

## Londoner 53

### Chapter 53. Seed Drill

Kivamus gave a nod to Gorsazo, hiding his smile. It felt a little bad to him to deceive Gorsazo like this, but it had to be done to lay the foundation for inventing any such machines in the future.

He began to sketch a rough diagram in the dirt by using a pointed wooden stick, which he found lying nearby. "Basically, it is a wooden frame with a small box for storing the seeds and a series of tubes, each with a small opening at the bottom," he described. "Preferably, the field should be already plowed, especially since it's the first time we'll be sowing anything in these lands. Then the seed drill, which will be pulled by a pair of horses, will make thin furrows in the field," he continued, "and it will drop the seeds into those furrows as we move across the field. We can control the depth of the seeds by adjusting the tubes before sowing, and behind the machine, we can also add a wooden board or maybe a chain of iron or even wooden rings, to loosely cover the furrows as the machine moves ahead."

Gorsazo studied the crude drawing, his face a mixture of confusion and intrigue. "It sounds complex," he admitted. "Can we even make such a thing here?" he asked doubtfully.

"I know it will require a few attempts to get it right," Kivamus agreed. "But the benefits will easily be worth it."

However, Pinoto's eyes had already lit up with excitement. "You are right, milord! This will save us so much time and effort!" he said enthusiastically. "Usually a lot of seeds are wasted and don't develop into grown plants, since many of them aren't fully covered by soil. They can also germinate too early or too late, depending on the depth they settle to when scattering them by hand, which often means that the plant doesn't survive for long. But this machine will easily prevent that!"

At this point Pinoto wasn't even looking at anyone near him. Rather, he gazed into the distance as he kept speaking, his eyes widened in amazement. "And by keeping a fixed distance between the rows of plants, weeding would also be much easier." He nodded to himself, getting carried on in his chain of thoughts. "If this... seed drill can also put the seeds at a fixed depth under the soil and cover them after sowing, birds and rodents wouldn't be able to eat the seeds either!" He looked exhilarated as he continued, "And the seeds which aren't getting wasted, we can plant in another field, which will improve the overall yield!"

Finally, he shook his head and said, "Milord, I can't be completely sure about it without actually seeing such a... machine in work, but if it can really do all the things you claimed, I can easily see the yields

doubling or even tripling!" However, a note of skepticism crept into his voice as he looked at Kivamus. "But can such a miraculous machine really be made here?"

Kivamus gave a satisfied smile. "You'll see," he replied. "Once I've gotten the first seed drill built, you can judge for yourself."

Gorsazo interjected, "But did you read about this machine in your books as well? I think I would have heard about such a thing if it existed anywhere."

Kivamus shook his head. "Not at all," he admitted. "The books I read there didn't mention anything like that. But like I told you earlier, I've always been thinking about such ideas in my mind. So when I realized that we would need to do large scale farming here, I spent a lot of time thinking about this." He gestured expansively to the wild, untamed forests around them. "As you know we need every advantage that we can get here to survive in Tiranat."

"That is true enough," Gorsazo acknowledged.

Kivamus continued, "Eventually, an idea came into my mind to make a machine to reduce the wastage of the limited amount of seeds we can buy with our funds, as well as to improve the yields." He gazed at everyone around him. "Most importantly for us here, by using a seed drill, we can cover much more ground in less time, with the same number of farmers. That means, as long as we get enough land cleared for farming, we should be able to produce all our food here, and stop relying on traders from Cinran who charge sky-high prices for the grain."

The guards who had come with him, seemed to be listening carefully as well, with an inkling of hero-worship in their eyes.

Pinoto looked at him thoughtfully for a while. Eventually, he smiled and looking at the afternoon sky, he said, "The goddess must have finally heard our prayers to send you as the new baron here. The truth is, most of us had nearly lost all hope before you arrived in Tiranat." Looking at the villagers working diligently to clear the ground nearby, he said with glistening eyes, "I think I speak for all the villagers when I say that I am glad that it is you who was sent to become our new baron." He gave a deep bow. "Thank you milord, for thinking about us commoners as well. It's a completely new experience for us - we are just not used to it."

Apart from Pinoto, one of the young guards who had come with them, who was probably a newly recruited guard, seemed to have gotten emotional as well. When Kivamus looked at him, the guard just muttered something about getting dust in his eyes. Their reactions clearly emphasized how downtrodden the villagers were, if even just the possibility of getting enough grain at a reasonable price to feed their families was enough to make the villagers tearful.

Kivamus just smiled and walked closer to Pinoto and patted him on his shoulder. "Don't worry about it, Pinoto. I will do my best for every last person in the village."

Pinoto stood straighter, and wiped his eyes with his sleeves. "I know you will, milord. I have no doubt about it." He added, "I give you my word that I will put every effort into making this farming plan successful. You can count on me."

Kivamus began, "So let's decide how much land we need to farm to feed the whole village. From what Duvas told me earlier, we need around one and a half sacks of grain to feed the whole village for a day." He remembered from the memories of the original Kivamus, that a year was nearly the same length here as on Earth at nearly three hundred and seventy days, divided into twelve uneven months of a little above thirty days.

He continued, "Based on that number, we need around five hundred and fifty sacks of grain to feed the whole village for a year. But including some spare grain to account for spoilage, let's plan for six hundred sacks of grain as the minimum that we should aim for, to feed all the villagers."

Gorsazo interrupted, "My Lord, we should also keep some grain aside to use as seeds for the next season, so that we wouldn't have to buy more seeds from Cinran after the first harvest."

Kivamus nodded. "That's a very good suggestion." He looked at Pinoto. "How much grain do you think we need to keep aside for that?"

Pinoto thought for a moment before replying. "Usually, milord, we used to get around ten new grains of wheat for every seed sown. So based on that, to aim for six hundred sacks of grain, we will need uh..." he trailed off.

Kivamus gave the answer for him, doing the simple math which was still too difficult for the ex-farmer. "Sixty sacks. That number is based on your previous experiences though. But I believe we will be able to

get a better yield with the use of seed drills. Even so, to be on the safer side, let's add another sixty sacks of grain to use as seeds in the next season. That means, our target is to harvest six hundred and sixty sacks of grain to account for everything."

He continued, "Now, six hundred and sixty sacks is around uh... somewhere around eighty to eighty-five thousand kilograms of grain. Let's call it eighty-five tons, in the metric measurement, where one ton is equal to a thousand kilograms of weight."

Looking at others' faces for a moment, he added, "Now, based on the current yield of farms here, where we get point-seven-five tons per hectare, we need a little above than one hundred and ten hectares to feed the whole village for a year, and still have enough grain remaining to use as seeds for the next year. That means, we need to clear an area of around eleven hundred meters by eleven hundred meters of forest to use for farming."

Pinoto looked confused on hearing the numbers, and asked, "Forgive me milord, but how much is that in terms of acres?"

Kivamus took a moment to think about it, trying to convert the numbers, and said, "We need around two hundred and eighty acres of farmland, I'd say, where we need to plant wheat."

Pinoto gave a slow nod. "That I can understand. It is quite a big area, but since the one thing that we don't have any shortage of in Tiranat is land, it should be achievable once we clear enough land for farming."

"Indeed. With any luck, we won't have any shortage of food grains from the next year," replied Kivamus.

Gorsazo nodded as well. "Let's hope so, my Lord."

Kivamus looked around at the villagers working in the early afternoon sun for a moment and said, "Well, now that we have a basic idea of what we need to do, we should return." He looked at the ex-farmer. "Pinoto, I will call you again in the coming weeks to ask for your help in designing a plow. Until then, you can either stay here to supervise the workers, or you can return home. It's up to you."

It didn't take long for Pinoto to make his decision. He said, "In that case I'll stay here for a while, milord. Earlier, there was no reason for me to wander around here, especially with the dangers of wild beasts here, but with so many other people here already, I think I should use this chance to take a better look around the land."

Kivmaus nodded. "Sure, you should do that."

With that, Pinoto gave a bow and walked towards the villagers working nearby.

Kivamus looked at Gorsazo. "Let's return now."

As their small group started to walk back on the path they had come from, he saw a group of women coming from the village with more buckets of water in their hands, along with wooden bowls in which they seemed to have brought the afternoon meal for those people from their families who were working here. When one of them recognised him, perhaps because he was the only person in the village to walk around accompanied by guards, most of them gave him nods and curtsies of respect, while a few even added praises and blessings to him.

He responded with a smile and a wave of his hands, as the small crowd of women passed their group. And slowly, they walked on the dirt path next to the palisade walls, on their way back to the manor.

It was evening now, with the sun getting close to the horizon in the west. Kivamus was strolling around the manor along with Gorsazo and Duvas to take a look at how things were going, while Hudan had gone to the training grounds in the eastern part of the manor to train the new guards.

A servant approached him. "Milord, the blacksmith is here to talk to you."