

that their nutrient elements have been withdrawn. The stock farmer in the virgin fields of eastern Oregon; or Washington must keep his lands up. He must be a diligent cultivator. He must be like the Belgians, whose land worth \$1,600, per acre, gather up whatever will enrich from yards and barns and roadways, and transfer it to his lands. A plan to do this, with a thoughtful economy of time and means, will make his acres pay large annual profits. The question with him will be not "how many, but how well." The gain of stock, fed on rich home pastures and stall, fed in the winter and spring, and made ready for the market on call, will be realized in high prices and prompt payments, as well as in larger growths. The saving in time and toil will surpass the incomes from roving herds over vast plains. A stock farm in any of the upper countries, conducted on this plan, is more sure and more reasonable than the wide ranges eaten off, have proved to be.

OBJECTIONS.

Scarcity of water is feared and felt. In some localities wells fail, springs dry up, and streams run out. Yet the upper Columbia basin is enclosed in a rim of high mountains and highlands which abound in springs and streams. The wide pastures have not failed for lack of water, or their herds died of thirst. Arid regions are changed by the plough. Green wheat fields in midsummer on high plains, are two-thirds water, showing a supply from the air by condensation. Wells are dug in dry gulches which give living water all the year. Others are sunk into the crumbled basalts 60 to 70 feet deep which furnish abundant supplies. With increase of farms, the water flow increases or becomes more manifest. The wide plains of Wasco, Umatilla, Walla Walla, Columbia, Whitman, Spokane, Klickitat and Yakima counties, once supposed to be dry and useless for farms, are proving to become the best grain, and vegetable, and timber culture claims. Sections on which no trees ever grew are now dotted with orchards, gardens, fields, pastures and clumps of trees, thrifty and promising in even the driest seasons. These prove that immense bodies of invisible vapor are present in the heated air, subject to deposit by every well ploughed field, and every leaf of vegetation, while

every grain of moisture increases the cooling surface for further deposits.

FENCES.

This idea for a stock farm, is strange to a stock rancher. The cost seems a bar to the plan. But 10,000 acres, divided into fifty stock farms of 200 acres each, will pay better every way in the number and value of the animals furnished for market, and in the cereals, vegetables, fruits, fowls, dairy products, wools, flax annually harvested for man's use and comfort and exchange, than any man can gain from a single farm of ten thousand acres. The one farm may support and enrich a household of twenty persons. The fifty farms will give a competence to two hundred and fifty persons. The gain in *products, powers* and *values* will be from ten to many hundred per cent. in favor of the fifty smaller well fenced and well-tilled farms, and these margins will pay for all the extra fencing and improvements made and needed. Grant all the difficulty and cost of fencing and improving such a farm, yet the income from well-tilled acres, and well-protected crops of grasses, cereals, vegetables and fruits and forests will reward the owner every month of the year. The soil and sunlight and air vapor are his capital to work on. His investment in labor and skill is an unlimited quantity, dependent on his will and energy and to be rewarded in like measure. How vastly more will fifty families do and be, on equal parts of ten thousand acres, than one man can do or be on the whole!

THE PLAN.

The stock farm, not the wheat farm, is the model farm in the upper Columbia basin, because its plan includes wheat among other products. Its plan requires a process to enrich itself. It demands the most varied and thorough cultivation. Its crops must be in rotation in order to give the best harvests. Its sale of stock may be the largest factor sought, but to reach this result the dairy, the fruit orchard, the garden and field will contribute special incomes monthly to swell the annual receipts. Such a plan employs every laborer every day and month wisely, and finds no idle hours, or wasted energies. Such farmers are in sight of steady gains with all their work, and the improvement instead of the exhaustion of their lands.

WHO?

It is a pleasant fact that model stock

farmers are immigrating from the older states of the Mississippi valley and the east, and from England, Scotland, France and Germany and other European countries. They come with the intense desire and propose to own their farms. They have the habit of industry and economy. They come with clear ideas how to make the most from an acre. They quickly turn a bit of marsh into a garden, or a rough hillside into a clean field of thriving vegetables or waving grain or grass. Their few cows soon become a herd, feeding on rich clover pastures. Their small band of sheep quickly multiply into a flock fit for the shears, or the market, tame, in their runs within call, housed in winter and fed from well-filled cellars and solid stacks. Their stables are neat, airy and every animal is kept in health by care and use.

These immigrants attain comfort, a competence and independence on small places, and extend their domains from annual accumulations.

OPPORTUNITIES.

The untouched lands, and undivided large estates offer these advantages to a larger number than have yet come among us. It is needless to go far, or wait long, to find a place to make a model farm. The interior of both states invite settlers to thousands of future pleasant and comfortable homes, to be carved out of the prairies, and hills and forest-covered valleys and mountains by their own strong arms.

CASCADE DIVISION.—We learn that Capt. J. T. Kingsbury, formerly chief of engineers of N. P. R. R. construction in the western division, is about to locate a line of road through the Cascade mountains, from the headwaters of the Yakima to the headwaters of Green river, through a pass surveyed after the sheets. The most feasible route will be found through the mountains, and the line marked. We are also informed that as soon as this line is located work will be commenced on the Cascade division of the N. P. R. R. This would have been done before, but every effort has been made to push the road through to Montana, so as to make the two ends meet as quickly as possible, thus making the company secure in a certain measure for any forfeiture of the land grant. We have confidence now that the work will be pushed forward to the Sound quickly, and that a large area of country in Eastern Washington will have a mar-

ket.