

Civilization 531

Chapter 531 - Bronze Qin Sword, Bronze Cloth Armor!

The sky was clear, and the clouds distant. Surrounding the solemn samurais, the King's voice sounded as if it came from the Divine Kingdom, bearing an undeniable majesty.

Tilipi bowed his head and pursed his lips, slowly drawing a bronze sword tinged with cyan and gold from the bottom of the weapon rack. Then, he bent down and carefully lifted the Bronze Sword above his head with both hands.

"Your Majesty, this is the Bronze Sword forged from the mold made according to your blueprint! Following your instructions, I increased the tin content and added some lead during the casting process. This sword is quite sharp, capable of stabbing through Leather Armor and also slicing through Cotton Armor..."

At this point, Tilipi hesitated, wanting to say more but stopping himself. He maintained his bowed and bent position, unseen by the King.

The King extended his hand, took the Bronze Sword, and held it horizontally in front of his chest, examining it closely. According to his memory of the design, this sword was a standard Qin Sword. The blade was about an arm's length, roughly 60 centimeters, about a finger wide, with the widest part not exceeding 6 centimeters, and the thickness around half a finger joint, approximately 1 centimeter. The hilt was about 15 centimeters long, suitable for one or both hands to grasp. The entire Qin Sword resembled a willow leaf, with eight facets, slightly thicker in the middle, and its edges emitting a chilling gleam.

"Hmm, the King of Qin swept across the realms, a tiger watching his prey!"

Xiulote was quite excited, gently touching the sharp Sword Blade, his face revealing a smile that came from the heart. Scenes of black-armored soldiers and long-range crossbows from familiar films flashed across the King's mind, matching his current ambitions... After examining it for a moment, he smiled and said to Black Wolf Torc.

"This Qin Sword was just forged and hasn't shown its edge yet. Black Wolf, you are my trusted aide and accustomed to battlefield slaughter, come test this sword for me!"

Toltec bowed and was eager to try. He first received the sword, testing its handle, then touched the sharp edge of the Sword Blade with his fingers and nodded. Then, with a questioning look, Black Wolf's brow furrowed and he asked,

"Your Highness, what does this 'Qin' signify?"

"Haha! This 'Qin' is a disciplined beast, like a surge of black wolves. 'Qin,' like Black Wolf, is your name!"

Hearing this, Toltec showed a pleased expression. He grasped the Qin Sword and walked briskly to a wooden mannequin nearby used for weapon testing. A trusted aide had already dressed it in Leather Armor. Black Wolf held the sword with one hand, steadied himself, and then suddenly lunged forward, issuing a loud battle cry.

"Break!"

"Rip!" A brief flash of cold light passed, and the Qin Sword thrust straight forward, forcefully piercing the Leather Armor. The sharp point penetrated several inches. Satisfied, Black Wolf nodded, then pulled the Qin Sword out and held it obliquely. He stepped back, gripped the sword with both hands, took a deep breath, and then delivered a powerful slash!

"Cut!"

"Rip!" Under the tremendous force, the Qin Sword traced a fierce arc of light, where the rushing wind was almost audible. Then, blade and armor paused just briefly before smoothly slicing through, leaving a cut nearly ten centimeters long!

"Lord Black Wolf is truly valiant!"

Seeing this sharp strike, the surrounding trusted aides all praised in unison. Xiulote also smiled and nodded.

However, Toltec stood still. He repositioned the Qin Sword horizontally in his hands, his brow deeply furrowed as he meticulously inspected the stressed part of the blade.

"Eh? ... This slash just now... this feeling?..."

"Black Wolf, this Qin Sword is incomparably sharp and extraordinarily tough. I intend to use it extensively on the battlefield, what do you think?"

Xiulote beckoned, signaling Black Wolf to come closer. He smiled as he looked at his trusted aide.

"Your Highness, this sword is indeed incomparably sharp, but as for being tough... allow me to test it for you!"

Black Wolf examined the Sword Blade for a moment, then swung it through the air twice, becoming more certain of his judgment. He returned to stand before the King, raising his head to propose,

"Eh? Test the sword for me?... Okay!"

Xiulote was slightly taken aback. He raised his hand, signaling Black Wolf to proceed as he pleased.

Toltec called over a trusted aide, instructing him to hold the sword horizontally with both hands. Then, he took out his extended War Club from behind, gripped it with both hands, and raised it above his head. The valiant Black Wolf adjusted the angle of the Obsidian shards and once again burst out in a powerful yell, forcefully striking down.

"Break!"

"Clang! Crack! Clank!" The sharp Obsidian Club struck right in the middle of the Bronze Sword, the sound of metal clashing abruptly filled the air, followed by an unusually clear sound of metal breaking, and then the sound of the sword falling to the ground!

"What!"

Xiulote widened his eyes in shock. Right before his eyes, the Qin-style Bronze Sword had completely snapped in the middle, becoming utterly useless. He inspected the break closely; the fracture was quite neat, showing the dense texture of bronze, as if it had been cut by a diamond blade.

"Your Majesty, forgive me!"

Seeing this, Tilipi "thudded" to his knees. He spoke loudly in his defense.

"Your Majesty, well, this... these Alliance's Gemstones are much sharper than the ordinary bronze of the Kingdom! Additionally, the long and thin make of the sword supplied by you, aimed at maintaining sharpness, also had too much tin added... In my opinion, the design of this Bronze Sword itself has a flaw and couldn't be used for extended periods on the battlefield!..."

"What?!"

"Uh... Your Majesty, forgive me!..."

Xiulote abruptly turned around, glaring fiercely at Tilipi. The astounded Caster Master immediately felt cold all over, pressing his whole body to the ground, tightly shutting his mouth. His brother, Chalape, also sweated profusely, kneeling beside him.

"Why would this happen?"

The young King snatched the Bronze Sword's broken blade, inspecting it closely for a moment. The blade's edge still emitted a cold light, but the middle of the break was slightly deformed, clearly lacking in toughness. He then took the refined War Club from Black Wolf's hand, examined the somewhat worn Obsidian shards on it, tiny gold flecks flickering in the sunlight, dazzling and flowing.

Chapter 532 - Bronze Qin Sword, Bronze Cloth Armor!_2

Seeing this, Xiulote became somewhat irritated. He paced back and forth with his hands behind his back, deep in thought.

"Mohs scale of hardness..."

The Mohs hardness is a measure of one object's ability to scratch another and more so reflects sharpness. Obsidian Stone's Mohs hardness ranges from 5.2 to 6.2 and is a natural glass but prone to shattering. Copper has a Mohs hardness of only 3, while bronze ranges from 5 to 6. Iron has a Mohs hardness of 4, carbon steel at 5.5 to 6, and manganese steel reaches 6.5.

These numbers show that the sharpness of the Obsidian Club, Bronze Sword, and Steel Sword isn't significantly different; it's just that the cost and toughness are worlds apart. Steel Swords are inexpensive to produce and can bounce back even after bending over forty degrees during combat. Bronze Swords cost much more, and the metal's toughness rapidly decreases as the hardness increases, prone to breaking at moderate angles. Obsidian production is entirely dependent on natural occurrences and severely lacks toughness. A single battle would completely wear down the sharp edges on the club.

Xiulote knew that superior quality Obsidian Stone hardness was around 6, similar to high-hardness jadeite, and could outperform early Bronze Swords that were not maturely heat-treated, which wasn't

surprising to him. But, what he hadn't anticipated was the fragility of the highly anticipated Bronze Qin Sword; it simply couldn't last long on the battlefield!

"It shouldn't be so prone to breaking with insufficient toughness, it's only 60 centimeters long! The Bronze Qin Swords from the latter period of the Warring States are lengthened to 90 centimeters! After being unearthed from the Terracotta Army, they were still sharp and sturdy... There must be some problem with the craftsmanship!"

"High tin content makes it sharp, low tin content makes it sturdy; the Bronze Qin Sword combines both, being sharp yet sturdy!... How to maintain a sharp edge while also ensuring a sturdy core?"

Xiulote pondered for a long time. Memories of the past surfaced one after another, bringing him many fleeting inspirations. The answer seemed on the brink of revelation. But some secrets are not to be unraveled in a moment. After a long while, the King shook his head reluctantly.

"Toltec, what do you think of this style of Bronze Sword?"

"Your Highness, Bronze Long Swords are sharp but easily breakable, offering no significant advantage over War Clubs. We can switch to half-arm-length short swords for close-quarters thrusting kills!"

Toltec recalled the scenes of the battlefield and said aloud.

"However, at that distance, Bronze Hand Axes are usually used. They can split open both Leather Armor and Cotton Armor! Also, during marching, Hand Axes can be used to chop obstructing vegetation and for hacking firewood. They use less bronze too, so it's more practical!"

Xiulote nodded slowly after a moment of thought. He had encountered the Tarasco Royal Legion during his western campaign, who had Bronze Long Spears, double-handed Bronze Axes, and Bronze Hand Axes but no Bronze Long Swords. There naturally existed objective reasons. Only then did he turn to the two Masters kneeling on the ground, speaking in a softer tone.

"This isn't your fault. Stand up, both of you!"

"Tilipi, continue organizing manpower to research the casting of Bronze Swords. The final product must be both sharp and sturdy... No excuses, this is a Royal Decree! I can assure you that it is achievable through some mixing methods! Chalape, you get involved as well."

"As you command, your Majesty."

Xiulote nodded. Chalape quickly gestured, ordering the apprentices to take away the broken Bronze Sword. He smiled and hastily changed the subject respectfully.

"Your Majesty, your wisdom is as profound as the sky, and your authority as dazzling as the sun! Based on the model armor you provided us, the new Cloth Bronze Armor has been successfully replicated!"

As Chalape spoke, he took a heavy set of dark Cloth Armor from the apprentice with both hands, as two of them presented it to the King. The outer layer was sewn from green cloth, filled with cotton and studded with dense bronze plates using bronze nails. The top of the Armor was stitched with spreading shoulder and armpit guards, and below there extended a protective skirt... Overall, the style of the Cloth Armor was very similar to the common bright armor of the era.

"Your Majesty, this is a long-sleeve Armor with extremely strong protection! The size of the bronze plates is about half a palm, and there are 240 plates. The tin content of the forged plates is around one-tenth, to maintain toughness as much as possible. Following the suggestion of the Head Warrior, like a valiant eagle, the plates prioritize the vulnerable chest, abdomen, shoulders, ribs, and waist, totaling thirteen jin of cotton and thirty-two jin of bronze, weighing forty-five jin! Look, it's almost impervious to Arrows and resistant to Axes and Spears—a gift from the Heavenly Divine!"

Xiulote was taken aback by this and called out loudly.

"Forty-five jin?! Such Heavy Armor! Toltec, give it a try and test the defense!"

"At your command!"

Two trusted aides draped the heavy Armor over a wooden mannequin nearby. Toltec licked his lips, grasped the club with both hands, and stepped in front of the Armor. Then, with a loud yell, he struck furiously with all his might, swinging the War Club in his hands.

"Break!"

"Slash!"

"Smash!"

Toltec struck with all his strength, and the War Club made a terrifying howl through the air, hitting the Heavy Armor with a loud "bang bang" sound. After several blows, the Black Wolf, gasping for breath, looked at the long-sleeve Armor in front of him, his face showing shock. The outer cloth layer had been cut through by sharp edges, and some of the bronze plates inside were deformed, yet the whole suit of Heavy Armor was almost intact!

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"Good, very good!"

Having witnessed the defense of the heavy armor, Xiulote was overjoyed. He called out again.

"Switch to the longbow!"

Toltec nodded solemnly, cautiously stepped back, nocked a well-crafted copper arrow, drew the hundred-pound longbow, and released it like a bolt of lightning!

"Ding!" The copper arrow pierced the cloth, struck the tall armor, and then fiercely bounced off.

"60 steps, no damage."

"Ding!" It bounced off again.

"50 steps, no damage."

"Ding! Tear!" The copper arrow hooked onto the tall armor, its tip slightly indented into the armor plate.

"40 steps, minor damage."

"Ding! Bang!" Toltec clenched his teeth fiercely. He switched to an armor-piercing arrow with a thicker head, shot with all his might, and finally penetrated the heavy armor in front of him!

"30 steps, armor-piercing!" the trusted aide overseeing the test shouted loudly, and only then did Black Wolf's taut face relax.

Xiulote nodded. He gestured for the trusted aide to bring the tall armor over. There were only two damaged bronze plates, the rest of the armor was intact. Such damage could be easily repaired by replacing the plates and nailing them back on. The King nodded with satisfaction.

"Not bad. Very good! Black Wolf, you have tried it yourself, how is this suit of armor?"

Toltec's expression was grave. He thought for a moment, then said softly.

"A seasoned samurai wearing this armor could spar with me for a short while."

Upon hearing this, Xiulote laughed heartily.

"Ha ha! Black Wolf, what if you were wearing this armor?"

Toltec stood tall and chest out, looked around confidently, and said.

"As long as my strength does not fail, I would be an invincible warrior in this world!..."

In mid-sentence, Black Wolf turned his head, just in time to see the Head Warrior's half-smiling, half-serious face. He opened his mouth and then added the last two words.

"...one of them..."

"Ha ha, good! Black Wolf, after the repairs, this heavy armor will be yours!"

Xiulote's smile was meaningful as he waved a hand. Joy appeared on Toltec's face. Then, the King became serious again and asked solemnly.

"Black Wolf, what if we carefully select a thousand brave samurais, all clad in such heavy armor?"

At these words, Toltec's expression froze. In large-scale battle formations, if there were a thousand elite wearing heavy armor, forming a formation. They would not fear arrows and hand axes, needing no shields for defense, freely swinging their war clubs, directly charging at the opposing commander's flag... Moments later, even on his usually fearless face, a hint of reverence appeared.

"Your Highness, if there were a thousand fierce warriors, able to wear this armor and fight for a quarter... they would be invincible in the world!"

Chapter 533 - Armor Work Hours, Royal Family Personal Army

"Ha ha!"

Xiulote laughed heartily, shaking his head slightly. In his laughter was the satisfaction of unrestrained joy; in his shaking head, however, was a wide embrace. After a moment, he looked at the craftsman master Chalape with approval.

"Chalape, this kind of long-body heavy armor is quite good! How much labor and time does it take to make a suit of armor like this?"

Upon hearing this, Chalape smiled sheepishly and looked to his kinsman. Tilipi scratched his head, calculating as he spoke.

"Your Majesty, a cloth-covered, long-body bronze heavy armor uses 13 jin of cotton and 32 jin of bronze. To make cotton armor, one must soak the cotton, repeatedly pound it into thin sheets, and,

after drying, patch it into two layers of cotton cloth. This, for covering both the front and the back, to conceal the weak seams... requires 2 workers for 5 days, totaling 10 workdays. This step is relatively simple, though stitching is a bit time-consuming; it can be done by healthy women.

Next, one must forge 240 pieces of bronze armor plates. Making the armor plates is quite tedious; it involves casting, forging, and fitting them properly... requiring 8 workers for 5 days, totaling 40 workdays. This step is physically taxing. The artistic demands are not too high; it can be done by strong and robust apprentice craftsmen.

Lastly, the plates are sequenced and embedded into the cotton armor. They are fixed with copper nails, inside and out; after proper adjustments, the long-body heavy armor is complete... This step requires 2 workers for 5 days, totaling 10 workdays. At this point, the assembly requires skill and must be done by an experienced craftsman personally!"

"A suit of cloth heavy armor requires 60 workdays..."

Upon hearing this, Xiulote's expression changed subtly, and he nodded slowly.

Considering the mining and smelting of copper ores, the cultivation and collection of cotton, as well as the consumption of charcoal and material wastage during the production process, the labor and resources consumed by a suit of heavy armor are astonishing, requiring continuous repairs and maintenance. In reality, the cloth heavy armor had already become the easiest and least expensive type of heavy armor to produce during the evolution of armor over a thousand years. Its repair and rust-proof maintenance were very simple. By comparison, the production time and maintenance costs of stab armor and scale armor were several times higher.

In this era, the late 15th century in Europe, metal craft was entering a fast track of rapid development. The iron-smelting blast furnaces of the Italian city-states stood at 4.5 to 6 meters high, capable of

providing high-quality pig iron and even ordinary steel on a large scale. The southern states of Shenluo were the centers of armor crafting, which had massively adopted hydraulic forging hammers to significantly reduce the human labor in armor making.

Even so, according to the workshop records and armor prices of the time, the forging duration for a full suit of knightly plate armor still required 150 workdays, often costing more than a small manor. Because even on top of the rough castings from water-powered forging, a significant amount of manual labor by experienced craftsmen was still needed to hammer out the curvature of the plate armor's surface and to polish the exterior. The plate breastplates commonly seen among the infantry took 50 workdays to produce, mainly providing protection with a solid steel plate at the chest and back; this was also the classic style of the Spanish conquerors. The thick padded jackets commonly worn by British longbowmen, requiring 25 workdays to produce, had a construction process similar to cotton armor, filled with linen or wool internally.

The three aforementioned types of armor—plate armor, plate breastplates, and thick cloth armor—were suitable for mass production and maintenance, becoming widely popular in Europe, catering respectively to knights, elite soldiers, and common militia. Traditional chain mail and lacquered leather armor, while both providing substantial protection, were exceptionally tedious to produce. With the same defensive capabilities, their labor costs far exceeded that of others, and their maintenance costs were extremely high; they were gradually overlooked by a developing and changing era.

Of course, as the end of the 15th century approached, Europe was just beginning to rise, technological advancements were accumulating, and productivity had not yet developed, there was still a stark contrast to the populous nations of Asia. By the late 16th and early 17th centuries, when European metalwork was fully matured, large-scale water-powered machinery proliferated along riversides, and the simplified process of mass-produced plate armor for the common people began to spread, that would be the true era of grand colonization and expansion.

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By that time, the production cost of a set of commoner's plate armor had fallen to 50 worker-days, and the breastplate alone required only 20 worker-days. The rate of armor adoption by the armies of various nations soared, giving them a significant advantage over the nations of Asia. With inexpensive heavy armor, heavy muskets, and combined with large cannons, a few hundred Western colonizers could establish strongholds and bastions in the nations of Asia and withstand sieges from enemy forces that were several times or even ten times their number.

"After the 17th century, that would be the nightmare of non-European transmigrators, the hell for the indigenous people of America... Fortunately, I still have time!"

Xiulote reflected for a moment and let out a long sigh. Then, his expression turned serious again as he looked toward the master craftsmen before him.

"Chalape, Tilipi, although this heavy armor is good, it is somewhat too heavy, requiring great physical strength from the samurai. Only true elite samurai can wear heavy armor for an extended period in battle. The sample armor I gave you is lighter, weighing only about thirty pounds. Do you have any replicas made?"

"Of course, Your Majesty, look!"

Chalape beckoned, and a craftsman presented a beautifully crafted half-body bronze medium armor. He then personally lifted the armor and presented it to the king.

This bronze medium armor resembled a vest and was extremely ornate. Its surface was embedded with gold grains and silver thread, which along with a dense array of copper nails, outlined patterns resembling eagle feathers. To be presented to the king, the inner layer of the armor was made with meticulous care to be more like scale armor, not impeding the wearer's agility.

"Your Majesty, this is a fine medium armor specially prepared for you by my brother and me, based on the Head Warrior's suggestion! It covers the upper body, using sixteen pounds of bronze and nine pounds of cotton, weighing a total of twenty-five pounds. Every piece of armor on the inside is handcrafted by us, sturdy and compact; the outer layer was commissioned from a master, who carved the image of a soaring eagle... Your Majesty, only divine beings are worthy of wearing such divine armor, please try it on!"

Xiulote was somewhat surprised. He took the exquisite medium armor and inspected it briefly before the Head Warrior helped him get suited up properly. The inside of the armor was even lined with a special thin lining made of high-quality brushed cotton cloth, which was quite comfortable to wear.

The cloth medium armor resembled a short sleeve or a vest, covering only the upper body and reducing the number of inner nailed armor pieces on the back, weakening the protection of non-vital areas. However, this medium armor weighed only a little over twenty pounds, was not at all cumbersome, and could be worn for an extended period in combat without impairing the movements of a strong samurai.

Xiulote moved his hands and feet to get a feel for the security provided by the copper armor and nodded his head in satisfaction.

"Very good, you all have done well! Bertade, you as well!"

Chalape bowed respectfully, his smile growing even broader. The Head Warrior merely smiled faintly.

"Tilipi, how much worker-time would it take to make a standard cloth medium armor without these decorations?"

Tilipi clenched his fingers and calculated for a moment.

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"Your Majesty, the half-body bronze medium armor weighs about 25 jin. Its defense is only slightly inferior to that of heavy armor, but still much stronger than leather armor. The quantity of bronze armor plates is about half of that of heavy armor, and the working hours for forging and nailing can also be reduced by half... All in all, it would take just over 30 workdays."

Xiulote nodded. He looked towards the Head Warrior.

"Bertade, how does the defensive capability of this medium armor compare to that of heavy armor?"

The Head Warrior thought for a moment and replied in detail.

"Skilled warriors can flexibly exploit the defense of different body parts. In large-scale samurai formation battles, it is very difficult for the enemy to attack the back and lower limbs, and sustaining endurance is also extremely important... Taking this into account, it is about 70% of the heavy armor!"

"70% of the defense, at 50% of the cost..."

Xiulote pondered for a moment, then made a decisive decision!

"Chalape, Tilipi, heed my command!"

The two Master Craftsmen immediately kneeled down.

"The Kingdom's Personal Army is being assembled and needs 500 sets of heavy armor, 2,000 sets of medium armor! It is now September, if the material supply is sufficient, can it be completed before the January festival?"

Chalape did some quick calculations, then showed a troubled expression. Next to him, Tilipi had already responded directly.

"Your Majesty, there definitely won't be enough time! The festival is in mid-January; it's only four months from now. The Bronze Workshop has only six or seven hundred people, and even if we suspend the vast majority of our tasks, we can only spare 500 workers. But crafting 500 sets of heavy armor requires 500 workers two months, and 2,000 sets of medium armor needs 500 workers four months... It would take at least half a year to complete!"

Xiulote's expression darkened. He had already started assembling the Kingdom's Personal Army, which would serve as a reliable force directly under his control and would gradually become the main promotion channel for senior officers.

The first batch of the Personal Army would have a strength of 2,500 men. Among them, 500 Jaguar Warriors would don heavy armor and wield two-handed war clubs, while the remaining 2,000 trusted aides would wear medium armor and carry longbows and copper arrows. Of the 2,000 trusted aides,

500 came from previous followers, 1,000 from the elite of the Northern Army, mainly composed of the Royal Family's Longbow Warriors.

Another 500 were selected from the first batches of the surrendered Tarasco armies, and some elite descendants of the formerly hostile Prepetcha were also recruited. In subsequent plans, the number of Personal Army soldiers of Prepetcha origin would gradually increase, and accomplished officers and soldiers from various factions would be incorporated as well. On one hand, this demonstrated the King's impartial treatment to all, and on the other hand, like the Keshik of Mongolia, it served to unify all parts of the Kingdom and acted as a reserve training camp for military officers.

"After the festival, the armies of the fiefs must be deployed. Before that, 2,500 sets of armor must be completed!"

The King had issued his explicit decree. Then, after pondering briefly, he looked at the Head Warrior.

"During the western campaign, a large number of craftsmen were captured in Ihuatzio City. How many coppersmiths were there among them?"

"Yes, Your Highness. They have all been settled near the Capital City's army camps to serve the armies. There should be about four to five hundred coppersmiths, mainly producing various copper utensils, tools, and trade goods. However, in Ihuatzio City, they were coppersmiths, not bronze craftsmen."

"Hmm, the fief's copper trade can be put on hold for a while, and copper mines must also be centrally allocated. They all have a certain level of craftsmanship... Chalape, I will give you 300 coppersmiths to hammer the armor plates, call in tailors from the Capital City to sew cotton armor for you, and later from the Mexica craftsmen who have migrated, I will send you an additional 200 apprentices! Whether it's copper materials, tin materials, or charcoal, I will give priority to supplying you!"

Hearing such generous conditions, Chalape's worried expression became even more profound. He bowed deeply, awaiting the anticipated demands.

"Four months' time before the January festival, to craft 2,500 sets of qualified armor! This is a military order! I will dispatch trusted aides to supervise. Hmm, are you confident?"

"Your Majesty, I will follow Your will. I will definitely push everyone to their utmost, I will not fail your heavy trust!"

Xiulote then smiled contentedly. He looked ahead, towards the vertical furnace smelting bronze. The flames roared, belching billows of smoke and pouring forth a dark red light. The fiery glow reflected in the King's eyes, making his pupils seem ablaze. Bronze and iron, metals are the future's hope!

Moments later, the King stepped forward, the armor plates upon him clanking. He arrived in front of a batch of brand-new bronze utensils. With a solemn expression, he reached out and took up a farming tool that felt both strange and familiar.

The farming tool was composed of two parts: the front part was a wooden rod with a bronze tip and a footrest for punching holes in the ground, called a plough; the back part was a digging tool resembling a shovel, with sharp bronze blades, called a spade. The plough and spade were joined together with wooden wedges, and at the very front, there was a pulling rope. Thus, the plough served as the handle of the spade, and the spade was the cap of the plough, capable of breaking apart clods of earth and creating furrows.

"As wise as Divine Revelation, Your Majesty!"

Chalape sprung to his feet, quickly following. In that moment, his face was filled with genuine respect and a smiling expression.

"This is the two-man bronze plow that I have completed by hand according to Your design!"

Chapter 534 - New Farm Implements and Agricultural Productivity

King Xiulote stood before the bronze plow, silently solemn, with only the flow of time visible in his eyes.

Familiar agricultural tools lined up, each coming into view, bringing his scattered thoughts back to his homeland nearly two millennia ago. It was a time remarkably similar to today, a time of change!

"The great affairs of the state lie in sacrificial rites and weaponry." This was the Spring and Autumn period in 578 BC, the beginning of a new transformation.

"The rise of a state depends on agriculture and war!" This was the Warring States period in 356 BC, when Shang Yang first reformed.

Reform was conceived in the Spring and Autumn and took place in the Warring States. The true driving force was iron farming tools and the continuous development of agricultural productivity!

The course of history progressed in cycles, social productivity and social systems alternately advancing. In today's Mexica Alliance, in the present-day lake fief, Xiulote had already referred to Shang Yang's reforms and initiated social transformation. Correspondingly, he further promoted the development of agricultural productivity to match the systemic innovation of the Qin and Han dynasties and to establish the foundation of a unified empire!

Guided by historical logic, Xiulote's administrative approach was notably clear. The first step in developing agricultural productivity was to control the land of the fief and centralize agricultural capital; the second step was to register households and require and encourage cultivation to boost agricultural labor input; the third step was the widespread adoption of bronze hand tools to increase the efficiency of making wood and stone farming implements and to manufacture and apply new bronze tools!

During the long pre-Qin era, the Celestial Empire boasted a highly prosperous Bronze civilization. Bronze farming tools existed for a long time, capable of improving agricultural productivity, yet they did not become widespread in the Yellow River Basin. This was mainly due to the preciousness of bronze and the scarcity of bronze resources in the north. Limited bronze was used for sacrificial vessels, military weapons, and chariot accessories. In contrast, the Yangtze River Basin was rich in bronze resources. The production and usage of bronze farming tools during the Shang and Zhou dynasties were significantly more advanced.

"With ox plowing still far away, and iron tools also out of reach, the only way to improve agricultural technology in the fief is by accumulating manure, building dikes, and utilizing bronze tools."

King Xiulote's thoughts returned from the passage of time. He carefully examined the categorically arranged farming tools. These tools were drawn from his memory, altered with the input from experienced farmers. He had many subsequent designs still remaining on paper.

The tools in front of him were divided into seven types, corresponding to the seven activities in agricultural production.

"Human-powered bronze plow, shaped like a spoon, with a footboard for stepping, often used by one person. Hmm, not bad, it is simple yet durable and can be called a step plow. Using the step plow for five days equals one day of ox plowing, although very tiring, it is the best outcome!"

Xiulote first grabbed the newly made bronze step plow, briefly examined it, and a smile appeared on his face. This was the first and most important tool for plowing and preparing the land. Plowing was crucial for agricultural production as it effectively promoted crop growth and increased yield. There were many reasons for this.

First, turning the soil. Leveling the land and breaking up soil clumps made it easier to sow seeds in the soil layers.

Next, aeration. Loosened soil improved aeration, helping the roots of crops grow deeper.

Then, fertilization. Plowing brought fertile soil from the bottom to the surface and buried the remnants of the previous season's crops, forming new fertilizer.

Additionally, weed removal. Before sowing, it removed sprouting weeds and disrupted the weed growth cycle. In the rain-abundant tropics of America, rapidly growing weeds could significantly reduce crop yields, requiring substantial labor to manage.

Lastly, pest control. By turning the soil, it brought underground insects and their eggs to the surface, allowing predators and tropical sunlight to kill them.

It was because of these benefits that agricultural production was dubbed farming, and the popularization of iron plows and ox plowing revolutionized agricultural production!

Historically, in the Celestial Empire, plows were divided into the ancient human-powered step plow and the more common animal-powered plow. The animal-powered plow evolved from the straight-beam plow of the Han Dynasty to the curved-beam plow after the Tang Dynasty, which featured a freely rotating plow disk on the yoke head and a plow grading on the plowshaft to control plowing depth, continuing to be used until the popularization of agricultural machinery.

In Xiulote's mind, the image of the curved-beam plow from later rural times still lingered, roughly understanding its principle, capable of drawing it out. However, the advantages of such plows had to be matched with draught animals to be realized. For the Central American civilization of this era, the human-powered bronze step plow was more appropriate. A rope for human traction could also be attached to the front of the plow, adding the assistance of another person.

Following the bronze plow were other tools used for turning the soil, including a bronze rake, but more refined tools like spades and scoops were not in King Xiulote's memory.

Alongside the plow and rake were seeders, the top part made of wood with a bronze foot, categorically a cart seeder. This was the second type of sowing tool, the ancient equivalent of a row-seeder. Due to the lack of animal power, Xiulote designed the two-legged cart seeder, which was pulled at the front by one or two persons and pushed from the back by another person. And to suit the planting of corn, the cart seeder had a wider spacing between its two legs to provide greater inter-row spacing for the crops.

Next was the third type, a mid-cultivation weeding tool. Quite simply, it was a bronze hoe. Xiulote merely glanced at it before nodding and moving on. Bertade frowned slightly; this farm tool seemed more like a bronze weapon handed out to farmers. And following behind, Toltec, quite curious, handled the hoe, his eyes sparkling as he pondered how to use this oddly shaped mid-length blade.

Chapter 535 - New Agricultural Tools and Agricultural Productivity_2

The fourth type was an irrigation farming tool, a human-powered turning vehicle, also known as the dragon bone cart. Its operating principle was similar to the chain rotation of a bicycle, but with a long slot in the middle. Powered manually, it turned wooden chain paddles that lifted water upwards and discharged it.

This farming tool was designed to lift water from the lower levels of a lake or river to the higher water channels, irrigating the fields along the channels. Similarly, there were also cylinder vehicles that utilized water power. Xiulote had already sketched out the designs, preparing to first test-produce them by the northern banks of the Lerma River.

"Your Majesty, your Divine Revelation's wisdom is truly as brilliant as a gem!"

Chalape followed closely behind, smiling and offering his compliments.

"This device was co-produced with the Master Carpenter. I used copper nails to reinforce crucial points repeatedly. With it, you can build highland gardens surrounded by earth embankments and wooden fences on the islands in the lake. This will not only facilitate irrigation but also prevent flooding!"

Hearing this, Xiulote paused and slowly nodded. The new irrigation farming tool indeed needed to be used together with embankments and canals, and there was no rush for the time being.

The fifth type of harvesting tool was equally simple, made of bronze, a small sickle less than half a meter long with a sharp inner curved blade. Harvesting tools actually included reaping, threshing, and cleaning. However, for crops like corn and pumpkins, only a reaping sickle was necessary.

Xiulote looked at it for a moment and asked in a grave voice.

"Chalape, how much bronze is used for this sickle? How many man-hours are needed to cast one?"

Chalape calculated it briefly; such a simple question, he knew well.

"Your Majesty, about three taels of bronze per sickle, roughly similar to a Bronze Spear tip. As long as the clay molds are sufficient, one person can cast a dozen or so in a day."

The King nodded slightly, pondered for a moment, and then issued an order.

"With autumn harvest approaching in October, the vast number of fields cultivated by the military crop cultivation force needs sharp bronze sickles for rapid reaping. Chalape, I give you one month's time, to provide at least half the sickles needed for the legions!"

"Ah, this... By your command, Your Majesty!"

Chalape's expression turned bitter, and he bowed his head to accept the order. With the King's inspection and successive military orders, one task followed another—he secretly resolved to push his craftsmen and apprentices to the limit these coming months: from dawn till dusk, eating and staying at the workshop!

The sixth type involved processing farming tools, used for processing grains and cotton. Xiulote was not familiar with the tools for processing cotton; he only remembered a scene where cotton was "shot," so he had people make a crossbow-like bed.

Basic grain processing tools, including pestles and stone mills, had long been available. Recalling a novel from another era, he sketched an upgraded version of the pestle, a foot-operated pestle, and then had the craftsmen produce it. Right now, he stretched out his foot and pressed down on the tail of the pestle, watching the front end rise and fall, and nodded with satisfaction, smiling.

"I have succeeded in developing the foot-operated pestle; I shall award myself a rank!"

Upon hearing this, Chalape was momentarily stunned, his mind racing, yet he also chimed in.

"Your Majesty's Wisdom Revelation has created the foot-operated pestle, capable of pounding soybean paste, corn kernels, and pumpkin mash. This device greatly saves labor and benefits the whole world... The Chief Divine will surely rejoice and grant you Divinity, and also place the hearts of the Fief's people entirely in your hands!"

Hearing this, Xiulote turned around in surprise, looking at the hereditary Copper Official before him, speaking meaningfully.

"Chalape, to hold the position of a mere Copper Official surely underestimates your talents."

"Ah, Your Majesty, your Divine light illuminates my eyes, allowing me to offer up the finest bronze craftsmanship... No matter what position I hold, I am willing to serve you to the death!"

Chalape quickly knelt to salute, his heart somewhat uneasy. He had deep roots in the workshop and was reluctant to leave it easily.

Xiulote nodded, noncommittal. He glanced at the Head Warrior and whispered an order.

"What Chalape said makes sense. The development of new agricultural tools is a Divine Revelation by the King and is related to the blessing of the Chief Divine... this can be made known to all the people."

A flicker passed through Bertade's eyes, and he nodded in understanding. Since the learned elder had assumed the position of the chief, the core had roughly taken control of the fief's discourse. The matters of propagation would soon infiltrate the hearts of the people like a spring breeze turns into rain.

The last aspect was the transportation of agricultural tools, including common carriers such as baskets and pole carriers, along with newly made wheelbarrows. As for more convenient mounts and large carts, they would have to wait for the arrival of pack animals.

Xiulote swept his gaze over the room twice, showing approval. Then, he solemnly asked his most trusted Head Warrior.

"Bertade, these new agricultural tools can facilitate the farmers in field production and help increase crop yields! I intend to popularize them throughout the fief so that all the people can use them... what do you think?"

Bertade pondered for a moment, his expression serious. He cautiously asked,

"Your Highness, how much do you think these tools can increase crop yields?"

"I have discussed this with the old farmers of the Alliance. The new tools can significantly reduce labor consumption, thus cultivating more land. As for the increase in crop yields... without actually planting for a season, there is no answer. The first year of farming might not show a clear increase, but it could reduce the fallow time. And with row planting and weeding with copper hoes... at least a 20% increase should be there!"

"A 20% increase..."

Bertade was no longer calm, his eyes revealing shock. He looked deeply at His Highness and then respectfully said,

"Your Highness, a definite increase in yields is indeed great news, and wooden agricultural tools are manageable. But currently, with the high price of copper, bronze is extremely expensive. How could ordinary people afford these bronze tools?"

"How about we distribute them uniformly across the fief?"

"Your Highness, agricultural tools are prone to wear and tear during use. Although bronze is durable, its usage cost may not be much less than that of stone tools before large-scale production can be achieved. For the ordinary farmers, rather than hoping for a little extra harvest, they would prefer to melt down the bronze tools to sell and continue using cheaper stone tools!"

"Hmm... you make a good point. What about temporarily leasing them?"

"Your Highness, ordinary people are not willing to lease items from the nobility, especially such valuable ones. If forced to lease, I'm afraid the people will only carefully store them away, unable to sleep at night, fearing they might lose them and be held accountable."

"Bertade, I am determined to popularize the new agricultural tools! What do you think we should do?"

"Your Highness, in my opinion, bronze tools could initially be used in military colonies. The military colonies are clearly organized, strictly managed, operate under strict military law, and are controlled by various levels of officers. As long as they are strictly supervised and losses checked, the new tools' advantages can truly be utilized!"

"As for ordinary civilian settlements, only a small number of bronze tools should be issued. Under the guise of sacrificial objects, they could be handed over to the priests, and then loaned out as a blessing from the Chief Divine by devout farmers in the villages. This can also enhance the authority of the priests and strengthen their hold over the villages!"

"Hmm... let's proceed as you suggest!"

The King stood still, reflecting deeply, and finally nodded slowly.

"Calculate the required quantities as soon as possible and then assign the task to the workshops. By next spring plowing, the military colonies must all use the new agricultural tools."

"Now it seems, to truly revolutionize the era, it is essential to reduce the cost of bronze soon. Large-scale excavation of copper mines is imperative!"

Xiulote paced with his hands behind his back, lost in thought, followed in silence by everyone. And when the King halted, right in front of him stood the real weapon to transcend the era, the bronze cannon!

Chapter 536 - The Bronze Cannon, A First Attempt Across Eras!

Upon the fertile soil of history, human civilization grows like a mighty tree. People's understanding of the world keeps improving, like increasingly robust roots providing continuous nourishment for the growth of civilization. Meanwhile, the development of technology climbs upwards, akin to the dense canopy of a tree reaching for the sunlight, always branching and specializing.

To Xiulote, the progress of human technology was a network shaped like a tree. Many technologies advanced in a straight line, requiring predecessors to lay the foundation. For example, the hydraulic machinery of Europe during this era required advanced iron-refining technology as a prerequisite because copper and bronze lacked the tensile strength and elasticity to serve well as mechanical parts, such as easily damaged springs.

Some technologies, however, were leaps across eras, hinging on the level of human cognition, like the gunpowder already used by the Alliance or, for instance, the bronze cannons currently at hand. They did not need iron as a foundation; they only needed prophet-like divine guidance to leapfrog military science in the hands of American civilization, unleashing a roar that spanned ages!

As he thought of this, the King smiled and stretched out his hand, touching the rough and cold weapon of slaughter before him. This was a 1 pound Falcon Cannon, also known as an Eagle Cannon, cast according to his design.

In Europe of this era, the 1 pound Eagle Cannon, as a classic lightweight field cannon, had just recently been created. It possessed the power to break through all field enemies, with a maximum range exceeding two and a quarter miles, and accurate range well over 200 meters. Weighing between 200 to 400 pounds, the Eagle Cannon was sufficiently mobile and became a favorite of explorers and elite infantry squads and would remain in use for over a hundred years, until the Thirty Years' War.

Chalape was observing at all times, and upon seeing the King's smile, he quickly tugged at Tilipi's sleeve. Tilipi hesitated for a moment before he mustered up the courage to come forward and explain carefully.

"Your Majesty, this is the Sun Divine Eagle Cannon you had us cast. It is 1.2 meters in length; the bore is 5 centimeters; we used 250 pounds of bronze, coupled with a matching hardwood stand... As per your instructions, with the help of the gunpowder craftsman, and witnessed by the Head Warrior, we conducted a test fire... using 1 pound of gunpowder to launch a 1-pound stone ball... The range fell somewhat short of your requirements, it's about... about 50 meters..."

Tilipi's voice grew fainter, yet it still clearly reached Xiulote's ears. The smile on the King's face instantly froze. He looked at Bertade, and the Head Warrior nodded gently. The King's hands silently clenched, his voice lowering as he demanded.

"Repeat that, what was the range?"

"...50 meters..."

Facing the chill in the King's eyes, Tilipi "thud" kneeled on the ground. He urgently raised his voice to explain.

"Your Majesty, the Head Warrior can bear witness! We used the highest quality bronze in full measure, and the clay molds were delicately crafted. But during the firing process, the cannon barrel emitted a puff of smoke... Craftsmen who had made wooden cannons said this was because the metal barrel was not favored by the spirits, weakening the God of Thunder's power. Only a wooden barrel has life and can carry the Divine Power..."

"Smoke... leaking air..."

Xiulote did not get angry, nor did he pay attention to the competition among craftsmen. Instead, he furrowed his brows and inspected closely once again. On the outer wall of the bronze barrel, one could faintly see some minute holes.

"Bring a bucket of water!"

The trusted aide immediately went to the workshop's well and fetched a bucket of clean water. Under the watchful eyes of everyone present, the King ordered the cannon to be stood upright and then had them pour the water into the opening at the top. Soon, tiny streams of water began to seep out from various parts of the barrel, accompanied by the surprised murmurs of craftsmen.

"The sand holes in the barrel are small and uniform..."

Looking at the leaking barrel, Xiulote fell into contemplation. Casting a bronze cannon was much simpler than casting an iron one, and a 1 pound Eagle Cannon was the most basic of light cannons; such minor sand holes were not a severe flaw.

"Get a copper rod!"

Xiulote demanded once more. He then personally inserted the copper rod into the muzzle, feeling the slight roughness and resistance of the inner wall, and he nodded slightly.

"The bore is not smooth enough; it needs polishing."

Tilipi's eyes widened as he watched all the actions of the King, a look of surprise filling his gaze. The King's image gradually shifted from an autocratic monarch forcefully directing them to a person with half-expert knowledge of the craft. Then came an irrefutable voice, once more transforming back into the authoritarian King.

"Tilipi, let me see your casting process!"

Tilipi bowed respectfully and agreed. Compliantly, he led everyone to the site of cannon casting, first pointing to a 1.2-meter wax tube.

"Your Majesty, the next few Divine Eagle Cannons are still in the preparation phase. This is the cannon tube made from wax blocks; the bore has already been drilled, and the overall size matches that of a real bronze cannon exactly."

Xiulote nodded. The lost-wax process for creating clay molds was very common in Central America's metalworking.

"Your Majesty, once the wax cannon is made, it must be wrapped in clay and filled with clay on the inside, only leaving a pouring hole at the tail end of the barrel; this is the clay mold. Once the clay mold is finished, heating it to melt the interior wax tube gives us a shaped clay model of the cannon tube!"

Tilipi pointed at two already shaped clay molds, explaining in detail.

"Your Majesty, I have pondered this for a long time. Based on the experience of casting bronze pots, the holes leaking air and water in the barrel are likely due to insufficient drying time for the clay mold! We have never cast such a large bronze piece before, and the molds only dried for less than a month. These new rows of Divine Eagle Cannons, please give us more time to let the molds air dry for three months!"

Chapter 537 - Bronze Cannon, the First Trans-era Attempt!_2

Upon hearing Tilipi's analysis and inference, Xiulote looked surprised. He gazed at the true master caster, affirming the other in his heart for the first time.

From countless transmigration novels of the future, Xiulote knew that the biggest problem with early cannon casting was the inadequacy of the clay models used.

The clay models for the cannons had high requirements for moisture, soil, and casting craftsmanship. The models were made of compressed clay, whose internal moisture was hard to dry thoroughly. During the casting process, the steam inside the clay model would heat up and evaporate, creating a honeycomb-like pattern of holes in the barrel, causing the cannon to leak air or even explode when fired. Therefore, the moisture inside the clay model needed to dry naturally. As the size of the cannons increased, so did the drying time, stretching from several months to half a year. If it was a particularly humid rainy season, the drying time would have to be extended even further.

"Tilipi, your thoughts are quite good! The past few months have been a rainy season with abundant rainfall, and the air is moist; the clay models need to dry longer. The issues with the trial-produced cannons are your responsibility, but they are forgivable! Now it is the drier September, and the rainy season will end with the harvest in October... I will give you another four months' time to complete this batch of Divine Eagle Cannons!"

Upon hearing this, Tilipi sighed in relief. Chalape's face also showed joy. The two exchanged glances and knelt down to perform a ritual salute simultaneously.

"Your Majesty, thank you for your leniency! Your magnanimity is like the boundless Great Lake..."

"Continue, finish explaining the process!"

Tilipi stood up, walked to the front of the bronze furnace, and continued his explanation.

"Your Majesty, once the clay model of the barrel is completed, we can start up the furnace, melt the bronze for the cannon casting. You see, by the outlet at the bottom of this furnace, there is a deep pit in the ground intended for placing the clay model. We position the cannon's clay model with its intake opening facing up, placed in this pit..."

As Tilipi spoke, he motioned with his hand. Two apprentice craftsmen carefully placed the cannon's clay model into the pit, barrel opening up.

"Next, fill up the pit, then use clay to create a conduit connecting the furnace's outlet to the clay model's intake opening, guiding the molten bronze into it... This step must also control the fire properly, the flow rate of molten bronze should not be too fast to avoid displacing the core inside the clay model... Then wait until the bronze inside the clay model naturally cools down, then excavate the clay model from the ground, and finally break it open to retrieve the cannon..."

Xiulote listened patiently to the cannon casting process, recalling several half-understood terms and fragments in his mind.

"Natural cooling... I seem to remember a term in cannon casting called 'water cooling self-tightening'. This should involve making the core's model hollow, filling it with water, causing the barrel to cool and contract from the inside out, greatly improving quality... No, the clay model cannot have water poured into its hollow; that must be the iron mold.

Iron mold... The clay model is disposable, needing to be broken open to retrieve the cannon. The surface of the iron mold is much smoother, can be reused, and has almost no water vapor or sand holes. Iron mold water cooling is the big secret for transmigrator's cannon casting!... Hm, iron molds are relatively easy, the metallurgical technology by the time of the Ming and Qing dynasties should be sufficient. Yet, water cooling requires a very high level of technology, probably only achievable in modern times. And most critically... I still don't have any iron."

Xiulote shook his head. He contemplated the cannon casting process in his mind for a moment, then instructed.

"Tilipi, remember my words! Other than increasing the drying time of the clay molds and polishing the inner walls of the barrels, the body of the Divine Eagle Cannon can also be thickened again, the bronze usage increased from 250 jin to 300 jin! Once the casting is complete, if there are no leaks, add five copper hoops to reinforce the body! A qualified bronze cannon must also be fitted with claw nails and copper trips for stabilization during firing!"

Bertade had already drawn out notes on inner polishing, thickening the barrel, five copper hoops, and stabilizing fixtures, then handed the drawings to Chalape. Chalape smiled gratefully, and the Head Warrior also responded with a gentle smile.

After finishing the essential points of the process, Xiulote paused to reflect, and a phrase he remembered surfaced in his mind.

"Clay model casting, cast ten to get two or three, then one can be called a master!"

Although he did not know which era this saying came from, the size of the cannons it referred to, whether it referred to bronze or iron cannons, it still gave insight into the difficulty of cannon casting. For the American civilization at this stage, early exploration into cannon casting could only rely on sufficient quantity to randomly meet quality standards.

With this thought in mind, Xiulote resolved to issue an order solemnly.

"Chalape, Tilipi, heed the command!"

At these familiar words, Chalape's knees trembled, and he knelt to the ground again with his clan brother.

"Drying the clay mold requires time. In these few days, you all must work harder and make the clay molds for 40 Divine Eagle Cannons!"

Upon hearing this, Tilipi's body trembled, and he looked at the King before him, asking in shock,

"Your Majesty, 40 Divine Eagle Cannon clay molds! That's 300 jin of bronze each, totaling 12,000 jin! Plus another 48,000 jin for casting Copper Armor, that's 60,000 jin of bronze! The bronze stockpiled in the warehouse over years still doesn't even reach half this amount, and this hasn't even taken into account the large consumption of bronze farming tools..."

"Tilipi, this is a Royal Decree!"

Xiulote interrupted the Master Caster, sternly rebuking him.

"You just do your best! As for the bronze ore, I will start resolving that matter soon, it won't delay the Workshop's production!"

The Workshop instantly fell silent, everyone bowed their heads, following the will of the King.

"Tilipi, for the 40 Divine Eagle Cannons clay molds, if you can successfully produce 5 usable ones, you will be deemed qualified! If you can produce 10, I will promote you to a military noble, making two nobles from the Metal Family!"

The King said indifferently, then his expression turned stern.

"If by next February, you haven't produced even 5 qualified Divine Eagle Cannons... then prepare to face the Alliance's military law and sacrifice yourself to the Chief Divine!"

Hearing the King's command, Tilipi first showed a look of joy, but then sweat began to bead on his forehead. He knelt on the ground, and after quite a while, he began to speak with difficulty.

"Your Majesty, I obey your command, willingly serving you to the death!"

"Hmm, good!"

Xiulote watched for a moment, then slowly nodded. Next, he looked at the kneeling master Craftsmen before him, his expression was extremely serious, and his words left no room for defiance.

"Chalape, Tilipi, your task is heavy! I am giving you another hundred captured Coppersmiths from Ihuatzio City! These four hundred Coppersmiths will arrive within two days. The two hundred Samurai escorting them will be stationed around the Workshop to tightly ensure your safety."

Of course, the so-called stationing also had other implications. After taking on the Bronze Cannon project, the Bronze Workshop became the most secretive military location in the Fief, and also the most critical place in all of America!

"Starting today, the area of the Bronze Workshop will be expanded, the workforce increased, and an additional wall will be built. All Craftsmen will be incorporated into the Kingdom Legion, under military law governance! Without permission, no one is allowed to leave the craftsman's camp even by half a step!"

"Tilipi, Cannon Casting is linked to the future of the Alliance, as well as the survival of the entire world... You carry the heavy burden bestowed by the divinities, and need to invest all your energy, focused solely on research. If you can continuously improve in Cannon Casting, I promise you the fortune of a hereditary nobility!"

The King's voice became gentler. He gently patted the Master Caster's shoulder, his face again showing a smile that made the other tremble.

"The Divine Eagle Cannon clay mold requires four months to dry. During this period, you need more practice and experiments. Here is another cannon blueprint for you to study. This cannon is only 40 centimeters long, with a bore of 4 centimeters, and an outer diameter just over 10 centimeters. It is short, light, and thin, weighing only a quarter of the Divine Eagle Cannon, with an estimated dry time of just one month for the clay mold, which is much easier than the Divine Eagle Cannon... Give you two months, and produce the first prototype cannon!"

"Ah... I obey your command. Your Majesty, what shall we call this type of cannon?"

"Hmm, the Alliance has Eagle Warriors and Tiger Warriors. Eagle Warriors belong to the Sun God's Legion, Tiger Warriors to the Rain Divine's Legion. Since we have the Sun Divine Eagle Cannon, let's name this cannon the Rain God Tiger Squat Cannon!"

Chapter 538 - Two Hundred and Sixty-Three: October Harvest, The People's Hearts Begin to Settle

Golden October arrived, walking through the cessation of wind and rain, and the warm sun shone down on the tropical highland, where the shores of the Lake Region still brimmed with life, with tall grass and warbling birds.

Harvest time had come. Chiwaco, with a bamboo basket on his back and a farming tool in hand, stood in the fields before the Milites encampment. On his aged smiling face, there was the joy of harvest time, and flowing through his deep pupils was the golden hope. Hope that had been nurtured through the drab, protracted rainy season, now transformed into tangible, ripe fruits.

"The harvest is bountiful!"

The old Militia murmured to himself. A hundred thousand acres of lush farmland unfolded before him, like the most touching and graceful long scroll extending to the very edge of the sky. Ten thousand Milites dispersed according to their units, carrying bamboo baskets, holding Stone Sickles, and busy bending over in the harvest fields.

"Blessings of the Chief Divine! To think I'm alive to see this day of bountiful harvest! It's like a dream."

Chiwaco looked around greedily, his eyes gleaming as if he wished to remain in this moment forever. Everywhere in front of him were busy figures, around him echoed the low shouts of work chants, and his nose filled with the pleasant scent of grain.

Huge pumpkins had been harvested, linked into long green and yellow stripes, and were laid out to dry in front of the distant thatched cottages. Large groups of Milites, carrying wicker baskets and wielding Stone Sickles, came and went in an unending stream. They piled the harvested beans into small mountains in the cool sheds among the fields, then wheeled them back to the encampment with pushcarts. As for the main crop, corn, it grew in large swaths of greenery, its cobs long and full within the leaves, the husks just starting to yellow, signaling the final harvest was at hand!

"Uncle, what are you looking at?"

Weizti, his head wrapped in a scarf and carrying a scythe, approached the old Militia. He followed the other's gaze but saw only the usual harvest fields and busy crowds, in this unusual year of chaos.

"First, we're harvesting pumpkins, then beans, and later we'll get to the corn. Each person is expected to harvest ten acres, and my back is about to break!"

Weizti wiped the sweat off his face, muttering complaints under his breath. The tense busyness of the harvest had already lasted two weeks, and he still had a little over three acres of beans left to gather.

"Ah, I never used to get tired doing farm work in previous years, but this year, I'm just not used to handling the farming tools. Probably because it's been too long since I last farmed, and this time we have too much land. Uncle, you're in charge of so many people now! Why don't you just do like Lord Huitu, and find a few people to take care of both our workloads? ...Er, even just sharing it a bit would be nice."

Hearing this, Chiwaco finally turned around and heavily patted Weizti on the head.

"Blockhead, after clenching a gun to kill people for a year, can't you get used to work that sustains life? Even if you were a blade of grass, you shouldn't forget your roots, or you'll become like duckweed on the water, never knowing where you'll drift. That Lord Huitu, at his very roots, is not the same as us rural folks..."

The old Militia looked thoughtful, stretched as he gazed into the clear sky, displaying a kind of ease and more propensity to chatter.

"...Besides, each person only has ten acres, and all the farming tools are provided; we just need to put in the labor. What's there that can't be done? These past two years we've walked over corpses... Now we can stay in the fields, peacefully farming and harvesting, sleep through the night without worry, and when there's free time, even bring some food to Luwei... I hope that these days will last long!"

Hearing his uncle's words, Weizti obediently nodded his head, since the uncle always had a point. He continued to look around.

"Uncle, with so many people working, the wild rabbits and stupid deer have all fled without a trace! Otherwise, hunting one or two would mean we could have some meat tonight. Eating pumpkins, black beans, and cakes every day without even a bit of grease, my mouth is terribly craving it!... I could even bring some good stuff to Luwei, she loves meat."

Chiwaco first glanced at Weizti, but when he heard the latter part, his expression softened considerably.

"Blockhead, although we had wine and meat when guarding the gates of the Capital City, those days were hollow, but now, our days are filled with substance. When we were in the village before, when could we afford to have our fill of mixed grains every day, let alone cakes on festival days? We didn't dare to think of such things, and as long as we weren't starving, it was considered a good year... Mmm, Luwei is still young, growing, so I'll go to the Priest in the encampment later tonight to ask for some meat. Once the busy period is over and we're allowed out of the encampment, you take it to the village where the families are, and give it to her."

"Great! Uncle, get an extra portion of meat. Little Ayuli's wife is pregnant, so when I go to the village to see Luwei, I can also take some for her!"

Weizti nodded vigorously, showing genuine concern for his brother's wife.

Since the Milites chose their land and established their encampment, they've continued to maintain military discipline, though it has eased slightly. The relatives of the soldiers were also grouped together and arranged to stay in nearby villages to give the Milites confidence and focus. Every few days, if the fields weren't too busy, the Milites could take turns leaving the encampment to visit their families. Weizti was just about due for his turn.

After the war, with many able-bodied men lost, the Lake Region was left with many young widows. Under the arrangement of the Priest, over the past few months, the single Milites had successively married, with the quick ones even having children. If food supplies were sufficient, it wouldn't be long before a baby boom ensued. Little Ayuli of the seven Militia was among the first to marry, with his bride being from a family of a Samurai who died in the city. Such marriages between rural Militia and city Samurai would have been unimaginable before, but now they had become commonplace.

Chapter 539 - October Harvest, The People's Hearts Begin to Settle_2

"Hmm, Little Ayuli is really fast! Wood, remember to talk to him before you go. These past few months, Luwei's wife has been taking care of him too... With you and Luwei, I feel reassured..."

"Alright!"

With the sun shining brightly, the two continued swinging their sickles, engaging in intermittent small talk as they worked.

It was not until the sun reached its zenith and the temperature rose to its peak that a loud, clear sound of a bone horn blew through the wind, signaling it was time for lunch. Labor during the harvest required physical strength and time was of the essence. Under Xiulote's personal supervision, a special lunch was established for the militia during the busy harvesting days as a grace.

The two then stopped their work, carrying baskets filled with vegetables, and walked together towards the center of the camp. The other milites gradually gathered around, whispering quietly on the dusty path created by their tread.

"The new King is truly benevolent, allowing us to eat a hearty meal at noon as if we were in a battle."

"All Kings are of the Divine Eagle Bloodline, they must have broad vision and generous hearts!"

"Nonsense! Have you not fought in the north? The new King is His Highness from Mexico. He is a Black Wolf Divine Descendant, an envoy of the God of Death, controlling the lives of warriors! Whenever he wields his Divine Power, it erupts like a thunderbolt, smashing legions into dust!"

"Ah? How come I heard a sage in the Capital City say that the new King is a descendant of the Sun God, possesses the Kingdom's Heritage gemstone, and also inherited the old King's Divine Power?"

"...You're both wrong!"

Hearing the chaotic discussions, finally a militia Camp Commander couldn't restrain himself. He bellowed fervently.

"I asked the Priest marching with the troops, and he said, the Emperor was born under the Chief Divine's Blessing, received Divine Revelations since childhood, and carries the future of the whole world! The Chief Divine is the highest and greatest, omnipotent. The Emperor, as the envoy of the highest Chief Divine, naturally possesses different Divinity."

"...He is the sun that creates life, the Black Wolf who commands death, and will also bring harvest, prosperity, and hope like the gliding Feathered Serpent! He devoured the former Divine Eagle Royal Family, expanded His Divine Power to the lake region, and made this place His Kingdom. He treats us all the same, He is both the Highness of the Mexica and the Divine King of Prepetcha!..."

The commander's words gradually turned into a chant, and the milites around gradually fell silent. Soon, others also began to chant. The eyes of the soldiers held deep reverence, filled with new expectations.

In the midst of chanting, Chiwaco stopped walking. He listened to the people's words, his eyes deepening.

"Uncle, have you seen His Highness from Mexico? What's he like?"

Weizti scratched his head, curious.

"What's he like?"

Chiwaco's expression on his face shifted complexly. After thinking for a while, he muttered to himself softly.

"He has a nose, two eyes...but now he's a man, later a god."

"What?"

Weizti did not catch the last sentence. As he was about to ask, his uncle had already walked far away, so he had to hurry to catch up.

Soon, the two reached the camp where the scent of food wafted in the wind from afar, making their mouths water. They unloaded the vegetables from their wooden baskets and greeted the Mexica Samurai guarding the food and tools. The mutual familiarities had already been established over the season.

"Blessings of the Chief Divine! Warrior Huoqia. The sun is fine today, and the fields are truly beautiful!"

"Blessings of the Chief Divine! Captain Chiwaco. Yes, today is the sixth day, a lucky day of the Sun God. Suitable for battles, skirmishes, and death."

Huoqia smiled and nodded in response, the same elder warrior as before. He took out a sparkling bronze sickle from a wooden box on the ground and continued with a smile.

"We've just received a batch of bronze sickles, not too many. You've made great contributions for the Alliance, you can take two to use first. These are much sharper and more durable than stone sickles!"

"Bronze sickles?"

Chiwaco was surprised. He took the sickle handed over by the warrior, and with a simple swipe on the vegetables on the ground, the vegetables were neatly cut into two halves.

"Really effective! Using such expensive tools for farming, it's really different!"

The old militiaman exclaimed.

"Well, collecting vegetables is one thing. When it comes to harvesting corn later, these convenient farm tools will make work much quicker and save a lot of effort!... Warrior Huoqia, could you allocate a few more for my team?"

"Ah, if it was someone else asking, surely there would be none. But Captain Chiwaco, you are different. I will give you half more! You are a person who His Highness himself has praised, 'Favoured by fate warrior', bound to be heavily relied on in the future..."

"Ah... Thank you. "

At the mention of "being heavily relied on," Chiwaco felt a gulp in his heart. He managed a nod with a forced smile, then pulled Wood towards his own camp to arrange for people to collect today's lunch.

People sat on the ground according to their camps, waiting. Accompanying the meal was the army-associated Priest. Initially, most priests were Mexica from the Alliance, now many lower-grade priests from Prepetcha had also joined. The priests prayed loudly in the dialect of Qinchongcan, and the people repeated along.

"Praise the Chief Divine Huitzilopochtli! He gives us sunshine, rain, and harvest..."

"Praise the Chief Divine!"

"Praise His Majesty Xiulote! He provides us food, stability, and homes..."

"Praise His Majesty!"

In the harvest-rich fields, within the stable camp, people followed the priests in their prayers, reciting words they knew by heart. Unconsciously, a sense of piety began to form in their hearts.

The overturning of the Kingdom, the reversal of ranks, the alteration of divine beings... In these past two years, too many heart-stirring events had happened, numbing the spirits of Prepetcha people. In this rapidly changing era, not only has the resistance to reform reduced to a minimum, but there are also voids in beliefs that could be filled. This is a hard-earned blank slate, being painted by the King. The new scroll spreads over the land of the Fief, and is also engraved in the hearts of the people!

Chapter 540 - October Harvest, The People's Hearts Begin to Settle_3

Soon after they finished their prayers and meals, the people returned to the fields in their respective units. They kept busy until the sun had set.

On these busy days, ample provisions, families settled in camps, oppressed legions, guiding priests, and the nearness of the Alliance officers - all of these together maintained the stability of the garrison forces and gradually won the hearts of the surrendered armies.

The same scene played out in dozens of villages across the Lake Region. Tens of thousands of villagers busied themselves in the fields and prayed in front of altars. With the crops' bountiful harvest, their wandering spirits could finally find peace. The three gods they prayed to quietly morphed into the common Sun God, and slowly converted into the sole Chief Divine.

Forty li southwest of Ihuatzio City, at the base of Qinganbate Mountains, lies the Lake Region's most remote village. Villagers stopped in the fields, watching the newborn sun, looking over the golden fields with plain joy on their faces.

"Blessed by the three gods! To think we could have such a good harvest this year!"

"Ah, may the Sun God bless us! This year has truly been tough! First, there were multiple draft and grain conscriptions, and the warriors from the Capital were ferocious as tigers, leaving nothing for planting. Then the troops passed through, killing all around, with warriors everywhere along the Great Lake shores, even tainting the lake waters red. After both these events, half of our village perished..."

"Yes, the village priest said that this year was marked by disaster, with the sun falling from the sky, and the moon ruling over the land. If the Moon Goddess wants you dead, it's fate. You can escape by day, but not by night; no family can avoid it..."

"No, the village priest has recently changed his statement! He said that this year is when the old sun sets and a new sun rises. The Mexica people have changed the heavens, and the new king is the Sun, Black Wolf, Feathered Serpent, and Divine Eagle..."

"Oh, the Mexica! The Mexica destroyed the Kingdom, and the Mexica killed the nobility. Unexpectedly, it was the Mexica who then distributed seeds, strictly ordering us to cultivate; they also provided food to help us survive the famine..."

"The priest says that the new king is also our king, from the Prepetcha..."

The villagers' discussion was full of imagination. They were filled with reverence for myths and their animosity towards the Alliance faded. Suddenly, one of the villagers softly exclaimed,

"The Mexica legion! The Black Wolf King!"

In an instant, everyone became silent. Rows of Mexica warriors appeared at the end of the field, followed by a tall banner of the Black Wolf. Soon, the villagers, both respectful and alarmed, knelt down on the ground, saluting the banner from a distance.

Beneath the banner, dressed in fine clothes, Xiulote observed the fields along the way. With a satisfied smile, he glanced at the villagers who were saluting spontaneously, feeling a wave of emotion.

"Looking all around, this year's crop is good! The sunlight and moisture are quite suitable, and the cultivation strong. The corn was planted late this season; there's still two weeks until the mid-October harvest. Once autumn harvest is completed, the fief's food shortages will no longer be pressing, and people's hearts will truly settle down. The Kingdom's rule will no longer be like eggs accumulated on a stone."

"Your Highness, how can one accumulate eggs on a stone? Are they to be roasted for eating?"

Upon hearing this, the Head Warrior was stunned. Then, he jested,

"The legion uses force to pile up stones, and the king ignites wisdom to start a fire. Carefully roasting for a year, people's hearts get thoroughly cooked... Of course, this also cannot be separated from the influence of knowledgeable elders. Your Highness, over the past few months, Chief Jatili did a great job

gathering a group of elite from the Prepetcha. They go everywhere extolling your valor, greatly influencing the populace."

"Hmm, Chief Jatili has done well! Bertade, do not worry. They are the most opportune group of people, without any force in their hands, always standing by the side of the strongest. We need to selectively accept them, providing the Prepetcha elites with a pathway for advancement."

Xiulote, with a confident smile, spoke assuredly.

"Soon, I will emulate the old systems of the Alliance, establishing community military schools across the regions, and building a new priest school in the Capital. I will provide the Prepetcha people with two additional pathways for advancement. Only by fostering a firm and reliable core, unifying more flag-waving peripheries, can our strength burn incessantly like the flames among pine forests!"

Hearing this, Bertade nodded respectfully, his eyes filled with profound admiration. Around him, a thousand personal guards armed with longbows formed a tight formation. They protected the safety of the king and left a solemn trace on the field ridges.

"Ezpan, the copper mine is just ahead, right?"

Xiulote, smiling, turned his head to look at the great general, born a miner.

"Yes, Your Highness!"

Ezpan bowed his head in salute. He looked around at the familiar scenery, filled with deep emotion.

"Your Highness, this lake is Lake Zirahuen. From here, follow the stream westward uphill, cross these several hills, and you will reach Qinganbate Mountain. The Kingdom's largest copper mine sits just below it!"

"In the local language, Qinganbate means the mountain of mild climate. There are also two archaeological sites on the mountain: one is a Teotihuacan-style tomb and the other is an ancient, abandoned human sacrifice arena. It is said that an ancient Divine Descendant was sacrificed here, buried at this spot. His Divine Power seeped into the earth, creating the vein-speckled gilt copper mine!"

Hearing this, Xiulote tiptoed, gazing at the distant mountains. Flecks of light flashed momentarily, faintly showing speckled golden hues! After gazing for a moment, the king burst into hearty laughter.

"Excellent, order the entire army to hasten their pace! I can hardly wait!"