

Londoner 52

Chapter 52. Yields

The ex-farmer walked a little ahead and bent down to the ground near the trees. Picking up a small amount of dirt in his hand, he crushed it, watching it carefully. With a nod to himself, he got up and walked a little farther away and repeated the same thing in a few other places. Then he looked around, and seeing a wooden bucket filled with water, which one of the laborers must have brought there from the village well for drinking, he walked towards it.

As Kivamus watched, Pinoto poured some water from the bucket onto the ground, and mixed some of the soil with water, kneading it into a ball of mud. With a nod to himself, he picked up that round clump of mud in both hands, and walked towards Kivamus. After lightly tossing up the ball of mud and catching it again, he opened his hands and explained, "As you can see, milord, this soil can hold its shape well enough, which means it is not too sandy." Then he took a part of the muddy ball in one hand, and squeezed it out between his thumb and index finger. Kivamus saw a strip of mud forming outside Pinoto's hands for around two to three centimeters, before it fell to the ground in a clump. Pinoto reported, "Like you saw milord, the mud holds itself together for nearly an inch, but not for much longer. This is a good quality of loamy soil for sowing wheat."

Before he saw Pinoto doing this, Kivamus had thought of testing the soil type by putting some dirt inside a glass jar, and leaving it to settle for a while after filling it with water. That would have shown what the soil consisted of. But he didn't think they had a glass jar here of a good enough quality and transparency to do that, so he hadn't mentioned it. However, this method seemed to work for the locals just as well. "That's good thinking!" he commended.

Pinoto nodded with a smile. "Thank you, milord. While the soil here is good for sowing wheat, having flowing water nearby would help a lot, otherwise we would need to dig a well here which would be quite time consuming."

"Don't worry about that. I will take care of supplying enough water here," Kivamus reassured. "But what about plowing the soil? How did you do it on the farm you worked at?"

Pinoto replied, "For the big fields, we used nodors there, milord." Seeing the confused look on Kivamus' face, he bowed his head. "My apologies, milord, I should have explained first. It must be rare to see a nodor near Ulriga, where oxen are used more often."

He explained, "Nodors are plant eaters, similar to oxen, but smaller than them. They are often seen grazing in forests and are easy enough to tame. While it's true that oxen are built more powerful, they are fewer in number and are much more costly to buy, feed and maintain, compared to nodors."

He added with a shrug, "The truth is, other than on hilly terrains, an ox is always better than a nodor for plowing and pulling carts, if only a farmer can afford it. That's why, away from the big cities like Ulriga and Cinran, as well as the farms of some rich nobles, nodors are much more common on farms."

Kivamus nodded slowly, thinking about it. It seemed a nodor was like a poor-man's ox, serving nearly the same purpose, but cheaper to maintain. He said, "Okay, carry on."

Pinoto continued with a nod. "We don't have any nodors or cattle in the village right now, apart from a few cows I've seen in the manor itself." He shook his head slowly. "There just wasn't enough fodder in the village to sustain them. The few cattle that we did have in the village earlier, had been slaughtered in the past few months for their meat. It was the same for most of the goats we had here." He added after a moment, "I think some of the relatively well-off villagers might still have a few of them, but not many. Anyway, those cannot be used for plowing the fields. But I think you might still have enough horses in the manor for that."

Kivamus asked the guards who had come with them, "How many cattle and horses do we have in the manor? All I saw was two thin cows in the shed."

A guard, who had been listening intently, spoke up. "You are right, milord, right now we only have two cows in the manor. We had more cattle in the past, but we had to butcher them in the past few months when we didn't have enough grain here. As for horses, we only had six of them remaining after the previous baron's unfortunate trip, before you arrived with another six horses. So we have a dozen horses now." He added, "Of course, eight of them are out on the journey to Cinran right now."

Pinoto observed, "A dozen horses might be enough, I think, if we could use all of them for plowing the land. However, you might only be able to provide half of them or even fewer, since they would still be needed for pulling wagons and other purposes, like right now. We'll have to see what we can do about plowing when the fields are ready." He added, "But we certainly don't have a single plow in the village, since we never did any farming here. You would need to have them crafted, milord."

Kivamus nodded. "Once the longhouses have been built and Taniok has more free time, I will need to talk to you again about the design of plows, so we can have them made before spring arrives."

Pinoto nodded in agreement. "Of course, milord. I will be available whenever you ask for me."

Kivamus could think of ideas for so many things which would make their lives much easier in this place. For farming, if only they just had a single tractor, it would be so easy to work the fields. However, just like most other machines and equipment from his past life, building a tractor was simply not possible with the current level of technology in the village, which was simply too primitive right now. Even so, it was another good idea for the future, which would greatly reduce the labor needed and vastly improve their productivity at the same time.

He also remembered thinking about seed drills earlier, and thankfully, that was something which seemed feasible to make in their current situation. He asked, "You sow the seeds manually, by your hands, right?"

Pinoto looked a little surprised, "That's the only way to sow seeds that I know of, milord. After plowing is done, we scatter the seeds by hand, before covering them with soil so the rodents and birds wouldn't eat it and so the seeds would grow their roots easily. Of course, we can sow each seed by hand, one by one, but that is rarely done for sowing in a large area." He asked, "Maybe I didn't understand your question correctly?"

Kivamus said, "Don't worry about it. I have been thinking about making something which would make sowing much easier and improve the yields as well. Basically, it is a contraption made of wood and some iron, by which a farmer can control the distance between the seeds sown, as well as their depths under the soil." Looking at the interested faces of others, he asked, "Firstly, tell me Pinoto, what is the yield of wheat here? You must know about it."

Pinoto nodded, and thought for a moment before replying. "It varies based on the soil type and amount of irrigation, and how well the usual problems like removing weeds and scaring away birds are taken care of." He continued, "It's been some time since I did any farming, but from what I remember, we used to get two and a half sacks of wheat from an acre on that farm, which was a fairly productive land."

Kivamus gave a sigh. Of course, they don't use metric measurement! He said, "I am used to thinking in terms of meters and hectares, which are easier in terms of calculations. So, I would like to convert these numbers. Tell me, how big is an acre here?"

"I'm not sure, milord," Pinoto replied.

However, Gorsazo demonstrated his knowledge. "An acre is roughly seventy yards by seventy yards, my Lord," he estimated.

Kivamus did a mental calculation. "That's nearly five thousand square yards," he said, "or around four thousand square meters, which is point-four hectares. That means we can expect around six sacks of grain per hectare." He asked, "Now, how much does a sack of grain weigh?"

Gorsazo replied again. "Around two hundred and fifty stones."

Kivamus said, "That doesn't help me!" Thinking about it, he asked, "Tell me, how much does a man weigh in terms of stones?"

"That is difficult to say," Gorsazo chuckled. "I have rarely heard of weighing up a man on a balancing scale! But if I had to give an estimate anyway, I would say the average man weighs around one hundred and fifty stones."

Kivamus nodded. Without access to something as basic as a weighing scale, it was only going to be an estimate, but for now, he had to work with the technology available here. Looking at others around him, he said, "Okay. The weight of an average man here should be around seventy-five kilograms, in the metric measurement, which is what I prefer to use. That means a single sack of grain is around uh.. one hundred and twenty-five kilograms, more or less." He concluded, "So we're looking at a yield of around seven hundred and fifty kilograms per hectare of farmland."

That was just point-seven-five tons per hectare, while modern yields on earth could easily be ten times as high. While they wouldn't get a yield of that level here anytime soon, but just with the use of seed drills, the yield should increase significantly. He said, "Okay, now I have a general idea of it. I will talk with Taniok and Cedoron about making that machine, which we can call a seed drill."

"A machine?" Gorsazo echoed.

Kivamus said, "That's what we call something which makes things easier to do for a person. You really should have read more in the libraries!"

Gorsazo looked away. "I am not the son of a Duke, so I didn't have access to the whole library, like you said earlier. Let's leave it there." He asked, "But how would it even work?"