

tal and personal labour united. About ten per cent. on his capital is all that an active and intelligent farmer can reasonably hope for as his return. From this must be deducted at the least four per cent., as the interest which would accrue from the capital if invested in such a way as to demand no labour or attention. Five per cent., indeed, is the deduction which is usually made in every case where risk is involved. But as we do not wish to overstate the case, let us allow six per cent. as the farmer's real profit on his capital as an agriculturist. It will quickly appear from a few figures that if an amateur farmer simply fails of making this six per cent., and does not also positively lose the additional four per cent., he is a marvelously lucky fellow. The chances are that he will not only lose the interest on his capital, but the whole rent of the land he cultivated into the bargain. And the secret of his loss is this. He pays too much for almost everything he buys. It is not that he necessarily farms ill, or is cheated on all sides, or fails to sell his produce at the market price. These sources of failure doubtless help to empty his pockets, but they are comparatively minor evils. His account book presents a balance on the wrong side, chiefly because he rarely purchases in the cheapest market. Every gentleman is painfully aware that for every cow he gives a guinea more than he ought to give. When he buys sheep, he thinks it little matter if he pays guineas instead of pounds. An extra shilling on a little pig is a bagatelle. And as for horseflesh—he never dreams of not giving a matter of five guineas too much for a fine teamster. In short, if we assume that our amateur pays only two shillings in the pound or ten per cent. more than the professional for his bullocks, his cows, his horses, and his sheep, we shall let him off more easily than he deserves. But what does this extra ten per cent. mean? The whole of the live stock of a farm, on the average, from horses down to sheep and pigs, cannot be supposed as remaining more than three years. In other words, about one third of it will have to be renewed every year. We have already got him to the point when all profits have more than disappeared, and his conscience tells a worse tale still. He is not only quite ready with his humble confession that he has habitually expended his inevitable sixpence where his tenant only pays fivepence, but he painfully shrugs his shoulders when he reflects on his weekly list of labourers, and the banker's cheques which he has drawn on behalf of his numerous and sleek-looking teams. He desires only to draw a curtain tenderly over the past, and loudly echoes the statement that he who would succeed as a farmer must live like a farmer, and, above all, must screw like a farmer. If a man cannot do this, his consolation must be that he has ridden his hobby, and paid for it.—*The Saturday Review*

COMPARATIVE VALUE OF WOOD FOR FUEL.

Messrs. Editors,—The subject of obtaining and preparing wood for fuel is one of considerable importance, and although it will probably receive but little attention from those who own land that has a supply of wood on it, yet there is a large class of persons who are under the necessity of buying their fire-wood, and it seems desirable that they should know the comparative value of the different kinds of wood for fuel, in order that they may be able to spend their money to the best advantage in the purchase of their fuel. From experiments made to determine the comparative value of different kinds of wood for fuel, results have been obtained according to the following table :

Shelbark Hickory.....	109	Yellow Oak.....	64
Pig-cut Hickory.....	95	Hard Maple.....	59
White Oak.....	84	White Elm.....	54
White Ash.....	77	Red Cedar.....	54
Hogwood.....	75	Wild Cherry.....	53
Scrub Oak.....	73	Yellow Pine.....	51
White Hazel.....	72	Chestnut.....	51
Apple Tree.....	70	Yew or Poplar.....	51
Red Oak.....	69	Batternut.....	51
White Birch.....	65	White Birch.....	48
Black Walnut.....	65	White Pine.....	48
Black Birch.....	62		

"Some woods are softer and lighter than others—the harder and heavier having their fibres more closely packed together. But the same species of wood may vary in density, according to the conditions of its growth. Those woods which grow in forests, or in rich wet grounds, are less consolidated than such as stand in the open fields, or grow slowly upon dry barren soils. There are two stages in the burning of wood—in the first heat comes chiefly from flame; in the second, from red hot coals. Soft woods are much more active in the first stage than hard, and hard wood more active in the second than soft. The soft woods burn with a voluminous flame, and leave but little coal; while the hard woods produce a less flame, and yield a larger mass of coal.

"The purpose, however, for which it is needed must be considered. Although white pine, compared to hickory, is only as 42 to 100 for heat, if a quick fire be needed for immediate warmth, or kindling for coal or other wood, the pine, or other soft wood, is the most suitable."

The comparative value of hard and soft wood will depend very much on the purposes for which they are used. Where a steady and continuous heat is required, hard wood is much the most valuable; but when a quick and active heat with a steady flame is wanted, soft wood seems to be preferable. In making sugar I prefer about equal proportions of hard and soft wood, as I can boil more sap in a given time with this proportion than with either kind separately. On railroads soft woods are used exclusively, as a quick and rapid flame of heat is wanted. On the other hand the steady and intense heat required for the furnace or forge needs hard wood or coal to produce it. E.