4	4.5	4.026
½	0.840	0.623	4½	5	4.508
¾	1.05	0.824	5	5.563	5.045
1	1.315	1.048	6	6.625	6.065
1¼	1.66	1.38	7	7.625	7.023
1½	1.9	1.61	8	8.625	7.982
2	2.375	2.067	9	9.625	8.937
2½	2.875	2.468	10	10.75	10.019

NOTE: Dimensions above are in inches, and are for standard steel and wrought-iron pipe.

Capacity of 100 feet of pipe—based on actual internal diameter:

¾"	2.8 Gals.	2 "	17.4 Gals.
1 "	4.5 Gals.	2½"	24.8 Gals.
1¼"	7.8 Gals.	3 "	38.3 Gals.
1½"	10.6 Gals.		

ANTIDOTES FOR POISONS

First.—Send for a Physician.

Second.—Induce vomiting by tickling throat with feather or finger; drinking hot water or strong mustard and water. Swallow sweet oil or whites of eggs.

Acids are antidotes for **Alkalies**, and vice versa.

Special Poisons and Antidotes

Acids.—Muriatic, Oxalic, Acetic, Sulphuric (oil of Vitriol), Nitric (Acqua Fortis). { Soap-suds, magnesia, lime-water

Prussic Acid.—Ammonia in water. Dash water in face.

Carbolic Acid.—Flour and water, mucilaginous drinks.

Alkalies.—Potash, Lye, Hartshorn, Ammonia. { Vinegar or Lemon juice in water.

Arsenic.—Rat Poison, Paris Green. { Milk, raw egg, sweet oil, lime-water, flour and water.

Bug Poison. — Lead, Saltpetre, Corrosive Sublimate, Sugar of Lead, Blue Vitriol. { Whites of eggs, or milk in large doses.

Chloroform.—Chloral, Ether. { Dash Cold Water on Head and Chest. Artificial Respiration.

Carbonate of Soda.—Copperas, Cobalt. { Soap-suds and mucilaginous drinks.

Iodine.—Antimony Tartar, Emetic. { Starch and water, astringent infusions, strong tea.

Mercury and its Salts. { Whites of eggs, milks, mucilage.

Opium.—Morphine, Laudanum, Paregoric, Soothing Powders or Syrups. { Strong coffee, hot bath. Keep awake and moving at any cost.

Nitrate of Silver.—Lunar Caustic. { Salt and water.

Strychnine.—Tincture of Nux Vomica. { Mustard and water. Sulphate of Zinc. Absolute quiet. Plug the ears.

INTEREST TABLE

The following will be found convenient in the absence of extended interest tables:

To find the interest on a given sum, for any number of days, at any rate of interest.

At 5 per cent, multiply the principal by the number of days and divide by 72

At 6 per cent, as above and divide by 60

At 7 per cent, as above and divide by 52

At 8 per cent, as above and divide by 45

At 9 per cent, as above and divide by 40

At 10 per cent, as above and divide by 36

At 12 per cent, as above and divide by 30

At 15 per cent, as above and divide by 24

At 20 per cent, as above and divide by 18

ONE MONTH TO SAME DAY IN ANOTHER

From	to Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January....	365	31	59	90	120	151	181	212	243	273	304	334
February ..	334	365	28	59	89	120	150	181	212	242	273	303
March.....	306	337	365	31	61	92	122	153	184	214	245	275
April......	275	306	334	365	30	61	91	122	153	183	214	244
May.......	245	276	304	335	365	31	61	92	123	153	184	214
June.......	214	245	273	304	334	365	30	61	92	123	153	183
July.......	184	215	243	274	304	335	365	31	62	92	123	153
August.....	153	184	212	243	273	304	334	365	31	61	92	122
September .	122	153	181	212	242	273	303	334	365	30	61	91
October....	92	123	151	182	212	243	273	304	335	365	31	61
November .	61	92	120	151	181	212	242	273	304	334	365	30
December..	31	62	90	121	151	182	212	243	274	304	335	365

Explanation—To find the number of days from January 20th to December 20th, follow horizontal line opposite January until you reach the column headed by December, when you will find 334, representing the required number of days, and so on with the other months. During leap year, if February enters into the calculation, add one day to result.

HOW TO MIX PAINTS

In the list below, the color first named is invariably the principal ingredient, the others coming in the order of their importance.

Thus, in making a drab color, white is the chief ingredient, and should be put in the painting pot first, and the black is needed in the least quantity. It is better to have the base color rather thick, and the other colors thin.

To make:

Buff—White, yellow ochre, and red.

Chestnut—Red, black, and yellow.

Chocolate—Raw umber, red, and black.

Claret—Red, umber, and black.

Copper—Red, yellow, and black.

Dove—White, vermilion, blue, and yellow.

Drab—White, yellow ochre, red, and black.

Fawn—White, yellow, and red.

Flesh—White, yellow ochre, and vermilion.

Freestone—Red, black, yellow ochre, and white.

French Gray—White, Prussian blue, and lake.

CLEANING PAINTED SURFACES

Painted Woodwork. Wash with a solution of trisodium phosphate, which is sold under various trade names as a household cleaner. Use one cup of powder to ten quarts of hot water. Sponge on, let set a minute or two, and sponge off with clean water. Then wipe dry with clean rags. Do not use soap powders, which are likely to leave a film.

Painted Walls. 1. Dust walls carefully, using a vacuum cleaner extension brush if available. 2. Use the cleanser mentioned above, but add one-half cupful of household ammonia to ten quarts of the solution, especially for kitchen walls. Clean from bottom up, sponge with fresh water, and wipe dry as fast as different sections or spaces are cleaned.

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

City and State

5-29: Heifer that was
grass poisoned, +
Treated.   ?

5-29 Heifer with high
Round fore Top
not Shell one. ?
no Brand.
       Red paint

6-16 Bred George
  To Bills Bull.

6-14 Took cows
To other pasture,

Hog. Recrd.

Started June. 10th

last sow To from
Bred. June 16

CROP	ACRES	YIELD	VALUE
Corn	1	8 -	1 P. 1 Rent
Wheat	2	7	"
Oats	3	7	"
Barley	4	8	
Rye	5 -	8	
Clover	6	8	
Timothy			
Alfalfa			
Potatoes			
Beans			
Peas			
Onions			
Beets			
Cotton			
Peanuts			
Tobacco			
TOTAL			

CROP	ACRES	YIELD	VALUE
Corn	Saved	6	4-1- Mid
Wheat	"	6	4-5 "
Oats	"	6	4-7 "
Barley	"	7	48 ev.
Rye		8	48
Clover		8	4-9
Timothy			
Alfalfa			
Potatoes			
Beans			
Peas			
Onions			
Beets			
Cotton			
Peanuts			
Tobacco			
TOTAL			

Week of	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
1st	Heifer		Calved		2	-22-		50
2"	"		"		2	24		50
3rd	"		"		2	-28		50
4th	"		"		3	- 1		50
5"	"		"		3	- 2		50
6"	"		"		3	- 2		50
7 }			"		3	5		50
8 {		"	"		3	5		50
9 }					3	6		
10 {					3	6		
11		Lost.			3	6		
12					3	7		
13		Bossie			3	9		
14		Heifer			3	12		
15					3	19		
16		Dish face			3	27		
17		Big ear			3	29		
18 }		Calf Heifer			5	8		

Week of	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
	Heifer calf.					Brad	"	
	"	"				"	"	
	"	"				"	"	
	"	"				"	"	
	Bull	"				Large Guitec"		
	Heifer	"				Big weld.		
	Heifer	"						
	Bull	-				small Heifer		
	Heifer							
	Bull							
	Heifs							
	Heifer					Sick cow		
	Hife					Bossy		
	Hefs					2 for Ka		
	Bull					Womb trouble		
	Heifer							

Date Bred	Name or Description of Animal	Sire Used	Date Due
12-16-49	Fuzzy	Gus	
12-16-49	Sows 6		
2-2-50	1 Hamp. Small		
2-6-50	1 Hamp. large, again 6-6		
4-7-50	Nelly Bred To Gus		
4-7-50	1 Red sow, perhaps		

Date Bred	Name or Description of Animal	Sire Used	Date Due
4-27	1 Ring R. Ear,		Two calves
4-22 ?	Heifer with Both ear		
4-29 "	1 Ring R. Ear		
4-29	1 " R "		
5-4	1 Ring R Ear, Large ∧ Left Hip. short Horn R side none on left. Large Bit out of L. Ear Small type Heifer		(2 brands?)
5-16	Cow with Twin calves		
5-22	Dish faced Heifer		
5-23	Double Ring R ear. Took male 2nd time, first 4-27		

Read across for expiration of period from date in first column. Thus: from Jan. 1st expiration date for mares is Dec. 6th, or 340 days from Jan. 1st; for cows, Oct. 10th, or 283 days from Jan. 1st, etc.

Time of Service	Mares 340 days	Cows 283 days	Ewes 150 days	Sows 114 days
Jan 1	Dec 6	Oct 10	May 30	Apr 25
" 6	" 11	" 15	June 4	" 30
" 11	" 16	" 20	" 9	May 5
" 16	" 21	" 25	" 14	" 10
" 21	" 26	" 30	" 19	" 15
" 26	" 31	Nov 4	" 24	" 20
" 31	Jan 5	" 9	" 29	" 25
Feb 5	" 10	" 14	July 4	" 30
" 10	" 15	" 19	" 9	June 4
" 15	" 20	" 24	" 14	" 9
" 20	" 25	" 29	" 19	" 14
" 25	" 30	Dec 4	" 24	" 19
Mar 2	Feb 4	" 9	" 29	" 24
" 7	" 9	" 14	Aug 3	" 29
" 12	" 14	" 19	" 8	July 4
" 17	" 19	" 24	" 13	" 9
" 22	" 24	" 29	" 18	" 14
" 27	Mar 1	Jan 3	" 23	" 19
Apr 1	" 6	" 8	" 28	" 24
" 6	" 11	" 13	Sep 2	" 29
" 11	" 16	" 18	" 7	Aug 3
" 16	" 21	" 23	" 12	" 8
" 21	" 26	" 28	" 17	" 13
" 26	" 31	Feb 2	" 22	" 18
May 1	Apr 5	" 7	" 27	" 23
" 6	" 10	" 12	Oct 2	" 28
" 11	" 15	" 17	" 7	Sep 2
" 16	" 20	" 22	" 12	" 7
" 21	" 25	" 27	" 17	" 12
" 26	" 30	Mar 4	" 22	" 17
" 31	May 5	" 9	" 27	" 22
June 5	" 10	" 14	Nov 1	" 27
" 10	" 15	" 19	" 6	Oct 2
" 15	" 20	" 24	" 11	" 7
" 20	" 25	" 29	" 16	" 12
" 25	" 30	Apr 3	" 21	" 17
" 30	June 4	" 8	" 26	" 22
July 5	" 9	" 13	Dec 1	" 27
" 10	" 14	" 18	" 6	Nov 1
" 15	" 19	" 23	" 11	" 6
" 20	" 24	" 28	" 16	" 11
" 25	" 29	May 3	" 21	" 16
" 30	July 4	" 8	" 26	" 21
Aug 4	" 9	" 13	" 31	" 26
" 9	" 14	" 18	Jan 5	Dec 1
" 14	" 19	" 23	" 10	" 6
" 19	" 24	" 28	" 15	" 11
" 24	" 29	June 2	" 20	" 16
" 29	Aug 3	" 7	" 25	" 21
Sep 3	" 8	" 12	" 30	" 26
" 8	" 13	" 17	Feb 4	" 31
" 13	" 18	" 22	" 9	Jan 5
" 18	" 23	" 27	" 14	" 10
" 23	" 28	July 2	" 19	" 15
" 28	Sep 2	" 7	" 24	" 20
Oct 3	" 7	" 12	Mar 1	" 25
" 8	" 12	" 17	" 6	" 30
" 13	" 17	" 22	" 11	Feb 4
" 18	" 22	" 27	" 16	" 9
" 23	" 27	Aug 1	" 21	" 14
" 28	Oct 2	" 6	" 26	" 19
Nov 2	" 7	" 11	" 31	" 24
" 7	" 12	" 16	Apr 5	Mar 1
" 12	" 17	" 21	" 10	" 6
" 17	" 22	" 26	" 15	" 11
" 22	" 27	" 31	" 20	" 16
" 27	Nov 1	Sep 5	" 25	" 21
Dec 2	" 6	" 10	" 30	" 26
" 7	" 11	" 15	May 5	" 31
" 12	" 16	" 20	" 10	Apr 5
" 17	" 21	" 25	" 15	" 10
" 22	" 26	" 30	" 20	" 15
" 27	Dec 1	Oct 5	" 25	" 20
" 31	" 5	" 9	" 29	" 24

AMOUNT OF PAINT REQUIRED FOR A GIVEN SURFACE

It is impossible to give a rule that will apply in all cases, as the amount varies with the kind and the thickness of the paint, the kind of wood or other material to which it is applied, the age of the surface, etc. The following is an approximate rule: Divide the number of square feet of surface by 200. The result will be the number of gallons of liquid paint required to give two coats; or, divide by 18 and the result will be the number of pounds of pure ground white lead required to give three coats.

AREAS OR SURFACES—
HOW TO FIGURE THEM

Triangle=base times half perpendicular height

Parallelogram=base times perpendicular height

Trapezoid=half sum of parallel sides times perpendicular height

Circular=radius squared times 3.1416

Ellipse=long diameter times short diameter times 0.7854

Regular polygon=sum of sides times half perpendicular distance from sides to center (altitude of triangle)

Cylinder=area of both ends plus circumference times height

Sphere=diameter squared times 3.1416

TABLE OF LOSSES DUE TO SOOT AND FIRE SCALE

Thickness	Loss %	Loss per Ton
1/32"	8.5%	170 lbs.
1/24"	9.3%	186 lbs.
1/16"	15.0%	300 lbs.
1/8"	36.0%	720 lbs.

BELTING POINTERS

How to Find Length Required

When it is not convenient to measure with the tapeline, the length required, apply the following rule: Add the diameter of the two pulleys together, divide the result by 2, and multiply the quotient by 3¼; then add this product to twice the distance between the centers of the shafts, and you have the length required.

If possible to avoid, connected shafts should never be placed one directly over the other, as in such case, the belt must be kept very tight to do the work.

It is desirable that the angle of the belt with the floor should not exceed 45 degrees. It is also desirable to locate the shafting and machinery so that belts should run off from each shaft in opposite directions, as this arrangement will relieve the bearings from the friction that would result when the belts all pull one way on the shaft.

To Find the Belt Speed in Feet per Minute

Multiply diameter of pulley in inches by 3.1416. This gives circumference of pulley, and this result multiplied by number of revolutions will give you belt speed in inches.

Relative Transmission of H.P. for Any Given Width of Belt

The horsepower for a given speed will be directly proportioned to the width of the belt; that is, a 4-ply belt, 16 inches wide, running at a certain speed, will transmit eight times as much power as a 4-ply belt 2 inches wide, running at the same speed, and a belt 100 inches wide, ten times as much as a 10-inch belt of the same thickness, running at the same speed, etc.

To Find the H.P. That Any Given Belt Will Economically Transmit

Multiply the width of the belt in inches by its speed in feet and divide the result by 800. The final result will be the horsepower for a 4-ply belt. For a 6-ply belt, divide this result by 600; for 8-ply, divide this result by 400; for 10-ply, divide this result by 350.

To Find the Ply of a Belt of a Given Width Required

To economically transmit a given horsepower at a given belt speed, multiply the given horsepower by 800 and the given width in inches by the given belt speed in feet, and divide the first result by the second.

If the final result is one, or nearly one, a 4-ply belt is required; if one and one-half, a 6-ply belt is required; if one and three-quarters to two, an 8-ply belt is required; if two to two and one-quarter, a 10-ply belt is required.

To Find Width of Belt Required

To find the width of a 4-ply belt required economically to transmit a given horsepower at a given belt speed per minute: Multiply the given horsepower by 800, and divide the result by the given belt speed.

To find the width of a 6-ply belt required: Multiply the horsepower by 600; divide the result by belt speed.

To find the width of an 8-ply belt required: Multiply horsepower by 400; divide result by belt speed.

To find the width of a 10-ply belt required: Multiply horsepower by 350; divide result by belt speed.

To Find Speed and Diameter of Pulleys

The product of the diameter and speed of the driving pulleys equals the product of the diameter and speed of the driven pulley; consequently, if the speed and the diameter of the driving pulley are given, multiply them together and divide by the diameter of the driven pulley to find the speed of the driven; or divide by the speed of the driven pulley to find its diameter.

Example—The drive pulley on a tractor is 9½ inches in diameter and runs at 1,000 R.P.M.; what size pulley must be used on a thresher cylinder shaft that must run at 1,100 R.P.M.?

9½ times 1,000 equals 9,500; divided by 1,100, equals 8.64. Since pulleys are made only in certain standard diameters, use either the next size larger, 9-inch diameter, and raise the engine speed slightly, or use 8½-inch pulley, considering that the slight slippage will reduce the effective speed to the correct number of revolutions per minute.

## TABLE OF KITCHEN MEASURES

One quart of white flour equals sixteen ounces or one pound.

Two cupfuls of butter equal one pound.

Two cupfuls of granulated sugar equal one pound.

Two rounded cupfuls of powdered sugar equal one pound.

Eggs average ten to one pound.

One gill equals two ounces.

One pint equals one pound.

One-half gallon is one-fourth of a peck.

Four gallons is one-half bushel.

Sixteen tablespoons of liquid equals one cup.

Four cups of liquid equals one quart.

Four cups of flour equals one pound.

"Butter the size of an egg" equals two ounces or one-fourth of a cup.

One heaping tablespoonful of sugar equals one ounce.

Two round tablespoonfuls of flour equals one ounce.

Four teaspoonfuls equal one tablespoonful of liquid.

Four tablespoonfuls equal one wine-glass or one-half gill.

Two gills equal one coffee cup or sixteen tablespoonfuls.

Two wine-glasses equal one-half cup or one gill.

Two coffee cups equal one pint or one-half pound of liquid.

Two tablespoonfuls of liquid equals one ounce.

One tablespoonful of salt equals one ounce.

One coffee cup equals one standard measuring cup.

One tablespoonful of soft butter rounded equals one ounce.

One pint of finely chopped meat packed solidly equals one pound.

USEFUL INFORMATION

To find diameter of a circle multiply circumference by .31831.

To find circumference of a circle multiply diameter by 3.1416.

To find area of a circle multiply square of diameter by .7854.

To find surface of a ball multiply square of diameter by 3.1416.

To find side of an equal square multiply diameter by .8862.

To find cubic inches in a ball multiply cube of diameter by .5236.

Doubling diameter of a pipe increases its capacity four times.

Double riveting is from 16 to 20 per cent stronger than single.

One cubic foot of anthracite coal weighs about 53 pounds.

One cubic foot of bituminous coal weighs from 47 to 50 pounds.

One ton of coal is equivalent to two cords of wood for steam purposes.

A gallon of water (U. S. Standard) weighs 8⅓ lbs. and contains 231 cubic inches.

There are nine square feet of heating surface to each square foot of grate surface.

A cubic foot of water contains 7½ gallons, 1,728 cubic inches, and weighs 62½ lbs.

Each nominal horsepower of a boiler requires 30 to 35 lbs. of water per hour.

To sharpen dull files lay them in dilute sulphuric acid until they are eaten deep enough.

A horsepower is equivalent to raising 33,000 lbs. one foot per minute, or 550 lbs. one foot per second.

The average consumption of coal for steam boilers is 12 lbs. per hour for each square foot of grate surface.

To find the pressure in pounds per square inch of a column of water, multiply the height of the column in feet by 434.

Steam rising from water at its boiling point (212 degrees) has a pressure equal to the atmosphere (14.7 lbs., to the square inch).

FILES

SHAPE	CROSS SEC.	GENERAL USES
Mill	▭	Sharpening mill, ice and circular saws, axes, implements, knives, shears, tools; lathe work; draw filing; polishing
Taper or Three Cornered	△	Sharpening saws, axes and milling cutters
Slim Taper	△	Sharpening circular, cross-cut and buck saws
Extra Slim Taper	△	Sharpening fine-tooth hand and hack saws
Double Extra Slim Taper	△	Sharpening fine-tooth saws
Cant Saw	◁	Filing M-shaped teeth of cross-cut saws
Cross-Cut	◁	Sharpening cross-cut saws of the great American type. Also wood or buck saws
Pit Saw	◠	Filing teeth of pit or frame saws
Flat	▭	A general-purpose file. Good for flat surfaces
Hand	▭	Another general-purpose file for angles, corners, flat surfaces
Pillar	▭	Keyways, slots and narrow work
Warding	▭	Narrow work requiring thin file. Making keys
Square	□	Corners, grooves, keyways, slots
Three Square	△	Acute angles, corners, grooves, notches
Round	○	Holes, shaping curved surfaces
Half Round	◠	Concave corners, crevices, rounding holes
Knife	◁	Cleaning out acute angles, corners, slots

WEIGHT OF GRAIN AND PRODUCE PER BUSHEL

Article	Weight in Pounds
Alfalfa	60
Apples, Green	50
Apples, Dried	24
Barley	48
Beans, Castor	46
Beans, Dry	60
Beans, Green	24
Beans, Lima (Dry)	56
Beans, Lima (Unshelled)	32
Beans, Navy	60
Beans, Snap	30
Beans, Soy	60
Beans, White	60
Beets	60
Bermuda Grass	35
Blue Grass Seed	14
Bran	20
Buckwheat	52
Cane Seed	50
Carrots	50
Clover Seed	60
Corn, Kaffir	50-56
Corn, Pop (Ear)	70
Corn, Pop (Shelled)	56
Corn, Shelled	56
Corn in Ear, Shucked	70
Corn in Ear, with Husks	74
Corn, Meal	48
Corn, Sweet (Green)	35
Cotton Seed	33
Cowpeas	60
Cranberries	33
Cucumbers	48
Flax Seed	56
Gooseberries	40
Hemp Seed	44
Hickory Nuts	50
Hubam Seed	60
Hungarian Seed	48
Lespedeza in Old Pastures or with Mixtures	40-45
Lespedeza for Hay Crop	40-45
Malt	38
Millet Seed	50
Oats	32
Onions	57
Onion Top Sets	30
Onion Bottom Sets	32

Article	Weight in Pounds
Orchard Grass Seed	18
Osage Orange	36
Parsnips	50
Peaches, Dried	33
Peaches, Green	48
Peanuts, Spanish	30
Peanuts, Virginia	22
Pears	50
Peas, Stock and Green	60
Potatoes, Irish	60
Potatoes, Sweet	46
Quinces	48
Rape Seed	60
Red Top Seed	40
Rice, Rough	45
Rutabagas	50
Rye	56
Salt	50
Sorghum or Cane Seed	50
Sunflower	22
Sweet Clover	60
Timothy Seed	45
Tomatoes	45
Turnips	42
Walnuts	55
Wheat	60

CARE OF OILSTONES

Soak a new stone in oil for several days before using, unless it is of the oil-filled variety. Keep it in a box with a closed cover and leave a few drops of fresh, clean oil on it.

To preserve the flat, even surface, sharpen tools on the entire stone surface. Turn the stone end for end occasionally. A mixture of machine oil and kerosene (half and half) works well on most stones, although there is a special oil for this purpose. Some stones give best results with water, such as those made from natural rock.

Keep a supply of waste handy and wipe off dirty oil as soon as possible after using the stone. If the stone gets gummed up or becomes glazed, its cutting qualities can usually be restored with gasoline or ammonia. Scouring the stone with loose abrasive or with sandpaper fastened to a perfectly smooth board will sometimes help. If a silicon-carbide stone becomes clogged, it can be renovated by heating in an oven or over a fire. Place it in

CARE OF OILSTONES — Continued

a pan to catch the oil and dirt that will ooze out. Wipe the stone dry while it is hot, then resoak in oil.

If a stone becomes uneven, its flat surface can be restored by grinding on the side of a grindstone, or rubbing down with sandstone or a rubbing brick.

Porous stones may be tempered in their cutting by filling the surface with wax or vaseline.

POUNDS OF SEED USED PER ACRE — CLOSE DRILLS

Alfalfa	8-15
Barley	72-96
Blue Grass	15-25
Buckwheat	36-60
Cane or Sorghum	15-75
Clover, Alsike	6-8
Clover, Hop and Red	8-12
Clover, White	5-7
Corn, for Grain	6-10
Corn, for Silage	8-18
Cotton	24-32
Field Pea, Austrian Winter	30-90
Field Pea, Small Seeded	90-120
Field Pea, Large Seeded	120-180
Flax for Seed	28-42
Flax for Fiber	84
Hemp	44
Hungarian Grass or Millet	20-30
Kaffir	14-42
Lespedeza in Old Pastures or with Mixtures	12-15
Lespedeza for Hay Crop	20-25
Oats	48-128
Orchard Grass	20-25
Pumpkin	4
Peanuts (Shelled)	25-30
Peanuts (Unshelled)	35-45
Red Top	10-12
Rice (Rough)	90-100
Rye	28-112
Soybeans, Small Seeded (double for large)	60
Sunflowers	8-10
Sweet Clover (unhulled)	30-45
Sweet Clover (hulled)	12-15
Timothy	8-12
Wheat	30-120

In the sowing of seed there is so much to be considered in determining the quantity to be sown, such as type and quality of soil, locality, moisture, etc., that the above figures should be used only as approximating the correct amount.

SPRAY SCHEDULE FOR SMALL FRUITS

Fruit	Time of Application	Materials (For 5 Gal. Spray)	Control
(1) Gooseberries, Currants...	When plants are dormant	2 pounds dry limesulphur	Scale insects
(2) Blackberries, Raspberries	When tips of leaves first show green (1 spray only)	1½ pounds dry limesulphur	Scale and anthracnose
(3) Gooseberries, Currants...	When buds open but before bloom bursts	½ pound dry limesulphur	Anthracnose, leaf spot, mildew
(4) Gooseberries, Currants...	After bloom falls	½ pound dry limesulphur plus 30 level tablespoonfuls of arsenate of lead	Anthracnose, mildew, leaf spot, currant worm
(5) Gooseberries, Currants...	Three weeks after (4)	Same as for (4)	Same as for (4)

SPRAY SCHEDULE FOR TREE FRUITS

Fruit	Time of Application	Materials (For 5 Gal. Spray)	Control
(1) Cherry, Plum, Peach, Apple, Pear, Quince....	When trees are dormant	2 pounds dry limesulphur	Scale, peach leaf curl
(2) Cherry, Plum, Apple	When buds open but before bloom	½ pound dry limesulphur and 30 level tablespoonfuls arsenate lead	Curculio, apple scab
(3) Cherry, Plum, Apple, Pear, Quince	Just after petals fall	Same as (2).....	Curculio, codling moth scab, leaf spot
(4) Same as (3)..	2-3 weeks after (3)	Same as (2).....	Same as (3)
(5) Plum, Apple	3 weeks after (4)	Same as (2).....	Same as (3)
(6) Apple.......	3 weeks after (5)	Same as (2).....	Codling moth

NOTE:—For peach apply sprays 1, 3, 4 and 5 but substitute in 3, 4 and 5 dry mix sulphur for dry limesulphur. Dilute according to label.

SPRAY SCHEDULE FOR GRAPES*

Fruit	Time of Application	Materials (For 5 Gal. Spray)	Control
(1) Grapes......	When new shoots are 8-10 inches long	4-4-50 prepared dry bordeaux at label strength and 30 level tablespoonfuls arsenate of lead	
(2) Grapes......	Just after petals fall	Same as (1) (Grapes)	Black rot, mildew, curculio
(3) Grapes......	3 weeks after (2)	Same as (1) (Grapes)	Same as (2)

*In case black rot has not been controlled satisfactorily it may be necessary to spray every two weeks until four weeks before ripening.

WHEN TO PLANT

Planting times must be adjusted to local conditions. Planting must not be done until the soil is loose and mellow several inches down. And it must be done in time to allow the plants to mature. Cabbage, Cauliflower and Tomatoes are best started from seed in a hotbed and later transplanted.

Asparagus	April to May
Beets	April to Aug.
Bush Beans	May to Aug.
Cabbage	April to May
Carrots	April to July
Cauliflower	April to May
Celery	March to April
Corn	May to July
Cucumbers	April to July
Lettuce	April to Aug.
Onions	April to May
Parsley	April to June
Parsnips	April to June
Peas	April to July
Potatoes	March to June
Radishes	April to Aug.
Spinach	April to Aug.
Tomatoes	May to June
Turnips	April to Aug.

TEMPERATURES DANGEROUS TO FRUITS AND PLANTS

Plants may often be saved from injury from frost if given slight protection. A cover of cheesecloth is usually sufficient; branches of trees will sometimes suffice.

In small sheltered gardens frost may sometimes be warded off by building a smudge fire or by placing shallow pans of water near the plants.

Frost usually comes when the sky is clear, the wind dies down at sunset, and the air has a crisp, sharp feeling.

The following table shows the temperatures at which the plants mentioned are liable to receive injury from frost.

PLANT OR FRUIT	In Bud	In Blossom	In Setting Fruit	At Other Times
Apples............	27	29	30	26
Apricots..........	30	31	32	30
Asparagus........	29	29	29	26
Barley............	......	29	......	......
Beans............	......	31	......	......
Beets............	......	......	......	25
Cabbage..........	......	......	......	15-27
Cantaloupes......	32	32	......	30-31
Cauliflower.......	......	......	......	20-27
Celery...........	......	......	......	28
Cucumbers.......	31	31	31	32
Cymplings or squash.....	31	31	31	30
Grapes..........	31	31	30	28
Lemons..........	30	31	31	28
Lettuce..........	......	......	......	12-28
Oats.............	31	......	......	......
Okra............	......	......	......	31
Onions..........	......	......	......	20
Parsnips.........	......	......	......	27
Peaches.........	29	30	30	29
Pears...........	28	29	29	28
Peas............	29	30	30	25
Plums..........	30	31	31	29
Potatoes: Irish....	30	30	30	31
Potatoes: Sweet....	31	31	31	31
Prunes..........	30	31	31	29
Radishes........	......	......	......	25
Shrubs, trees, or roses....	26-30	28-32	......	30-26
Spinach.........	......	......	......	21
Strawberries........	28	28	28	30
Tomatoes........	31	31	31	31
Turnips.........	......	......	......	26
Watermelons......	......	......	......	28-31
Wheat...........	......	31	31	......
Walnuts, English......	30	31	31	28

TIME NEEDED FOR GARDEN SEEDS TO GERMINATE

	Days
Bean	5 to 10
Beet	7 to 10
Cabbage	5 to 10
Carrot	12 to 18
Cauliflower	5 to 10
Celery	10 to 20
Corn	5 to 8
Cucumber	6 to 10
Lettuce	6 to 8
Onion	7 to 10
Pea	6 to 10
Parsnip	10 to 20
Pepper	9 to 14
Radish	3 to 6
Tomato	6 to 12
Turnip	4 to 8

TABLE OF WEIGHTS AND MEASURES

Fruit or Vegetable	Measure	Weight	Quart Jars
Red Raspberries	24 pt. crate	16 lbs. net	8
Strawberries	16 qt. crate	22 lbs. net	8
Cherries	16 qt. crate	22 lbs. net	12
Peaches	1 bushel	48 to 50 lbs.	25
String Beans	1 peck	6 lbs.	6-8 pints
Carrots	1 bushel	50 lbs.	40 pints
Corn	1 bushel	70 lbs.	16 pints
Tomatoes	1 peck	14 lbs.	7-9 pints

NUMBER OF SHRUBS OR PLANTS FOR AN ACRE

Distance Apart	No. of Plants	Distance Apart	No. of Plants	Distance Apart	No. of Plants
3 x3 inches	696,690	4 x 4 feet	2,722	13 x13 feet	257
4 x4 "	392,040	4½x 4½ "	2,151	14 x14 "	222
6 x6 "	174,240	5 x 1 "	8,712	15 x15 "	193
9 x9 "	77,440	5 x 2 "	4,356	16 x16 "	170
1 x1 foot	43,560	5 x 3 "	2,904	16½x16½ "	160
1½x1½ feet	19,360	5 x 4 "	2,178	17 x17 "	150
2 x1 "	21,780	5 x 5 "	1,742	18 x18 "	134
2 x2 "	10,890	5½x 5½ "	1,417	19 x19 "	120
2½x2½ "	6,960	6 x 6 "	1,210	20 x20 "	108
3 x1 "	14,620	6½x 6½ "	1,031	25 x25 "	69
3 x2 "	7,260	7 x 7 "	881	30 x30 "	48
3 x3 "	4,840	8 x 8 "	680	33 x33 "	40
3½x3½ "	3,555	9 x 9 "	537	40 x40 "	27
4 x1 "	10,890	10 x10 "	435	50 x50 "	17
4 x2 "	5,445	11 x11 "	360	60 x60 "	12
4 x3 "	3,630	12 x12 "	302	66 x66 "	10

FRUIT-BEARING TABLE

PLANT OR FRUIT	Time to Bear	Good Crop	Length of Bearing Season
Apple..............	3 years	10 years	25-40 years
Blackberry.........	1 year	3 years	6-14 years
Currant............	1 year	3 years	20 years
Gooseberry.........	1 year	3 years	20 years
Oranges and Lemons..	3 years	6 years	50 years
Peach..............	2 years	5 years	12 years
Pear...............	4 years	12 years	75 years
Plum..............	3 years	6 years	25 years
Quince.............	2 years	4 years	15 years
Raspberry..........	1 year	3 years	12 years
Strawberry.........	1 year	2 years	3 years

COST OF ONE POUND OF FEED AT A GIVEN PRICE PER TON

Price Per Ton	Cost of 1 Lb. Cents	Price Per Ton	Cost of 1 Lb. Cents	Price Per Ton	Cost of 1 Lb. Cents
$ 3.00	.150	$16.00	.800	$36.50	1.825
3.25	.162	16.50	.825	37.00	1.850
3.50	.175	17.00	.850	37.50	1.875
3.75	.187	17.50	.875	38.00	1.900
4.00	.200	18.00	.900	38.50	1.925
4.25	.212	18.50	.925	39.00	1.950
4.50	.225	19.00	.950	39.50	1.975
4.75	.237	19.50	.975	40.00	2.000
5.00	.250	20.00	1.000	40.50	2.025
5.25	.262	20.50	1.025	41.00	2.050
5.50	.275	21.00	1.050	41.50	2.075
5.75	.287	21.50	1.075	42.00	2.100
6.00	.300	22.00	1.100	42.50	2.125
6.25	.312	22.50	1.125	43.00	2.150
6.50	.325	23.00	1.150	43.50	2.175
6.75	.337	24.00	1.200	44.00	2.200
7.00	.350	24.50	1.225	44.50	2.225
7.25	.362	25.00	1.250	45.00	2.250
7.50	.375	25.50	1.275	45.50	2.275
7.75	.387	26.00	1.300	46.00	2.300
8.00	.400	26.50	1.325	46.50	2.325
8.25	.412	27.00	1.350	47.00	2.350
8.50	.425	27.50	1.375	47.50	2.375
8.75	.437	28.00	1.400	48.00	2.400
9.00	.450	28.50	1.425	48.50	2.425
9.25	.462	29.00	1.450	49.00	2.450
9.50	.475	29.50	1.475	49.50	2.475
9.75	.487	30.00	1.500	50.00	2.500
10.00	.500	30.50	1.525	50.50	2.525
10.50	.525	31.00	1.550	51.00	2.550
11.00	.550	31.50	1.575	51.50	2.575
11.50	.575	32.00	1.600	52.00	2.600
12.00	.600	32.50	1.625	52.50	2.625
12.50	.625	33.00	1.650	53.00	2.650
13.00	.650	33.50	1.675	53.50	2.675
13.50	.675	34.00	1.700	54.00	2.700
14.00	.700	34.50	1.725	54.50	2.725
14.50	.725	35.00	1.750	55.00	2.750
15.00	.750	35.50	1.775	55.50	2.775
15.50	.775	36.00	1.800	56.00	2.800

COST OF ONE POUND AT A GIVEN PRICE AND WEIGHT PER BUSHEL

When a Bushel Costs	WHEN A BUSHEL WEIGHS				
	32 Lbs.	48 Lbs.	56 Lbs.	60 Lbs.	70 Lbs.
	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs
Cents	Cents	Cents	Cents	Cents	Cents
20	0.625	0.417	0.357	0.333	0.286
21	0.656	0.437	0.375	0.350	0.300
22	0.687	0.458	0.393	0.367	0.314
23	0.719	0.479	0.411	0.383	0.328
24	0.750	0.500	0.428	0.400	0.343
25	0.781	0.521	0.446	0.417	0.357
26	0.812	0.542	0.464	0.433	0.371
27	0.844	0.563	0.482	0.450	0.386
28	0.875	0.583	0.500	0.467	0.400
29	0.906	0.604	0.518	0.483	0.414
30	0.937	0.625	0.536	0.500	0.428
31	0.969	0.646	0.554	0.517	0.443
32	1.000	0.667	0.571	0.533	0.457
33	1.031	0.687	0.589	0.550	0.471
34	1.062	0.708	0.607	0.567	0.486
35	1.094	0.729	0.625	0.583	0.500
36	1.125	0.750	0.643	0.600	0.514
37	1.156	0.771	0.661	0.617	0.528
38	1.187	0.792	0.678	0.633	0.543
39	1.219	0.812	0.696	0.650	0.557
40	1.250	0.833	0.714	0.667	0.571
41	1.281	0.854	0.732	0.683	0.586
42	1.312	0.875	0.750	0.700	0.600
43	1.344	0.896	0.768	0.717	0.614
44	1.375	0.917	0.786	0.733	0.628
45	1.406	0.937	0.804	0.750	0.643
46	1.437	0.958	0.821	0.767	0.657
47	1.469	0.979	0.839	0.783	0.671
48	1.500	1.000	0.857	0.800	0.686
49	1.531	1.021	0.875	0.817	0.700
50	1.562	1.042	0.893	0.833	0.714
51	1.594	1.062	0.911	0.850	0.728
52	1.625	1.082	0.928	0.867	0.743
53	1.656	1.104	0.946	0.883	0.757
54	1.687	1.125	0.964	0.900	0.771
55	1.719	1.146	0.982	0.917	0.786
56	1.750	1.167	1.000	0.933	0.800
57	1.781	1.187	1.013	0.950	0.814
58	1.812	1.208	1.036	0.967	0.828
59	1.844	1.229	1.054	0.983	0.843
60	1.875	1.250	1.071	1.000	0.857

COST OF ONE POUND AT A GIVEN PRICE AND WEIGHT PER BUSHEL — Continued

When a Bushel Costs	WHEN A BUSHEL WEIGHS				
	32 Lbs.	48 Lbs.	56 Lbs.	60 Lbs.	70 Lbs.
	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs
Cents	Cents	Cents	Cents	Cents	Cents
61	1.906	1.271	1.089	1.016	0.871
62	1.937	1.292	1.107	1.033	0.886
63	1.969	1.312	1.125	1.050	0.900
64	2.000	1.333	1.143	1.067	0.914
65	2.031	1.354	1.161	1.083	0.928
66	2.062	1.375	1.178	1.100	0.943
67	2.094	1.396	1.196	1.117	0.957
68	2.125	1.417	1.214	1.133	0.971
69	2.156	1.437	1.232	1.150	0.986
70	2.187	1.458	1.250	1.167	1.000
71	2.219	1.479	1.268	1.183	1.014
72	2.250	1.500	1.286	1.200	1.028
73	2.281	1.521	1.303	1.217	1.043
74	2.312	1.542	1.321	1.233	1.057
75	2.344	1.562	1.339	1.250	1.071
76	2.375	1.583	1.357	1.267	1.086
77	2.406	1.604	1.375	1.283	1.100
78	2.437	1.625	1.393	1.300	1.114
79	2.469	1.646	1.411	1.317	1.128
80	2.500	1.667	1.428	1.333	1.143
81	2.531	1.687	1.446	1.350	1.157
82	2.562	1.708	1.464	1.367	1.171
83	2.594	1.729	1.482	1.383	1.186
84	2.625	1.750	1.500	1.400	1.200
85	2.656	1.771	1.518	1.417	1.214
86	2.687	1.792	1.536	1.433	1.228
87	2.719	1.812	1.553	1.450	1.243
88	2.750	1.833	1.571	1.467	1.257
89	2.781	1.854	1.589	1.483	1.271
90	2.812	1.875	1.607	1.500	1.286
91	2.844	1.896	1.625	1.517	1.300
92	2.875	1.917	1.643	1.533	1.314
93	2.906	1.937	1.661	1.550	1.328
94	2.937	1.958	1.678	1.567	1.343
95	2.969	1.979	1.696	1.583	1.357
96	3.000	2.000	1.714	1.600	1.371
97	3.031	2.021	1.732	1.617	1.386
98	3.062	2.041	1.750	1.633	1.400
99	3.094	2.062	1.768	1.650	1.414
100	3.125	2.083	1.786	1.667	1.428

Lbs.	$1.00	$1.25	$1.50	$1.75	$2.00	$2.25	$2.50
1	.01	.01	.01	.01	.02	.02	.02
2	.02	.02	.03	.03	.04	.04	.05
3	.03	.03	.04	.05	.06	.06	.07
4	.04	.05	.06	.07	.08	.09	.10
5	.05	.06	.07	.08	.10	.11	.12
10	.10	.12	.15	.17	.20	.22	.25
15	.15	.18	.22	.26	.30	.34	.37
20	.20	.25	.30	.35	.40	.45	.50
25	.25	.31	.37	.43	.50	.56	.62
30	.30	.37	.45	.52	.60	.67	.75
35	.35	.43	.52	.61	.70	.78	.87
40	.40	.50	.60	.70	.80	.90	1.00
45	.45	.56	.67	.78	.90	1.01	1.12
50	.50	.62	.75	.87	1.00	1.12	1.25
55	.55	.68	.82	.96	1.10	1.23	1.32
60	.60	.75	.90	1.05	1.20	1.35	1.50
65	.65	.81	.97	1.13	1.30	1.46	1.62
70	.70	.87	1.05	1.22	1.40	1.57	1.75
75	.75	.93	1.12	1.31	1.50	1.68	1.87
80	.80	1.00	1.20	1.40	1.60	1.80	2.00
85	.85	1.06	1.27	1.48	1.70	1.91	2.12
90	.90	1.12	1.35	1.57	1.80	2.02	2.25
95	.95	1.18	1.42	1.66	1.90	2.13	2.37
100	1.00	1.25	1.50	1.75	2.00	2.25	2.50
105	1.05	1.31	1.57	1.83	2.10	2.36	2.62
110	1.10	1.37	1.65	1.92	2.20	2.45	2.75
115	1.15	1.43	1.72	2.01	2.30	2.56	2.87
120	1.20	1.50	1.80	2.10	2.40	2.70	2.90
125	1.25	1.56	1.87	2.18	2.50	2.81	3.12
130	1.30	1.62	1.95	2.27	2.60	2.92	3.25
135	1.35	1.68	2.02	2.36	2.70	3.03	3.37
140	1.40	1.75	2.10	2.45	2.80	3.15	3.50
145	1.45	1.81	2.17	2.53	2.90	3.26	3.62
150	1.50	1.87	2.25	2.62	3.00	3.37	3.75
155	1.55	1.93	2.32	2.71	3.10	3.48	3.87
160	1.60	2.00	2.40	2.80	3.20	3.60	4.00
165	1.65	2.06	2.47	2.88	3.30	3.71	4.12
170	1.70	2.12	2.55	2.97	3.40	3.82	4.24
175	1.75	2.18	2.62	3.06	3.50	3.93	4.36
180	1.80	2.25	2.70	3.15	3.60	4.05	4.50
185	1.85	2.31	2.77	3.23	3.70	4.16	4.62
190	1.90	2.37	2.85	3.32	3.80	4.27	4.75
195	1.95	2.43	2.92	3.41	3.90	4.38	4.87
200	2.00	2.50	3.00	3.50	4.00	4.50	5.00
225	2.25	2.81	3.37	3.93	4.50	5.06	5.62
250	2.50	3.12	3.75	4.37	5.00	5.62	6.24
275	2.75	3.47	4.12	4.81	5.50	6.18	6.86
300	3.00	3.75	4.50	5.25	6.00	6.75	7.50
325	3.25	4.06	4.87	5.68	6.50	7.31	8.12
350	3.50	4.37	5.25	6.12	7.00	7.87	8.75
375	3.75	4.68	5.62	6.56	7.50	8.43	9.37
400	4.00	5.00	6.00	7.00	8.00	9.00	10.00
450	4.50	5.62	6.75	7.87	9.00	10.02	11.25
500	5.00	6.25	7.50	8.75	10.00	11.25	12.50

Lbs.	$2.75	$3.00	$3.25	$3.50	$3.75	$4.00	$4.25
1	.02	.03	.03	.04	.04	.04	.04
2	.05	.06	.07	.07	.08	.08	.09
3	.08	.09	.10	.11	.11	.12	.13
4	.11	.12	.13	.14	.15	.16	.17
5	.13	.15	.16	.18	.19	.20	.21
10	.27	.30	.33	.35	.38	.40	.43
15	.41	.45	.49	.53	.56	.60	.64
20	.55	.60	.65	.70	.75	.80	.85
25	.68	.75	.81	.88	.94	1.00	1.06
30	.82	.90	.98	1.05	1.13	1.20	1.28
35	.96	1.05	1.14	1.23	1.31	1.40	1.49
40	1.10	1.20	1.30	1.40	1.50	1.60	1.70
45	1.23	1.35	1.46	1.58	1.69	1.80	1.91
50	1.37	1.50	1.63	1.75	1.88	2.00	2.13
55	1.51	1.65	1.79	1.93	2.06	2.20	2.34
60	1.60	1.80	1.95	2.10	2.25	2.40	2.55
65	1.78	1.95	2.11	2.28	2.44	2.60	2.76
70	1.92	2.10	2.28	2.45	2.63	2.80	2.98
75	2.06	2.25	2.44	2.63	2.81	3.00	3.19
80	2.20	2.40	2.60	2.80	3.00	3.20	3.40
85	2.35	2.55	2.76	2.98	3.19	3.40	3.61
90	2.47	2.70	2.93	3.15	3.38	3.60	3.83
95	2.61	2.85	3.09	3.33	3.56	3.80	4.04
100	2.75	3.00	3.25	3.50	3.75	4.00	4.25
105	2.88	3.15	3.41	3.68	3.94	4.20	4.46
110	3.02	3.30	3.58	3.85	4.13	4.40	4.68
115	3.16	3.45	3.74	4.03	4.31	4.60	4.89
120	3.30	3.60	3.90	4.20	4.50	4.80	5.10
125	3.43	3.75	4.06	4.38	4.69	5.00	5.31
130	3.57	3.90	4.23	4.55	4.88	5.20	5.53
135	3.70	4.05	4.39	4.73	5.06	5.40	5.74
140	3.85	4.20	4.55	4.90	5.25	5.60	5.95
145	3.98	4.35	4.71	5.07	5.44	5.80	6.16
150	4.12	4.50	4.88	5.25	5.63	6.00	6.38
155	4.26	4.65	5.04	5.43	5.81	6.20	6.59
160	4.40	4.80	5.20	5.60	6.00	6.40	6.80
165	4.53	4.95	5.36	5.78	6.19	6.60	7.01
170	4.66	5.10	5.53	5.95	6.38	6.80	7.23
175	4.79	5.25	5.69	6.13	6.56	7.00	7.44
180	4.95	5.40	5.85	6.30	6.75	7.20	7.65
185	5.08	5.55	6.01	6.48	6.94	7.40	7.86
190	5.22	5.70	6.18	6.65	7.13	7.60	8.08
195	5.36	5.85	6.34	6.83	7.31	7.80	8.29
200	5.50	6.00	6.50	7.00	7.50	8.00	8.50
225	6.18	6.75	7.31	7.88	8.44	9.00	9.56
250	6.86	7.50	8.13	8.75	9.38	10.00	10.63
275	7.54	8.25	8.94	9.63	10.31	11.00	11.69
300	8.25	9.00	9.75	10.50	11.25	12.00	12.75
325	8.93	9.75	10.56	11.38	12.19	13.00	13.81
350	9.62	10.50	11.38	12.25	13.13	14.00	14.88
375	10.31	11.25	12.19	13.13	14.06	15.00	15.94
400	11.00	12.00	13.00	14.00	15.00	16.00	17.00
450	12.37	13.50	14.63	15.75	16.88	18.00	19.13
500	13.75	15.00	16.25	17.50	18.75	20.00	21.25

ROUGH AND DRESSED LUMBER SIZES

When you buy a dressed two-by-four, you get a piece of lumber that actually measures 1⅝" by 3⅝", the difference having been planed away in the process of dressing. All dressed lumber is thus reduced in size to some extent, the amount depending upon the number of sides planed. This reduction, however, is not a hit-or-miss affair, left to the whim of any particular mill operator; it is guided by standards established by the National Bureau of Standards with the cooperation of representative manufacturers and lumber users.

The table below gives standard dressed sizes for yard and structural lumber, the type most widely used. Standard sizes are slightly different in the case of factory and shop lumber intended for use by industrial plants that resaw it or work it up into other products.

NOMINAL AND ROUGH WIDTHS (Inches) — WIDTHS OF DRESSED SIZES

Nominal/Rough Width	\ Nominal and Rough Thickness → 1	1¼	1½	2	2½	3	4	5	6	7	8	Thicker than 8
Wider Than 8	½ off	½ off	½ off	½ off	½ off	½ off	½ off	½ off	½ off	½ off	½ off	½ off
8	7½	7½	7½	7½	7½	7½	7½	7½	7½	7½	7½	··
7	6⅝	6⅝	6⅝	6⅝	6⅝	6⅝	6⅝	6½	6½	6½	··	··
6	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5½	5½	··	··	··
5	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4½	··	··	··	··
4	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	··	··	··	··	··
3	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	··	··	··	··	··	··
2	1⅝	1⅝	1⅝	1⅝	1⅝	··	··	··	··	··	··	··

THICKNESSES (Inches)

	1	1¼	1½	2	2½	3	4	5	6	7	8	Thicker than 8
Dressed	25⁄32	1 1⁄16	1 5⁄16	1 5⁄8	2 1⁄8	2 5⁄8	3 5⁄8	4½	5½	6½	7½	½ off
Nominal and Rough	1	1¼	1½	2	2½	3	4	5	6	7	8	

S4S (surfaced 4 sides), S1S1E (surfaced 1 side and 1 edge), S2S1E and S1S2E sizes are the same. S1S or S2S—Dressed thickness by nominal or rough width. S1E or S2E—Dressed width by nominal or rough thickness.

BOARD MEASURE

Size	Length in Feet							
	12	14	16	18	20	22	24	26
	Square Feet							
1 x 8	8	9⅓	10⅔	12	13⅓	14⅔	16	17⅓
1 x 10	10	11⅔	13⅓	15	16⅔	18⅓	20	21⅔
1 x 12	12	14	16	18	20	22	24	26
1 x 14	14	16⅓	18⅔	21	23⅓	25⅔	28	30⅓
1 x 16	16	18⅔	21⅓	24	26⅔	29⅓	32	34⅔
2 x 3	6	7	8	9	10	11	12	13
2 x 4	8	9⅓	10⅔	12	13⅓	14⅔	16	17⅓
2 x 6	12	14	16	18	20	22	24	26
2 x 8	16	18⅔	21⅓	24	26⅔	29⅓	32	34⅔
2 x 10	20	23⅓	26⅔	30	33⅓	36⅔	40	43⅓
2 x 12	24	28	32	36	40	44	48	52
2 x 14	28	32⅔	37⅓	42	46⅔	51⅓	56	60⅔
2 x 16	32	37⅓	42⅔	48	53⅓	58⅔	64	69⅓
3 x 4	12	14	16	18	20	22	24	26
3 x 6	18	21	24	27	30	33	36	39
3 x 8	24	28	32	36	40	44	48	52
3 x 10	30	35	40	45	50	55	60	65
3 x 12	36	42	48	54	60	66	72	78
3 x 14	42	49	56	63	70	77	84	91
3 x 16	48	56	64	72	80	88	96	104
4 x 4	16	18⅔	21⅓	24	26⅔	29⅓	32	34⅔
4 x 6	24	28	32	36	40	44	48	52
4 x 8	32	37⅓	42⅔	48	53⅓	58⅔	64	69⅓
4 x 10	40	46⅔	53⅓	60	66⅔	73⅓	80	86⅔
4 x 12	48	56	64	72	80	88	96	104
4 x 14	56	65⅓	74⅔	84	93⅓	102⅔	112	121⅓
4 x 16	64	74⅔	85⅓	96	106⅔	117⅓	128	138⅔
6 x 6	36	42	48	54	60	66	72	78
6 x 8	48	56	64	72	80	88	96	104
6 x 10	60	70	80	90	100	110	120	130
6 x 12	72	84	96	108	120	132	144	156
6 x 14	84	98	112	126	140	154	168	182
6 x 16	96	112	128	144	160	176	192	208
8 x 8	64	74⅔	85⅓	96	106⅔	117⅓	128	138⅔
8 x 10	80	93⅓	106⅔	120	133⅓	146⅔	160	173⅓
8 x 12	96	112	128	144	160	176	192	208
8 x 14	112	130⅔	149⅓	168	186⅔	205⅓	224	242⅔
8 x 16	128	149⅓	170⅔	192	213⅓	234⅔	256	277⅓
10 x 10	100	116⅔	133⅓	150	166⅔	183⅓	200	216⅔
10 x 12	120	140	160	180	200	220	240	260
10 x 14	140	163⅓	186⅔	210	233⅓	256⅔	280	303⅓
10 x 16	160	186⅔	213⅓	240	266⅔	293⅓	320	346⅔
12 x 12	144	168	192	216	240	264	288	312
12 x 14	168	196	224	252	280	308	336	364
12 x 16	192	224	256	288	320	352	384	416
14 x 14	196	228⅔	261⅓	294	326⅔	359⅓	392	424⅔
14 x 16	224	261⅓	298⅔	336	373⅓	410⅔	448	485⅓
16 x 16	256	298⅔	341⅓	384	426⅔	469⅓	512	554⅓

SPREADING RATES OF PAINT

Coating Material	Character of Surface	Surface Covered by 1 Gallon		
		1 Coat	2 Coats	3 Coats
		Sq. Ft.	Sq. Ft.	Sq. Ft.
Oil paint (gloss finish)...........	Smooth wood........	600	325	225
	Rough wood.........	350	200	135
	Metal..............	700	340	230
	Plaster..............	450	250	175
	Hard Brick..........	400	225	160
	Soft Brick..........	350	200	150
	Smooth cement.......	350	200	150
	Rough cement (stucco).	200	100	...
Oil paint (flat finish).	Smooth wood or wall board..........	500	275	200
	Plaster..............	400	225	160
	Hard brick..........	350	200	150
	Soft brick..........	300	175	125
	Smooth cement.......	300	175	125
	Rough cement (stucco).	150	75	...
Enamel paint........	Smooth, painted with undercoats..........	500	250	...
Exterior spar varnish.	Smooth wood........	500	275	200
Interior finishing varnish...........	Smooth wood........	450	250	175
Shellac.............	Smooth wood........	600	300	...
Shingle stain*........	Rough wood..........	125	75	...
Asphalt roof paint...	Smooth..............	250	...	...
	Rough..............	150	...	...
Asphalt-asbestos liquid roof cement..	Smooth..............	100	...	...
Cold-water paint (5 lb. powder).....	Smooth..............	300	...	...
Calcimine (5 lb. powder).....	Plaster..............	400	...	...
Whitewash (4 to 5 lb. hydrated lime).	Wood................	250	...	...
	Brick................	200	...	...
	Plaster..............	300	...	...

*2½ gal. per 1,000 shingles when dipped two-thirds their length.

TRACTOR AND TRUCK RECORD

DATE	GAS	OIL	TIRES	REPAIRS	MISCELLANEOUS								

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