

National Museum of Agriculture in Szreniawa – Basic Script

Automatyczny komunikat systemowy_EN

If you're ready to start your tour, please press the round button on your audio guide. We'll hear the first recording in the ticket building.

2002 Ticket Building

2002a

Welcome to the National Museum of Agriculture and Farm and Food Industry in Szreniawa. Let's walk through the gates and go outside. There we'll start our tour.

2002a_apk

Welcome to the National Museum of Agriculture and Farm and Food Industry in Szreniawa. Let's walk through the gates and go outside. There you can play the next recording.

2004 After Leaving the Ticket Building

2004a

Let's take the wide, paved walkway that, after a short distance, turns to the left.

2004b

Agriculture is one of the most important and oldest areas of the economy. Its history goes back thousands of years. In our museum, you'll see how it's changed over the centuries. Our exhibition has been set up on the grounds of a large former country estate. At the turn of the last century, this place witnessed a true revolution, a result of Polish agriculture starting to use machines on a large scale.

2004c

I'll tell you about one of these machines in a moment. It's on your right and looks like a locomotive, though it functions as a tractor. Let's get closer.

2004c_apk

I'll tell you about one of these machines in a moment. It's on your right and looks like a locomotive, though it functions as a tractor. Let's go up to it, pause there and play the next recording.

2006 Kemna Locomobile

2006a

Let's pause by the machine. This is a self-propelled Kemna steam locomobile. The first such machines were used in agriculture in the late 19th century and remained popular until the Second World War. This locomobile dates to 1927. We can imagine how impressive it was at the time!

2006a_apk

Let's pause by the machine. This is a self-propelled Kemna steam locomobile. The first such machines were used in agriculture in the late 19th century and remained popular until the Second World War. This locomobile dates to 1927. We can imagine how impressive it was at the time!

2006b

[Male voice 1] What kind of devilish machine have you brought here, sir?

[Male voice 2] It's a locomobile, Wojciech. The newest model, straight from the factory in Wrocław.

[Male voice 1] Ah... a locomobile... It looks like the steam engine that runs down the tracks every day from our Szreniawa to Poznań. It chugs, smokes, makes a racket...

[Male voice 2] Because the two machines are similar. Only this one has different wheels, for driving on roads. It can also go into the fields.

[Male voice 1] What for?! It'll destroy everything, crush it, scare away the people and animals!

[Male voice 2] Far from it, Wojciech. It will help all of us with work. You see this large wheel up here? You place a belt on it, attach it to a wheel on a thresher, and the machine will thresh all the grain for us on its own. But you can also plough with it, and quickly too!

[Male voice 1] Then the people won't have anything to do.

[Male voice 2] We need to move with the spirit of the times. And there will always be work for people on a farm.

2006c

Let's continue along the walkway towards the buildings you see nearby. We're heading for the green pavilion marked with a large number 2. See you there.

2006c_apk

Let's continue along the walkway towards the buildings you see nearby. We're heading for the green pavilion marked with a large number 2. Please go inside and, once there, play the next recording.

2008 In Front of No. 2

2008a

Let's go inside pavilion 2. There we'll learn about the history of agriculture in the Polish lands from as far back as we can go in history.

2010 No. 2 History of Agriculture



2010a

Let's head straight into the first annexe on the right, with the white pony.

2010a_apk

In this pavilion, we'll learn about the history of agriculture in the Polish lands from as far back as we can go in history. Let's head straight into the first annexe on the right, with the white pony.

2010b

Probably 7,500 years ago, population groups who knew how to practise agriculture arrived in the territory of today's Poland from southern Europe. At the time, the landscape here was mainly forest. The first farmers burned sections of it to clear land and plant mainly wheat and barley.

2010c

Right in the corner, we've recreated a burned forest, and in it we've placed primitive agricultural tools. The people living in the hut you see in the illustration didn't yet know how to use metal. They mainly used wooden and stone tools. So in the burned forest, we see items like a ploughshare, meaning a log sharpened at one end that helped break up the soil. Lying next to it is a gnarled harrow, made of a tree trunk with the branches cut short, used for breaking up larger clumps of soil.

2010d

There are some stone tools in the display case. They are hoes, sickles and axes, which could be used both for work and for battle.

2010e

In the next display on the left, you can see horse and cattle bones. From the beginning, working the land went along with animal husbandry, which was particularly easy to develop in the Polish lands. We can see what horses of this era looked like from the example of the Polish pony standing behind the display case. This breed physically resembles the horses that arrived here with nomads from the steppes.

2010f

Meanwhile, the aurochs is considered one of the modern ancestors of the cattle of that time. One of their mighty skulls hangs on the wall to the right. These animals lived in forests all across

Europe. Bulls were up to three metres long, over 1.5 metres tall and weighed up to 1,000 kilos. The last aurochs in Poland died in the early 17th century.

2010g

Now let's go left, to the neighbouring annexe on the two-field system. [FX: [cisz 2s](#)]

2010h

So-called slash-and-burn agriculture was replaced in time with a system of cultivating two fields. In one section, grain was sown and harvested. Meanwhile, the second section, the so-called fallow field, rested and regained its fertility. Later, the two were swapped.

2010i

This method is illustrated by two photographs behind the exhibit items. On the left, we see ears of grain, and on the right, the fallow field we described. Interestingly, the grain in the photo is millet, which thousands of years ago was the most popular crop in Poland.

2010j

Progress in agriculture in this era is represented here by an ard. These simple ploughs were used to break up the soil without turning it. Notice the end of the tool in the middle. It's made of iron, which was slowly becoming widespread at this time. Iron knives and sickles, for instance, became a valuable aid for farmers.

2010k

Let's go up to the next annexe, on the three-field system. [FX: [cisz 3s](#)]

2010l

Let's take a look at the colourful illustration opposite the entrance. It shows a city on the Vistula. Floating on the river are boats full of grain. From the 16th to the 18th centuries, this was the main Polish export good. The production of large amounts of wheat or rye supported development in agriculture, including the replacement of the two-field system with the three-field system. In this new method, land was divided into three parts. The first grew winter crops, the second, spring crops, and the third was left fallow.

2010m

In this ancient period in Poland, farmers also gained new tools. In the display on the right, you can see instruments such as a sokha and a plough. The sokha, long and heavy and therefore requiring great strength from the farmer, was used mainly in northern and eastern areas. In the centre and the west, the lighter and more efficient plough appeared relatively early. Both tools made it possible to partially turn the tilled soil, forming ridges.

2010n

Now let's turn round and take a look at the large photo behind the display on the other side of the annexe. It shows oxen on the steppe. Breeding and selling these animals was very

profitable in ancient Poland. A trade route ran from Ukraine through Małopolska to Silesia, along which thousands of animals were herded every year.

2010o

Let's continue on and take a look at the exhibit in the corner of the room. [FX: cisza 3 s.]

2010p

We've reached an important breakthrough in agriculture. At the turn of the 18th and 19th centuries, new crops began being grown. You can see them in the photos in the back of this display. They include clover, and on the far right – potatoes. Papilionaceous plants, like clover, enrich the soil with nitrogen, and their large amount of green mass increases the level of humus in the soil. Potatoes prevent the soil from being exhausted when growing grain, so it was no longer necessary to leave fields fallow. This allowed for the development of crop rotation, in which grain is grown in alternation with other crops.

2010r

At this same time, the industrial revolution began to reach the countryside. New farming machines were invented that allowed the land to be more efficiently exploited. We'll see these machines in the exhibit by the opposite wall. Let's take a closer look.

2010s

All the machines and tools presented here are factory-made. One of the largest is the wheelbarrow seeder. It comes from Hipolit Cegielski's famous factory, founded in Poznań in the mid-19th century. To the left we can also see some very popular tools: a chaff-cutter and a threshers.

2010t

Meanwhile, on the wall to the right, you can see a photo of a locomobile, similar to the one near the entrance to the museum. This is a portable steam engine – a symbol of the transformation in 19th-century technology – whose strength made it possible to use many heavy and efficient machines on modern farms.

2010u

Let's head to the left to face the last annexe. It holds a collection of machines and equipment from the 20th century. By then, mechanization had made great strides in agriculture. Pride of place here goes to a Lanz Bulldog HL12 tractor. This is a German model from the 1920s. It was valued for its small size and relatively simple construction. It has a single-cylinder, two-stroke, 12-horsepower engine. It could run on practically any type of liquid fuel, even low-quality.

2010w

In Poland, tractors and other large agricultural machines only became widespread after the Second World War. The illustration on the wall represents that period. It shows a Polish Vistula combine harvester. We'll be able to get a close look at one later in the exhibition.

2010x

Now take a moment to look around the exhibit on your own. When you're done, please exit the building and turn left, to pavilion 3. There we'll see the work apart from farming that people in the countryside did long ago.

2010x_apk

Now take a moment to look around the exhibit on your own. When you're done, please exit the building and turn left, to pavilion 3. Once inside, play the next recording and we'll continue our tour.

2008od2010 In Front of No. 2

2008od2010a

After leaving the building, please turn right, to pavilion 3.

2012 No. 3 In a Rural Home

2012a

We're in a space set up to look like the main room in a rural home. Let's pause here for a moment. Until the 1940s, some regions of Poland maintained the ancient tradition of making textiles for clothing, sleeping pallets and sacks. Every house in those days had a small plot for growing flax, and many farms kept sheep. Flax was turned into linen and wool was made into cloth. In the countryside, weaving was mainly done by women in the winter, when they combined work on the loom with other household duties. There were also artisans who did weaving year-round.

2012b

The initial stage of processing raw material took place outside. But the most important work was done inside the house, usually in autumn and winter. As Władysław Reymont described in his novel *The Peasants*:

"Many people gathered together, for the evenings were long and they had no work to do. Winter was moving harshly and the nasty days made you yearn for going to sleep with the cockerels since anyway you'd be sleeping and lying down for so long until dawn that your sides would hurt.

The hubbub was slow to build because they still talked quietly amongst themselves, the spindles just fluttered and thunked on the floor, and here and there a wheel whirred, but not often, because these new-fangled inventions weren't overly trusted, and people preferred to spin the old way on distaffs.

The Kłębiaks, and four of them were youngsters, grown tall as pines and now with moustaches just about sprouting, twisted twine by the door, while the rest of the farmhands spilled out into the corners, puffing cigarettes, grinning toothily and making teasing jokes with the girls, so the

whole room almost shook with giggles, and the older ones also started in with their ribbiting, so there was more cause for laughter and fun.”

2012c

Now let’s face away from the entrance and look at the exhibit on the left. The machine nearest us, light-brown with a wooden wheel, is a spinning wheel. Placed on it is a distaff, which looks like a clump of hair. This is actually raw wool or plant fibre. Spinners would pull it out using their fingers and then twist it into a thread using the spinning wheel, making yarn.

2012d

The other equipment we see here was used to prepare the yarn for weaving. This final step took place on a special weaving machine, called a loom. Standing facing the entrance, we can see one on the left. Currently, the loom is making a multicoloured, striped rug. But skilful hands could also make patterned kilims – like the ones hanging on the walls behind the loom – as well as bedspreads or textiles for clothing. Manufactured materials and pre-made clothing reached the countryside only at the turn of the last century.

2012e

The self-sufficiency of rural people long ago was not just limited to making fabric. Most farmers were also familiar with basic woodworking, for instance. If they didn’t know something, they sought help from professional artisans.

2012f

Now let’s move on to the next room. See you there.

2012f_apk

Now let’s move on to the next room. There, pause by the entrance and play the next recording.

2014 No. 3 Handicrafts



2014a

Let’s stop near the entrance. At first glance, you can see we’ve entered a workshop or actually several workshops. You’ll hear about the first two from Piotr, who works as a carpenter and knows every tool here.

[Pan Piotr] Hello! Maybe let's start with whether you know what a carpenter does. Well here you are – a carpenter is an artisan who builds houses, churches and other buildings out of wood. My workshop is in the corner to the left. The machine with the two wheels is a hand lathe. Lying next to it are various chisels, drills, planes and saws. My job is to make sure the structures I build with them last even a hundred years. The most important part are the walls and the roof. Right in front of us on the floor, you can see a few examples of wall construction. Wooden beams are laid one on top of another and joined at the corners using special notches, so-called woodworking joints. This kind of construction is known as framework. It's simple and durable, and known all over Poland.

2014b

[Pan Piotr] Next to my workshop to the right is another artisan known for working with wood: a cooper. Coopers make containers out of wood planks – barrels, kneading troughs, milking pails and watering cans. Their toolkit is similar to a carpenter's. But also notice some special equipment here. An anvil, for instance. A cooper, like a blacksmith, uses iron in their work. Metal strips are used to tighten the planks to make the container watertight. It might be hard to believe, but this anvil is around 400 years old! Such a big hunk of iron was very valuable at one time. It was passed on from generation to generation as the greatest treasure. Today there are even fewer coopers than carpenters. Wooden vessels have been replaced by metal and plastic products.

2014c

[Narrator] Thank you, Piotr, for that information. Now let's continue. Go up to the black sewing machine that says "Singer" on the side, which you can see further along in the exhibit. Displayed next to the sewing machine are two disappearing professions: tanning and leatherwork.

2014d

A tanner turns animal hides into leather. You can see a tanning workshop on the left. Lying on the tanning beam is a large hide, on top of which we can see protective gloves. The tanner's job is to treat the hide so it's soft and flexible. This is a difficult and lengthy procedure. Artisans used many raw vegetable and mineral materials to help keep hides clean, smooth them out and grease the leather. So they needed to know at least a little about chemistry.

2014e

On the low stool, you can see glass containers with preparations used in tanning. These are tanning fat, black dye, pitch, salt and soda. Apart from these, you also need tanning agents. At one time they were most often made from ground oak bark. All this means long-ago tanneries resembled small chemical plants. Unfortunately, they often gave off an indescribably awful stench. Therefore they were usually located a fair distance from residential areas.

2014f

Let's go back to the Singer sewing machine. It was used by a saddler, who made saddles and harnesses. These artisans purchased the leather produced by the tanners. They also additionally used wood, metal and fabric. Saddlers' stands often enjoyed great success at markets and fairs. Every farmer wanted his harnesses to look as beautiful as possible. But saddling disappeared into the past when live horses were replaced with machines.

2014g

Now let's stand facing the hanging rugs with colourful stripes. We saw almost identical ones recently in the staged rural house. There we talked about the initial processing of plant fibre or wool into yarn. Here we can get a close look at the tools used for this. Two basic ones are right in front of the rugs and labelled in red with a 7 and 8. These are two different types of breaks, resembling large scissors. They were used to break up the hard flax or hemp stalks, to extract the most delicate fibre inside. Later the fibre was scutched, or beaten, and pulled through the metal comb you see here, called a heckle. Heckling combed out the fibre that could now be placed on the distaff of a spinning wheel. The process after that, from making yarn to weaving, you already know.

2014h

Now let's take a look at the final handicraft presented in our exhibit. This is pottery. Its symbol is the pottery wheel. This display includes two types: in the front, we see an electric wheel made of metal, and behind it, a wooden foot-powered one. While they are powered differently, they work by the same principle. A potter will place clay on the rotating wheel on top to shape vessels or other objects. A rich variety of products can be made using pottery. After all, for thousands of years, clay containers predominated both in cities and the countryside.

2014i

We can see proof of this by going into the annexe behind us. In the large display case to the right of the film monitor, you can see a collection of vessels and figures from pottery workshops all over Poland.

2014j

In the corner, beside the entrance to the next room, you can also see objects related to other, formerly very widespread, handicrafts: wheelwrighting and blacksmithing. We'll learn more about these in a later part of our audio tour. Here it's worth mentioning that all the professions we've talked about had a strong influence not only on the lives of countless generations of Poles but also on Polish naming practices. As in English, popular Polish surnames often are derived from these trades. Kowalski is the equivalent of Smith, Bednarek means Cooper, and Cieślak means Carpenter. The names of hundreds of towns, large and small, also come from similar roots. Now please take a moment to explore this exhibit on your own.

2014k

I'll wait for you in the next room, through the wide entrance opposite the monitor.

2014k_apk

When you're done, please go through the wide entrance opposite the monitor into the next room, turn right, and go into the room with the model of a windmill. There, please play the next recording.

2016 No. 5 Oil Milling

2016a

We've entered the next pavilion. The subject of the first annexe is oil milling. We'll take a look at that in a moment. But first, let's go to the right and take the short corridor to the room with the model of a windmill. We'll continue our tour there.

2018 No. 4 Flour and cereals



2018a

Let's stop by the model of a windmill. You can make it turn by pushing the button on the metal railing in front of us.

The windmill marks the start of our exploration of food production. Back in the early 20th century, these mighty, wind-powered machines were an inseparable element of the Polish rural landscape. In this province alone, there were hundreds of them. Along with water mills, they produced flour and cereals that formed the basis of most people's diets.

2018b

Let's take a close look at the simple but ingenious construction of the windmill. It reflects the deep knowledge and great technical skills of our ancestors. Windmills here in Wielkopolska province are most frequently so-called "post mills", which could rotate to face into the wind. They were built out of pine and oak and could be up to 15 metres tall. The interiors were divided into four levels. The lowest held the storeroom. Above it were two working levels. Then, right under the roof, was the so-called cap, used to hold the machinery.

2018c

From the outside, the most impressive part are the mighty sails. When bursts of wind set them moving, the sturdy shaft they are mounted on starts to turn as well. The shaft, through a transmission system, turns the heart of the windmill, meaning the powerful stone mill wheels. They can easily grind grain seeds into flour.

2018d

The first windmills were built in Western Europe nearly a thousand years ago. How did people grind grain before then? They used tools invented many thousands of years before. We can see some to the left of the windmill. These are querns.

2018e

The earliest querns were simply made of two stones. Grain was poured into a natural depression in the larger stone, then pounded with a smaller stone.

2018f

In time this tool was refined somewhat. Further to the left, we have a quern that you might still have seen in country houses in the first half of the 20th century. Two round stones, placed one on top of the other, are placed in a wooden box. A vertical bar makes it possible to turn the upper disc and grind the grain. The rubbing meant stone shards got into the grain, and also into the bread baked from them.

2018g

Now let's look at the cup-like wooden vessels you can see behind the querns. These are hand mortars for cereals. Flour is not the only thing derived from grain. You just had to pour wheat, barley, millet or buckwheat into a mortar, and then skilfully shell and mash the grain with a wooden pestle. This gave you pearl barley, millet groats, and buckwheat or millet kasha.

2018h

Now let's go past the wall on the left. Since we now know how flour is made, let's look at baking bread.

2018h_apk

Since we now know how flour is made, let's look at baking bread. To do so, go past the wall on the left and play the next recording.

2020 No. 4 Baking**2020a**

Let's pause by the round table. All the objects surrounding us now are related to baking. We don't know who first mixed flour with water and baked bread, or where and when. But the discovery was a breakthrough. Bread became a staple food for millennia.

2020b

In this room we see some key items for home and professional breadmaking, laid out side-by-side. From country houses we have a few dozen wooden basins of various sizes, which we can see hanging on the wall. They were used for hand-kneading dough. All you needed were four

ingredients: flour, most often rye, water, salt and a raising agent, like leaven or yeast. The leaven was most often a chunk of bread leftover from the last bake.

2020c

Kneaded dough was transferred to a container called a kneading trough, where it was left to rise near a warm oven.

2020d

As the bread rose in the kneading trough, it could be divided and transferred to small moulds, which gave the bread its final shape. Some of these moulds are on the table next to us. The older ones are made of wicker or straw, but there are also plastic ones from the late 20th century.

2020e

The last step was baking in a bread oven. A farmwife long ago would not need a watch to know when the bread was done. We'll be able to see some rural bread-baking ovens outside the pavilion. Meanwhile, in the corner of this room, we can see a professional oven, which reflects changes in baking techniques initiated in the 19th century. This oven is much larger than a domestic one. It could be used to bake more loaves at once.

2020f

Of course, this had to do with changes in making dough. Let's take a look at the metal tub opposite the wall with the wooden basins. This is a modern form of one of those basins. Dough was hand-kneaded in it by teenage baking journeymen. This hard work took place at night and was often detrimental to the boys' health.

2020g

After a certain time, help came in the form of mechanization. To the right of the tub, we now see two German dough mixers. The journeymen's work was replaced by a more efficient arm powered by electricity. Now please take a moment to explore the rest of the exhibit on your own.

2020h

When you're done, please go past the wall with the colourful stained glass. There we'll continue our tour. See you there.

2020h_apk

When you're done, please go past the wall with the colourful stained glass. There, once you play the next recording, we'll continue our tour. See you there.

2022 No. 4 The Sugar Industry

2022a

Let's go straight, along the wall to the left. We won't stop until we're past the white brick wall, near the tall black metal pillars.

2022b

To their left, we can see colourful posters with the advertising slogan SUGAR ENERGIZES. These all date to the 1920s and 30s. What a time to be alive...

[Male voice] The Polish state is growing in power and developing economically. We've expanded the Baltic port of Gdynia, Silesian coal is being exported worldwide. For us to achieve even more, we can't be short of energy. So eat sugar! Sugar energizes!

As the Sugar Propaganda Bureau assures us: "Anyone who works a great deal must eat a great deal of sugar. Sugar fortifies the bones and gives strength and health!"

Even movie stars know it.

[Male lover] Lola, will you dance with me again?

[Female lover] I haven't got the energy, Eugeniusz, really!

[Male lover] Waiter! Sugar for the lady! And champagne! We're partying until morning!

2022c

In the interwar period, sugar was subject to excise duties. Income from selling it contributed several percentage points to the national budget. Unfortunately, these high taxes meant that every kilo cost a fortune. So potential customers chose cheaper saccharine. Aggressive advertising was meant to counter this. Its main element was the short and catchy slogan SUGAR ENERGIZES. It was thought up, for a generous fee, by the popular writer Melchior Wańkiewicz. He said himself it was probably the most anyone was paid in history for two words.

2022d

On the table, we can see so-called sugar loaves in the shape of rounded cones. Valuable sugar was traded in this form until the first decades of the 20th century. The custom was born in colonial sugarcane refineries. It was there that they begin pouring sweet syrup into cone-shaped ceramic or metal moulds. After draining and drying out the loaf, it was sent off for transport and sale. You could buy them in various sizes: from a few kilos to over ten kilos. To break up the hard lumps at home, people used special little hammers or grinders in small boxes. In time, loaves were supplanted by easier-to-use granulated or cube sugar.

3000 Excelsior

3000a

Standing in front of us is the Excelsior grinder - an exceptional Polish design from the second part of the 19th century. It was invented by Edmund Szmeja, the founder and long-term owner of a machine factory and iron foundry in Biała, once a part of Galicia governed by the Austro-Hungarian Empire, now a district of Bielsko-Biała. A company advert published in the 1930s reads: "This invention has filled a major gap in the shredding machine range". The device was originally used for milling sugar, but was soon adapted to grind other hard products, such as salt, fertilizers or even bones. The patent was so lucrative that the company was bought out several times, and once was even subject to a hostile takeover. Eventually, the patent was sold to the German industrial tycoon Krupp.

3002 Polish sugar factories

3002a

Black metal columns which are now an element of the room's interior design come from two now defunct sugar factories in Kościan and Gniezno in Wielkopolska where they supported ceilings of factory halls. They are a vivid reminder of a two-hundred-year-long history of the Polish sugar industry.

3002b

Black and white photographs on the wall depict several Polish factories. One of them is the "Michałów" sugar factory in Leszno near Warsaw. Its construction began in 1849. It was operating for more than 150 years until 2004. But it was not the oldest one in Poland. This title goes to the sugar factory in Gałów near Szamotuły in Wielkopolska which was established in Jerzy Mycielski's estate in 1820. A pioneering factory in Galicia was opened three years later. The first sugar factory in the Russian partition was completed as late as at the end of the 1820s.

2022e

Now let's go left and take a close look at the model of a large building with three red chimneys. We're going back in history to the start of the sugar industry. The model shows a factory from the first half of the 19th century, where sugar beets were processed. This technological revolution was the result of a decree from Napoleon after he went to war with the United Kingdom. He banned the import of colonial goods, including sugar, to Europe. The first sugar factory was founded in Konary in Lower Silesia in 1802 by Franz Karl Achard, a descendant of French immigrants and employee of the King of Prussia. His factory meant that Europe was no longer condemned to horrendously expensive cane sugar imported from overseas colonies. New sugar factories started springing up everywhere.

2022f

Let's go over to the model in the middle of the room. It shows various machines used in the sugar industry. Beet sugar factories were more technically advanced than other factories. They installed the newest propulsion machines and the first electricity networks. In the 20th century, they were transformed into huge factories, as you can see in this room's two models of modern sugar factories: one for beets and one for sugarcane.

2022g

Now take a moment to explore the exhibit on your own. Here beside certain items you'll see for the first time round labels with a headphones symbol. These allow you to hear more information. To play the recording, aim the audio guide at the label (like a TV remote) and then press the round button.

2022g_apk

Now take a moment to explore the exhibit on your own.

2022h

When you're done, please go past the wall with the models of the beet sugar factories and return to the oil milling room. See you there.

2022h_apk

When you're done, please go past the wall with the models of the beet sugar factories and return to the oil milling room. Please play the next recording there.

2020od2022**2020od2022a**

If you've already visited the baking and sugar industry sections, please return to the oil milling room. See you there.

2018 No. 4 Flour and Cereals**2018od2020a****2018od2022a**

Let's take the short corridor back to the oil milling room.

2016 No. 5 Oil Milling**2016od2018a**

Let's pause here for a moment. Take a look at the small square displays on the left-hand wall, with the drawings of plants. Flax, hemp, rapeseed, poppy, sunflower and a few other species are the so-called oleaginous plants, ones that can be used to make oil. This oil is contained in their seeds, shown here in round containers. Centuries ago, people learned how to enlist these oils, mainly to enrich their diets, but also for toiletries, lighting or lubricating machines. Most popular of them all was flax, since in addition to oil it also provided raw material for linen.

2016od2018a_apk

Let's pause here for a moment. Take a look at the small square displays on the left-hand wall, with the illustrations of plants. Flax, hemp, rapeseed, poppy, sunflower and a few other species are the so-called oleaginous plants, ones that can be used to make oil. This oil is contained in their seeds, shown here in round containers. Centuries ago, people learned how to enlist these oils, mainly to enrich their diets, but also for toiletries, lighting or lubricating machines. Most popular of them all was flax, since in addition to oil it also provided raw material for linen.

2016od2018b

Let's face away from the plant illustrations. In this part of the exhibit we can see equipment used in traditional oil milling. With a little skill, small amounts of oil could be extracted on almost any farm. But most often artisans earned their living doing this, using more efficient machines.

2016od2018c

Notice the largest piece of equipment, visible on the right and made out of powerful wooden beams. Let's take a closer look. This is a farmer's oil mill from the Polish highlands. A round opening has been drilled in the top of the thickest horizontal beam. This is where a mash of oleaginous seeds is placed, after being ground, blended with a small amount of water and

warmed up. The opening is blocked with a heavy stopper and squeezed with the press. The oil flows out through an opening in the bottom of the beam.

2016od2018d

It's worth mentioning that in traditional cooking, vegetable oils were used most often during religious fasting periods, when they completely replaced animal fats.

2016od2018e

Now let's go to the next machines along: mechanical oil presses.

2016od2018f

Home oil pressing only ended for good in the mid-20th century. The practice was continued by a small number of professional oil mills located most often in small towns. They now used mechanically driven machines. An oil mill that operated in Lwówek Wielkopolski from 1954 was made up of a crusher, a roaster and a hydraulic pump. We even know the mill's builder and owner: Józef Przymuszała.

2016od2018g

Now let's go right and past the wall with the stained glass. I'll meet you there.

2016od2018g_apk

Now let's go right and past the wall with the stained glass. Then play the next recording.

2024 No. 5 Butter and cheeses



2024a

This exhibit focuses on making butter, cheese and milk.

2024b

First, let's look at the items displayed by the wall to your right. To talk about them, we're going to make a quick side-trip to the mountains.

It's there, in the Tatras, Gorce and Beskids, that probably the most famous Polish cheese is produced, known in the highlands as *oscypek*. It's made from the milk of sheep grazed in mountain pastures. The whole production process takes place in shepherds' huts. It uses special regional versions of pots, ladles, and tubs, which you can see in front of you. After heating the milk, at a certain point, you add rennet, which causes the milk to coagulate. Pieces of soft cheese are collected and shaped into balls. Next, these are placed into distinctive wooden moulds carved with highland folk patterns. The final steps are soaking the cheese in brine, smoking it and ageing it.

2024c

The use of rennet puts *oscypek* in the same category of cheeses as British cheddar, Dutch gouda, Swiss gruyère or Italian parmesan. But in Poland that makes it unusual. Our country has traditionally specialized in soft, white cheeses known as *twaróg*. In Western Europe, these are even popularly called Polish cheeses.

2024d

Now let's turn around and take a look at the items at the opposite wall. They are all connected to making *twaróg* cheese and butter. The process was as follows. First, the cream was removed from the milk, to be turned into butter, while the skimmed, soured milk was turned into cheese.

2024e

Most of the objects in this display are tools for making butter. One of the first items from the left is a butter churn. These have been used since time immemorial and are even still in use today. They're made of wooden slats and are shaped like tall cylinders growing narrower at the top. You just have to pour in cream and beat it energetically with the long pole. Before long you'll have the first lumps of butter.

2024f

But what did people do when they had not a few litres of milk, but hundreds of litres? That was the case not least in the estate here in Szreniawa. For that you needed the equipment you can see at the end of the display on your right: larger and smaller rotating barrels, or boxes which hung from the ceiling and rocked from side to side.

2024g

Now let's go back to the butter churn. To the right of it are two wooden presses. Each consists of two slats, between which you can see a small linen bundle. The bundle has cheese inside it. The press squeezed the whey out of the cheese and shaped it, to make a delicate white cheese. To avoid quick spoiling it needed to be preserved. Some of the tools for doing so can be seen in the very middle of this display, such as the openwork box with wooden, decoratively carved slats. This is a so-called ripening box for drying cheese in an airy space.

2024h

Now let's go further into the room and pause in front of the display of the machines with metal bowls. This exhibit is about milk.

2024i

Milk and its products have been known to humans since prehistoric times. But the dairy industry itself is much younger, about 150 years old. Interestingly, one particular invention influenced its foundation. This is the centrifugal cream separator.

2024j

Let's take a close look at one. It's to the right of the wooden box, at the centre of the display. The label at the base reads: "De Laval system cream separator". This apparatus was made entirely of metal. Its solid base has a driving element and a hand crank. Higher up you can see a part with two wide nozzles, and above it a distinctive metal basin.

2024k

How did a cream separator work? Raw milk was poured into the bowl. Then you turned the crank, which moved an internal drum, making it spin. The centrifugal force separated the lighter cream from the heavier skimmed milk. These products flowed out through the two separate nozzles.

2024l

The first machine was built in 1879 by the Swedish engineer Gustaf de Laval. It was a spectacular success. Finally, it was possible to process large amounts of milk and use the cream obtained to produce butter, which dairies made large profits from selling, reinvesting their earnings in development.

2024m

Now let's take a look at the aforementioned wooden box standing to the left of the de Laval cream separator. This is also a centrifuge, but it works as a small laboratory. It makes it possible to quickly check the fat content of milk. Dairies and creameries used such machines on milk from their farmer suppliers.

Now please take a moment to explore this part of the exhibit on your own.

2024n

When you're done, we'll head toward the monitor on the wall, turn right and take the nearest exit outside. I'll meet you there.

2024n_apk

When you're done, we'll head toward the monitor on the wall, turn right and take the nearest exit outside. We'll continue our tour there when you play the next recording.

2026 In Front of No. 5**2026a**

Let's stop here for a moment with our backs to the pavilion. Before we go further, notice the small brick buildings on the left. These are free-standing rural bread ovens. They served one family or a whole village. Villagers used them to bake bread for the whole week.

2026b

Now let's go to the right, toward the main walkway. Turn left when you reach it, and go straight for a moment. We'll continue the tour by the beehives placed among the trees to the left of the walkway.

2026b_apk

Now let's go to the right, toward the main walkway. Turn left when you reach it and go straight for a moment. We'll continue the tour by the beehives placed among the trees to the left of the walkway. Please, play the next recording there.

2028 Beehives

2028a

Welcome back. Let's go straight, and then turn down the first walkway on the left. You'll see numerous beehives all around. This is a collection of different kinds of hives. The oldest are so-called bee gums, made of hollowed-out tree trunks. In addition, we can see many more recent box hives made of wood planks nailed together. But the most interesting examples are the ones sculpted by talented folk artists. They represent animals or colourful human figures.

2028b

Let's go straight, toward the small pavilion you see among the trees. I'll meet you there.

2028b_apk

Let's go straight, toward the small pavilion you see among the trees. We'll continue our tour there when you play the next recording.

2030 No. 6 Beekeeping

2030a

The walkway through the beehives has led us to the beekeeping pavilion. Let's stop by the entrance, in front of the thick tree trunk.

The primeval forest for centuries has offered shelter and food. There our ancestors also began observing bees and reaping the benefits of their persistent labour. In time, farmers of forest bees came to be called honey hunters or honey harvesters.

You can see one of them climbing a pine tree over 100 years old, to reach the hive in its hollowed-out trunk. On normal days, when the bees are working, it's covered by a square slat with a small opening. Now the hive is fully exposed. Inside, you can see beeswax combs swollen with honey. The bees are agitated. That's why honey hunters keep their whole bodies covered up and protect their heads with a hood. Another two or three pulls on the thick ropes he

uses to hoist himself up, and he'll reach the sweet treasure... He just has to mind the heavy chunk of birch wood you can see high up in the tree. This is a *samobitnia*. They usually hung in front of hives and had to be moved out of the way before harvesting began. They were there to repel greedy bears, who would try to push it away, only to get a nasty whack on the nose.

2030b

Now let's turn round and look at the sign to the right of the entrance, with the mysterious symbols. These are honey hunters' symbols. Traditional Polish honey hunters would use them to mark the part of the forest where they worked. These symbols were most often put on trees with hives. Any theft or vandalism would be severely punished.

2030c

Further along to the right, we can see tools used for honey hunting. The largest, hanging on the wall, were used for scooping out the hollows. To attract bees into the tree, various methods were used. These included sprinkling the hollow with extracts of selected plants. Once the hive was settled by forest bees, you could count down until it was time to collect the honey. This happened in August and, in good years, in July and September as well.

2030d

Let's continue to the section on beekeeping. Creating apiaries with beehives made it much easier to care for bees and obtain honey or beeswax. In the large illustration we can see what an apiary looked like in the 16th century. It was made up of wooden hives, made of cut sections of tree trunks and covered with bark, so there was no need for climbing. The hives could also be moved, to place them in front of a house or in a forest clearing.

2030e

Another particularly popular form of hive was a so-called skep. You can see one on the lower right. They look like bells made of straw. They stand on a special frame, onto which they are woven. On the side of the skep is a hole allowing the bees to fly in, or out to collect pollen, nectar or honeydew, which are made into honey or other bee products.

2030f

Now let's look at the unassuming green beehive to the right of the skep. This takes us to the final part of this display, on beekeeping as we know it today. Modern beekeeping was born at the turn of the 18th and 19th centuries. One of the most important inventions of that time was a drawer-shaped hive with movable frames inside, on which the bees could build their honeycombs. The first to introduce this innovation was Jan Dzierżon, a Polish priest from Silesia. He studied bees for around 70 years. He was both a practitioner and a theoretician. One thing he noticed was that bees could reproduce without the presence of males. This phenomenon is called parthenogenesis. In the 19th century this discovery set off a storm of scientific controversy.

2030g

Now take a moment to explore the exhibit items on your own. When you're done, go outside and follow the main walkway back to the beehives.

2030g_apk

Now take a moment to explore the exhibit items on your own. When you're done, go outside and follow the main walkway back to the beehives. There, turn left toward the green building with the toilets. On the opposite side of it is the entrance to the next pavilion, marked number 7. We'll continue our tour there when you activate the next recording.

2028od2030 Beehives

2028od2030a

On the main path, let's turn left toward the green building with the toilets. On the opposite side of it is the entrance to the next pavilion, marked number 7. I'll wait for you there.

2032 No. 7 Land Improvement

3004 Pump

3004a

The wooden manual water pump station is the largest exhibit in the museum collection. It was used from about 1890 in Kartuzy in Pomerania near Gdańsk. The device consists of a long and narrow trough with vertical interior sluices that directed water towards metal wheels of the drive. The water pump station was used to drain water from wetlands. Drainage technologies were used by residents of Pomerania as early as in the Middle Ages. Highly sophisticated solutions were used in the Żuławy region located close to Kartuzy.

3006 Ditches

3006a

The model shaped like a wooden concertina depicts different types of covered drainage ditches which are most popular drainage structures. A network of ditches helps effectively evacuate water from wetlands. In the old days, stones, perches and fascines, or bundles of tree and bush branches, were used to build ditches.

3006b

Nowadays, essential building materials include ceramic and plastic pipes as well as concrete elements. We can see them in front of the model in the middle of the room.

3006c

Another intriguing exhibit is the drainage pipe made from a long tree trunk which you may see on the platform. It dates back to approximately the mid-19th century.

3008 Tools

3008a

Showcased on the platform are basic drainage tools. They were used for digging and the maintenance of ditches. Most of them are the so-called drain spades with very long and narrow blades that cut deep into the ground. Spades with curved blades facilitate excavating soil from the bottom of the ditch. Meanwhile, the tool with a single horizontally bent bar is used for laying drains or drain pipes. Drains were later hammered to ensure they were watertight.

3010 The sprinkler

3010a

The inconspicuous model of a machine made up of two-wheeled vehicles is Szczepkowski's sprinkler irrigation machine. It marked Poland's first and the world's pioneering attempt at mechanical irrigation of farmland. Its inventor, Władysław Szczepkowski, had a large estate in Łęgi near Śrem in Wielkopolska. He designed the machine in the 1910s. It consisted of several metal carts coupled by woven-cloth hoses. To start irrigation, carts had to be arranged in a row in the field and the hose had to be unreeled and routed all the way to the water source which was the Warta River in Łęgi. Later, the pump was activated to feed water into carts and hydrants mounted on carts would sprinkle water in the field. Having irrigated one part of the field, the sprinkler was moved to another location. Szczepkowski's invention attracted major interest. Soon after similar machines were operating in several other land holdings in Wielkopolska, and sometime later, also in other countries.

3012 Biological pest control

3012a

Natural enemies of pests are man's great allies in crop protection. That is why the exhibition features a collection of birds known from Polish meadows, fields and forests. Insects and rodents are the staple of their diet. For instance, insect pests account for three-quarters of the tit's food. Meanwhile, storks specialise in rodent control. Interestingly, man is also using animals against other animals. For instance, the small predatory mite *Typchlodromus pyri* helps keep orchards safe as it preys on spider mites that attack trees. Female *Typchlodromus pyri* are distributed on special cloth bands wrapped around branches.

3014 Machines

3014a

On the platform in the middle of the room we can see machines used to apply crop protection products and fertilizers in fields and orchards. The first exhibit on the right is a Polish horse-drawn sprayer from the interwar period. Liquid in the tank was diffused via long lances flanking the engine. The machine was manufactured in a factory in Poznań. Next to it, on the left, stands a small manual duster used to spread powder formulas. Other notable exhibits include two fertilizer distributors. They have large, distinctive red wheels. The larger two-wheeled distributor was drawn by horses. The single-wheel vehicle in front of it was driven like a wheelbarrow.

3016 Solid and liquid manure

3016a

The red and orange four-wheeled vehicle is a manure spreader. Standing on its left hand side is a liquid manure pump. Both solid manure, or fermented animal faeces mixed with litter, as well as liquid manure, or fermented urine, are classified as natural fertilizers. They have been used since times immemorial. The so-called auxiliary fertilizers, which are also of natural origin, were introduced in the first half of the 19th century. It included guano, or bird droppings, as well as dried and ground remains of whales, fish and industrial waste. Green manure, or such legumes like clover and lupin, became a novelty that quickly rose in popularity. Legumes capture nitrogen from the air and deposit it in the soil that fertilizes it.

3018 Mineral fertilizers

3018a

Round transparent containers feature key mineral fertilizers. They have been divided into several groups. Starting from the left, we can see nitrogen, phosphorus, potassium, calcium,

auxiliary and compound fertilizers. Mineral fertilizers were invented in the second half of the 19th century which saw a dramatic development of science, industry and agriculture.

Superphosphate was the first phosphate fertilizer introduced for general use. Mined in Chile and exported to Europe, nitrate was the first nitrogen-based fertilizer that gained popularity very early on. The Polish fertilizer industry began to grow in the interwar period. Major contributor to its development was Ignacy Mościcki, an eminent chemist and the President of the Republic of Poland. The nitrogen plant in Mościce near Tarnów was named after him.

3020 The meadow

3020a

2032a

Welcome to pavilion 7. Once you're inside the exhibition room, we'll go up to the white panels you can see on the wall to the left. They show the history of land improvement. This term describes both irrigating and draining agricultural land, allowing it to be better used.

2032b

Let's open the first panel on the left. Inside we can see an illustration of the irrigation system on the Nile in ancient Egypt. This reminds us that land improvement is as old as our civilization, going back several millennia. In the Polish lands it has been known since the Middle Ages, though it achieved the greatest scale in the 19th and 20th centuries, when it truly changed the face of large areas of the country. Here and there this provoked the opposition of rural people who were most attached to tradition. Supporters of land improvement had to spend a long time convincing them.

2032c

Edward Redliński described this colourfully in his novel *Konopielka*.

"People, folks, what's wrong with you, he shouts, after slapping his forehead, do you really want to spend your whole lives in these shacks, you and your children living like ducks? Do you know that in a year the mountain near Bokiny will be tunnelled through: the water will drain and there will be no trace of the swamp, the oxbow lakes, the reed thickets, the whirlpools, the creeks, the only thing left will be the main river near Suraz, and the meadows that the marshes leave behind will be reclaimed? Can you imagine the motorways that will run down the middle of the swamps and the buses and tractors that will drive around your village? In five years, half of you will be traveling to Łapy and Białystok to earn money in the factories! You'll start building brick houses and pigpens, thresh with combine harvesters, and in your homes you'll have mirrors, radios! And burying your heads in the sand will be no help, what's supposed to happen will happen, whether you like it or not! But you, people, instead of getting in our way, help us! Help us pull you out of poverty and backwardness, if you don't take pity on yourselves, take pity on your children: they're the ones who'll grow up to be savages, do you want them to be the laughingstock of the country and the world?"

2032d

Now take a moment to explore this exhibit on your own. You can hear information about the most interesting items by pointing your audio guide at the labels with the headphone symbol.

2032d_apk

Now take a moment to explore this exhibit on your own.

2032e

We'll continue our tour further into the room, at the top of the first set of stairs.

2032e_apk

When you're done, please go further into the room and once you've gone up the first set of stairs, activate the next recording.

2034 No. 7 Protecting Plants



2034a

Now we'll learn what to do to make sure you get healthy plants and large harvests. Keep in mind that in the battle against pests we have natural allies that require our protection. Just like in the room on land improvement, we'll discover some interesting things hidden behind little white doors.

2034b

Take a moment to check out the information inside the panels on your own and explore the exhibit using the labels with the headphone symbol.

2034b_apk

Now take a moment to check out the information inside the panels and explore the exhibit on your own.

2034c

When you're done, please go to the room with the collection of tools and agricultural machines. See you there.

2034c_apk

When you're done, please go to the room with the collection of tools and agricultural machines, and then play the next recording.

2036 No. 8a Shovel Plough and Plough**2036a**

Let's stop by the entrance to this room. On the wall to the left you can see the title of this exhibit in large letters. In English it means: TECHNOLOGICAL PROGRESS IN 19TH AND 20TH CENTURY AGRICULTURE.

2036b

Let's take a look at the two largest items in front of us: a red metal plough and a shovel plough, which has large wheels and looks like an antique cannon. These are tools used for a basic activity in farming, meaning tilling the soil. This consists of preparing soil for sowing or planting.

2036c

Even at first glance you can tell the shovel plough is older and more primitive. In fact, we encountered a version of this machine right at the start of our tour, in the first pavilion on the origins of agriculture. This tool was invented a few thousand years ago. Its most important element is the coulter, situated all the way down between the wheels, which digs into the soil. Here it has a metal end, which makes it easier to cut the soil and loosen it.

2036d

The plough appeared in Europe in the Middle Ages. At the time it was a manifestation of modernity, since it not only was it capable of digging shallow furrows, but also pushing the tilled soil to the side, forming ridges. Over centuries, this tool was perfected. Finally in the mid-18th century an invention appeared that is used to this day. Let's take a look at the red plough in front of us. Notice the three sharp pieces that cut directly into the earth. Their rear parts, the so-called mouldboards, are curved. They allow the soil not only to be pushed to the side, but also completely turned over.

2036e

Now let's walk past the wall with illustrations of machines, taking the first walkway to the left. On both sides you'll see collections of various horse-drawn ploughs. They date from the 19th and 20th centuries. You can easily notice they are divided into two types: those with wheels and those without. The former are known technically as riding ploughs, the latter as walking ploughs.

2036f

The walking ploughs are collected on the right. All of their weight rested on the arms of the plough operator. They are made of wooden and metal pieces. Most of these tools were made in rural artisanal workshops.

2036g

Meanwhile the riding ploughs, shown on the opposite side, are factory-made and completely metal. Wheels made it easier to drive the plough around the field. Many of these were fitted with a pair of cutting elements. They include the Rekord frame plough presented in the very centre. There's a label with its name in front of it. This plough was produced by Hipolit Cegielski's factory in Poznań. It was one of their most popular products and was on sale from the late 19th century to the era of the Second World War.

2036h

Now let's go back to the shovel plough and the red plough, and then go down the walkway behind them.

2036h_apk

Now let's go back to the shovel plough and the red plough, and then go down the walkway behind them. There, play the next recording.

2038 No. 8a Harrows and Seeders

2038a

Let's walk along the walkway. Here we can see tools farmers used after finishing ploughing.

2038b

Standing with our backs to the entrance, on the left we can see rollers, levellers and harrows. When dragged through a field, they broke up clumps of earth while also smoothing it out. In this way they prepared the soil for the next activity, meaning sowing. For many millennia seeds were sown by hand from a sheet. But in the 18th century a major breakthrough took place: a machine for sowing was invented, known as a seeder.

2038c

On the right of the walkway you can see a collection of seeders, used on farms in the Polish lands in the 19th and 20th centuries. Let's go up to the second-to-last machine, standing just in front of its green-wheeled relative. The label tells us this is a Polonia drill seeder. It's yet another product of the famous Poznań factory of Hipolit Cegielski, which played a significant role in mechanizing Polish agriculture.

2038d

The Polonia was made in the interwar period. The manufacturer was sure of its high quality, as you can hear from this advertisement from the time.

“Patented Polonia universal drill seeders – a product of the Hipolit Cegielski Joint-Stock Company in Poznań.

They sow all kinds of seeds in even rows, from the smallest grasses and clover to largest, like peas or broad beans.

Our planting apparatus, the soul of the seeder, is constructed based on long experience and experiments. As the most reliable authorities in this field declare, the planting apparatus of our seeders is the only one that ensures evenness in planting as well as giving the lowest percentage of damaged seeds....

Our seeder plants evenly on every terrain, no matter if it's going uphill, downhill or along a slope..."

2038e

It's worth adding that the Polonia was built in two types. One model, called the Peasant, was smaller and offered mainly to farmers with small properties. The buyers of the larger type of machine, called the Normal, were large rural landowners.

2038f

Now let's go left and enter the last annexe on the right. Displayed there are tools and machines that aid with growing potatoes and beetroot. Potatoes were introduced to Europe from South America. They became a widespread crop in the first half of the 19th century, leading to large economic and social changes. Tubers became one of the staple foods of a million inhabitants of the European continent.

2038g

Let's look at the equipment on the right. Displayed side-by-side are two potato planting machines. They demonstrate how these machines evolved over time.

2038h

The planter on the right resembles a small harrow. This is hand-built out of wood and metal. The small shovels on the wheels, when pulled across a field, dig small holes in the ground into which so-called seed potatoes are dropped.

2038i

Meanwhile the potato planter on the left, equipped with large wheels, is fully machine-produced.

2038j

The machines on the opposite side of the annexe, in the corner, were also factory-made. They were used for planting beetroot. This was most often a speciality of large farms, often manorial estates.

Now take a moment to explore the items in this room on your own.

2038k

When you're done, please exit the pavilion by the same doors you entered.

2038k_apk

When you're done, please exit the pavilion by the same doors you entered. Outside you'll see Pavilion 9 directly in front of you. Please go inside it and play the next recording there.

2036od2038 No. 8a Shovel Plough and Plough

2036od2038a

Let's go back the same way, though the fertilization, plant protection and land improvement sections, to the start of the pavilion.

2034od2036 No. 7 Plant Protection

2034od2036a

[FX: *cisza*]

2032od2034 No. 7 Land Improvement

2032od2034a

Let's head towards the exit. Outside, please go over to Pavilion 9, opposite. I'll meet you in there.

2040 No. 9 Gardening

2040a

This pavilion we've entered mainly looks at the history of gardening. Arranged on the left are fragments of three types of gardens: rural, monastic and manorial. Let's head for the furthest one, the farm garden.

2040b

A woman works in a home garden. It must be late summer or early autumn, because the weather is sunny and the apple trees hold full-grown fruit. This garden looks just as it would a hundred, two hundred or three hundred years ago. Wooden tools predominate. The working parts of some of them have been reinforced with elements of valuable iron. A shovel plough leans against the fence. There are also a spade, a pitchfork, a rake and a harrow with wooden teeth. Swede, a cousin of cabbage, grows in the vegetable patch. Here the farmwife might also raise peas, onions, lentils, broad beans or green beans. If God wills it... Listen, the bells are ringing for the Angelus.

2040c

That's from the nearby monastery of pious and hardworking monks. Let's peek behind their walls. To the left we can see a monastery garden known as a *garth*. It's surrounded by shady, columned cloisters. In the middle is a well. A monk is sitting beside it. For years in silence, whispering prayers, he has learned the mysteries of nature. How wisely God has constructed the world! Roses and other flowers delight the eyes, whilst herbs return us to health. You only need to know how to prepare and consume them. The monastery's pharmacy serves everyone – the monks themselves, but also the poor farmers and wealthy nobility, whose residence stands right alongside.

2040d

Let's go up to it. The manor house is surrounded by a beautiful garden. This is to serve only as decoration and for walks in solitude or in good company. Day and night, gardeners tend to the exotic trees, bushes and flowers. They trim the dark green boxwoods to form the most elaborate patterns. Between them, they create colourful carpets of plants. There's also no shortage of bowers, sculptures, and above all fountains, whose quiet trickling is so soothing...

2040e

Please take a moment to explore this display on your own.

2040f

When you're done, please exit the pavilion and, once outside, turn left to pavilion 10.

2040f_apk

When you're done, please exit the pavilion and, once outside, turn left to pavilion 10. Go inside and play the next recording.

2042 No. 10 Plant Breeding

2042a

Now let's move from the gardens of the past to those almost of today. The modern form of the exhibit in this room shows the achievements of Polish scientists in plant breeding. The first experiments in this field took place back in the 19th century and picked up speed in the 20th. The results can be seen in the transparent tubes.

2042b

Let's go up to the first installation, made of tubes and situated nearest the entrance. In the spherical containers you can see twelve varieties of potatoes with bulbs, leafy shoots and flowers. At first glance they don't seem to differ greatly. But actually, each one has particular characteristics. Some can be harvested early, but in small quantities, others late but in large numbers. There are different amounts of starch in the bulbs. Of course each variety has a different flavour. Some are resistant to potato wart disease. So farmers and consumers are spoilt for choice. It's hard to believe, but in Poland there is a total of over 120 varieties of potato.

2042c

Now let's head further into the room and pause by the first installation with the yellow plants in the transparent tubes. These are a few varieties of rye bred by Polish farmers. Further along, in similar yellow containers, you can see varieties of other grains that are popular in Poland, like barley, oats, maize or wheat. Domestic growers developed an interest in breeding better varieties of these in the late 19th century. One pioneer was a certain Popławski, owner of the estate of Sarnowo, about 150 kilometres east of here. From 1860 he experimented with the local variety of wheat. His goal was for the ears to hold larger grains. After a few years he succeeded and a new variety of wheat came to market, known as Sarnowska. This marked the beginning of systematic plant breeding in our country.

2042d

Now take a moment to explore this exhibit on your own, including the original scientific instruments used by plant breeders. When you're done, please go into the small room opposite the entrance. I'll meet you there.

2042d_apk

Now take a moment to explore this exhibit on your own, including the original scientific instruments used by plant breeders. When you're done, please go into the small room opposite the entrance. There we'll continue our tour when you play the next recording.

2044 No. 10 Forage Science

2044a

Closely connected to plant breeding is animal husbandry. Husbandry involves both keeping animals to obtain some product from them, such as milk, meat or physical strength, and also breeding them, meaning deliberately having them reproduce. When it comes to husbandry, caring for animals means feeding them properly. Here we can learn more about animal feed.

2044b

In the very centre of the room is a manual drum chaff-cutter. This is a 19th-century invention that replaced the simple box you see on the right with a cutting blade on the end. Both tools made it possible to cut hay or straw. This produced *chaff*, which until recently was the basic feed for cows, sheep or horses, particularly in winter when they didn't have access to pastures. Today natural pasturage is used much more rarely. Animals are more often fed nutrient-rich prepared blends.

2044c

Popular raw materials used since time immemorial to make feed are bulb and root crops, along with legumes or grain. Let's take a look at the small machines by the wall to the left. Nearest to the entrance is a grain mill. It could be used to process grain seeds into smaller pellets that are easy for an animal to digest.

2044d

Meanwhile to the right of the grain mill is a tool used for processing beetroot, poppy seeds and potatoes. Breaking vegetables into small pieces is one of the first activities in the whole process of making them into feed. Later they require further treatment, for instance cooking or drying.

2044e

For animals to develop well, they also need minerals in their diet. That's why to the right of the machines we see a large cube of salt. This is called a salt lick. They are usually placed in a shed or a stable. From it, cows, sheep and horses obtain essential sodium and iodine.

2044f

Of course chaff, pellets, vegetables and salt are only the basic ingredients of feed. These days the variety of feeds is very extensive. You can see that for yourself by checking out the materials on the informational panels. Take a moment to look these over on your own.

2044g

When you're done, please go over into the white, brightly lit room: the veterinary clinic. We'll continue our tour there.

2044g_apk

When you're done, please go over into the white, brightly lit room: the veterinary clinic. Once there, please activate the next recording.

2046 No. 11 Veterinary Science

2046a

[Male voice] Please stop by the entrance, behind the rope, and don't get in the way! We've got a few patients here. First I'm taking care of this young sow. Her owner's afraid she's got foot and mouth disease. That's a terrible illness. In the worst case, we'll have to cull the whole farm. First I'll take her temperature. Rectally, of course. If it comes out to 40 or 41 degrees, that will be bad news... We'll wait and see.

Luckily this little lamb has calmed down. See her lying there in her basket. They brought her in with a broken leg. She made an unfortunate jump over a ditch. Poor creature. We did her an x-ray, immobilized the leg – and she can go home.

Meanwhile, that mink in the wire cage has got me worried. I'm keeping a close eye on her. I'm afraid she'll show signs of a contagious disease.

2046b

[Narrator] Let's stay out of the way, then, and go on to the room next door.

2046b_apk

[Narrator] Let's stay out of the way, then, and go on to the room next door. Play the next recording there.

2048 No. 11 Radiology

2048a

We're in a former radiology lab. This room collects equipment used several decades ago. The largest are the Siemens brand x-ray machines along with their equipment. They were powered by a generator. The x-ray tube is located in the spherical structure at the end of the arm.

2048b

We can see an example of how an x-ray was taken on a young cow.

2048c

After being developed, the x-ray would be examined using a viewer. You can see two examples on the wall opposite.

2048d

Meanwhile on the wall to the right you can see original x-rays from former veterinary practices. They show various farm animal and pet illnesses, including tumours, joint and bone degeneration, and fractures.

2048e

In one of the pictures on the far right you can also see an x-ray of a dog who ate something that wasn't food. This happens fairly frequently. The large, bright circle is a coin that was found in the stomach of an Alsatian.

2048f

Let's go on to the next room.

2048f_apk

Let's go to the next room and play the next recording there.

2050 No. 11 Żubroń**2050a**

Let's go down the ramp and stop by the enormous animal in the middle of the room. This is a żubroń, meaning an inter-species hybrid of domestic cattle and European bison. We owe its current name to a contest held by the magazine *Przekrój*. This żubroń is standing on a scale for weighing cattle. These animals could grow as heavy as 1,200 kilos.

2050b

Breeders began experimenting with crossing these two kinds of bovines back in the 19th century. Their goal was to breed magnificent animals who could provide large amounts of meat, and also live in semi-wild conditions. They thought their attempts had been successful. Unfortunately it turned out that while żubrońs are large, they're also very aggressive.

2050c

The case of the żubroń once again highlights the difference between breeding and keeping animals. Breeders cross the best individuals so their descendants have greater useful value. Proper breeding ought to lead to cows producing more milk or meat, sheep more wool, and chickens more eggs.

2050d

Now take a moment to explore this exhibit on your own. Please notice the instruments used in breeding.

2050e

I'll meet you in the next room. See you there.

2050e_apk

I'll meet you in the next room. Play the next recording when you get there.

2052 No. 11 Keeping Animals**2052a**

In this room we can take a quick look inside stables and sheds, as well as a chicken coop, pigsty and a sheep pen.

2052b

To start with, let's stop in front of the stable with the beautiful grey horse. You'd never find a steed like this in a village farm. This stallion, named Comet, was born in the Nowy Dwór stud farm in 1953 and lived eleven years. He's an example of a famously beautiful purebred Arabian horse. He was an exceptionally talented racer. He also sired numerous, equally talented progeny. But he certainly wouldn't have been a great workhorse. On a farm, strength and endurance are more important than beauty – and for that, it's draught horses who excel.

2052c

Let's take a look inside the shed in the corner to the right. In it you can see cows and calves of the Polish Red breed. Polish Reds are one of four breeds of cattle native to our country. They were once widespread, particularly in the south, but nowadays only a few thousand head are kept. The Polish Red was supplanted by more efficient breeds, mainly black-and-white in colour.

2052d

Further along on the right, we can see a roosting chicken coop, and next to it, a pigsty housing Hampshire pigs. This breed originated in the United States and was only introduced to Poland in the 1970s.

2052e

The pigs' neighbours to the right are sheep. The horned male, or ram, is a Polish merino, whilst the three females are of the Wielkopolska breed. Merinos are one of the most popular breeds in our country. One of the factors in their success is the high quality of their wool. Their Wielkopolska cousins are somewhat smaller, but their wool is just as good.

2062f

Now let's look at the pigs in the right-hand corner. As you can see on the label, they are Żłotniki Whites. These are the pride of breeders from the Experimental Agriculture Institute in Żłotniki, near Poznań. The breed was developed after the Second World War. They don't require much food and are well adapted to our climate, though they do not put on body mass very quickly.

2052g

Finally, let's take a look at the brown-and-white cow standing just in front of the exit. Her name is Adeldeadema. During her lifetime she was a record-setting milk producer. In 1957 she produced 7,000 litres. At the time this was considered a great achievement. Currently, dairy cows produce even twice as much.

2052h

Now let's go on to the next room.

2052h_apk

Now let's go on to the next room. Once you're there, play the next recording.

2054 No. 11 Incubation

2054a

We're in the last room about animal husbandry. The focus here is on reproduction, specifically incubation and insemination.

2054b

The largest item, which looks like a white cupboard, is an electric incubator. It was probably used in a large landowner's estate. Inside it holds rotating wooden shelves and drawers. Eggs were placed inside for a few weeks of incubation. During this time they were heated and regularly turned over. After a few or several weeks, chicks would hatch from the eggs.

2054c

The incubator dates to the interwar period. Somewhat older pieces of equipment with the same purpose stand in the corner of the room on the left. They look like four-legged nightstands. Interestingly, they have oil-powered heaters on the sides.

2054d

Meanwhile on the left we can see the most natural method of incubation. The hen herself cares for the egg, and she is nestled comfortably in a large straw basket.

2054e

Let's take another look to the right of the white incubator. Beneath an impressive bull's head, we can see tools for insemination – meaning artificial fertilization. This means introducing the sperm of a male bovine, horse or pig into the reproductive organs of a female. This method was invented in the late 19th century. Currently it is universally used.

2054f

The bull's head presented here belonged to an exceptionally high-quality sperm donor. In the 1950s he was used to fertilize over 11,000 cows and heifers.

2054g

This is the end of our exhibit on animal husbandry. If you're interested, after ending your audio tour please check out the museum cowsheds. There you can admire real live animals.

2054h

Meanwhile let's go on to the next exhibition room.

2054h_apk

Meanwhile let's go on to the next exhibition room and play the next recording there.

2056 No. 11 Harvesting Techniques

2056a

In this room we return to growing crops. Let's imagine for a moment the hot harvest season.

2056b

"...over the field teeming with little crowds of harvesters, along with the roasting heat and the glare of the sun, a great silence hung. The little crowds of harvesters, scattered irregularly across the wide space and of unequal sizes, slowly but inexorably moved forward in different directions. Sometimes only the short burst of a laugh went up over them, or the wind carried a loudly shouted name and a flock of sparrows took up the cry; here, there and everywhere glinted the steel flashes of sickles."

2056c

This is how Eliza Orzeszkowa portrayed the harvest in her novel, *On the Banks of the Niemen*. This excerpt actually reflects the late 19th century, but the image changed little over the next several decades. In the Polish lands in the early 20th century, grain was still cut using sickles and scythes. They were also used for harvesting hay.

2056d

We can see a collection of these tools on the wall opposite the entrance.

2056e

First from the right are the sickles. Their shape hasn't changed since they were invented by the first farmers around 10,000 years ago. They all have a short, usually wooden handle and a sharply curved, rounded blade. This is the perfect tool for cutting down ears of corn – carefully, so as not to damage even one grain. The sickle was so important in culture that in Polish, the name of the harvest month of August – *sierpień* – is derived from the word for this tool.

2056f

In time, scythes came to compete with sickles. These are the tools to the left, with longer and straighter blades attached to a long handle. Apparently the first to use them were the classical Romans. In the Polish lands they became widespread in the pre-modern period. Though they made it possible to reap more quickly, they never completely displaced sickles. Interestingly, even in the interwar period there was a debate about which tool was better.

2056g

Meanwhile in other parts of our globe, machines already dominated the fields. Let's turn around and look at the first of these on the left.

The first half of the 19th century. The Great Plains in the middle of the United States of America. From North to South, from the Dakotas through Kansas, Oklahoma and Nebraska to Texas, golden fields stretch as far as the eye can see. This is the so-called Wheat Belt. A sickle or a scythe wouldn't be enough to harvest it all. But necessity is the mother of invention. Cyrus McCormick, the son of a farmer from Virginia, worked for months constructing the first horse-drawn harvester. In 1834 he patented his idea and took the market by storm. It was something all American farmers had been waiting for.

2056h

In front of us we can see an exact model of McCormick's machine. The front is on the right, directed toward the exit of this room. The large bottom wheel is for mobility. In front of it is a long shaft that would attach to a harnessed horse. Above the mobility wheel is a smaller wheel driving a crank. While the machine was moving, the crank turned and scooped the grain toward a wide, toothed blade, placed in front of a wooden platform. The cut grain fell onto the platform and then was thrown off it. People walking behind the reaper picked up the grain and arranged it into sheaves.

2056i

Now let's go right, to the last machine displayed in this room. This is a binder made by the Canadian firm Massey-Harris before 1914. Unlike the reaper, it not only mechanically cut the grain but also tied it into sheaves. This solution significantly sped up harvesting work. The inventor of the binder was none other than Cyrus McCormick, who also invented the reaper.

2056j

Meanwhile, among these American machines are two examples of Polish construction. It's worth noting that they date to the mid-20th century. Only then did mechanization make a full entrance into Polish agriculture.

2056k

Now let's go down the ramp to the next room with an exhibit of agricultural machines.

2056k_apk

Now let's go on to the next room with an exhibit of agricultural machines. We'll pause there and play the next recording.

2058 No. 12 Threshing Machines

2058a

Let's go up to the large green vehicle standing by the wall opposite the entrance to the room. Before us is the only example in Poland of a ZhMS-4 self-driven harvester. This was the first domestic combine harvester, which reaped, threshed and cleaned grain itself. It was constructed by engineers from the Soviet Union and from 1954 production was licensed to a factory in Płock.

2058b

This is how one of the leading factory workers described the machine's début:

"[...] it was a warm spring day when the delegation came and declared: 'the first ZhMS-4 combine is ready to run.' This was a great day for the factory, a great celebration, though no one celebrated it in the literal sense of the word. [...] We decided to show the machine to the city's inhabitants. We drove it up to the factory gates, but they turned out to be too narrow – the combine wouldn't go through. What could we do? We obviously had to dismantle the gate. Now, in retrospect, I think this was almost like a symbolic opening up to the world [...]."

2058c

This combine was produced only for a few years. It was notoriously unreliable and also caused its operators a lot of trouble. Soon Płock was building much more modern machines like the Vistula and the Bizon, which we'll see further along on our tour.

2058d

Now let's turn away from the ZhMS-4. In the 1950s and 60s, combine harvesters were used almost exclusively by large state-owned farms. For a long time to come, the majority of farmers used more traditional methods. In this room we can see how they dealt with threshing and cleaning after reaping the grain.

2058e

Let's look at the wall on the right. Hanging on it are a few flails. They are made of two sticks connected with something flexible, most often a leather strap. This is the simplest tool for threshing grain, used for millennia. This activity was very labour- and time-intensive. The corn was laid out on the ground. Next, holding the longer stick, the ears were beaten with the shorter stick to separate the grain from the chaff. It's hard to believe, but this type of threshing only disappeared in the second half of the 20th century.

2058f

In the era before combines, farmers were still aided by machines known as threshers. We can see some on the left-hand side of the walkway where we are standing. Next to us you can see a display of small threshers operated by hand or by animal power.

2058g

Moving towards the middle of the room, we can see an impressive set of green threshers connected to a black locomobile. In this case, human muscle power was replaced with steam.

2058h

Lastly, let's notice the objects standing near the wall with the flails. These are winnowers and mills. The grain obtained by threshing was put into these machines, which cleaned it of the remains of the ears and of so-called chaff.

2058i

Now let's walk past the locomobile and toward a monument to a remarkable person whose name has already been mentioned many times on our tour.

2058j

Let's pause by the model of a monument whose original stands in all its glory in the centre of Poznań. It portrays Hipolit Cegielski, one of the most famous citizens of this province. He died young, only 55 years old. Yet he achieved great things, led by the ancient maxim: *labor omnia vincit*, meaning work conquers all. Cegielski studied the humanities, but he was famous as a merchant and businessman. In Poznań in 1846, he founded an iron goods store. Over more than a decade, the company developed into a large factory, specializing in manufacturing farming machines. Cegielski's products were known for high quality and farmers bought them from all over the province and other regions of the country. We can say that they contributed a great deal to the modernization of Polish agriculture.

2058k

After Cegielski's death, his heirs expanded the factory's activities. The most modern machines of their time were built in Poznań. The portable engine and thresher attached to it date to the interwar period.

2058l

Meanwhile behind the monument you can see some objects that are less beautiful, but equally useful on every farm: a small broad-throttle threshing machine and potato spinners.

2058m

Now take a moment to explore the exhibit on your own. Its last section is made up of tools and machines for harvesting root and bulb vegetables, meaning mainly potatoes and beetroot.

2058n

When you're done, exit the pavilion through the door in the corner of the room. Once outside, please turn left and go into pavilion 13. We'll continue our tour again there.

2058n_apk

When you're done, exit the pavilion through the door in the corner of the room. Once outside, please turn left and go into pavilion 13. We'll continue our tour again there, when you play the next recording.

2060 No. 13 Transport

3022 Travelling carriages

3022a

This part of the exhibition presents stately horse-drawn vehicles used in the old days in Poland by landowners. A one-horse carriage that we see in front of us was used by the owner of an estate to inspect his property in the interwar period. But most popular in Poland were four-wheeled britzkas which we will see in the next section of the exhibition.

3022b

In winter, sleighs were used alongside wheeled vehicles. Standing behind us is an elegant stately sleigh drawn by two horses. It dates back to the interwar period. Let's take a look at its body. Its shape resembles a swan. It was the most popular decorative motif. A small sleigh, known as party sleigh, sports the same shape. In Old Poland, sleigh parties involved taking a ride in the sledge, visiting all neighbours and drawing them in the fun.

3024 Podlasie wagon

3024a

The exhibited Podlasie wagon is the first peasant vehicle we are stopping by during our tour. It's a small wagon fit for sandy roads. It was almost entirely made of wood which was even used to make axles connecting its wheels. A single horse could easily draw the light wagon. Let's take a closer look at its harness. It's distinctive for the eastern part of Poland. The horse is standing between two shafts, known as *holoble*. They are held in their position by a wooden cross bar known as *duga*. In front of it, we can see an oval collar around the horse's neck. It's the main element of the harness that helps make the most of the animal's pulling power.

Finally, it's worth mentioning that the wagon originates from Vilnius region. It arrived in Wielkopolska after World War 2 with the Poles forced to leave their homeland.

3026 Kraków wagon

3026a

Long and low Kraków wagon was one of the most popular vehicles in the undulating region of southern Poland. It has a robust structure reinforced with metal elements. It is also fitted with a brake essential when going downhill. Its distinctive feature is the body known among experts as *wasąg*. It has a timber frame and woven wicker sides. The wagon was drawn by two horses sporting a richly decorated breast collar harness with a single shaft.

3028 Horse-drawn cab

3028a

Popular in the highlands, the horse-drawn cab known as *wasiąg* or *fasiąg* in dialect is a variation of the Kraków wagon. Let's look inside it. The comfortable seat is covered with fabric. For decades, people were travelling in such comfortable conditions to Zakopane and its environs. First health resort patients and tourists in the mid-19th century were starting their journey in Kraków where they were arriving by train. Their trip lasted several days. When railway line was built to Chabówka located close to the Tatras, the duration of the journey was reduced to just one day. When the railway line was extended to Zakopane in 1899, horse-drawn cabs were carrying tourists only at the foot of the mountains.

3030 Skid vehicles

3030a

Robust, made of timber beams and a woven basket, the sleigh is a fine example of a peasant runner vehicle. It was used with the basket as a travelling vehicle, and without it on the farm to, for instance, transport manure to the field.

3030b

“Doubles” or the Polish combined sledge, was used for heavy duty jobs. It consists of two sections what facilitated carrying tree trunks of varied length.

3032 Box wagon

3032a

Standing in front of us is the box wagon, one of the most versatile wheeled country vehicles. A farmer could use it to carry sacks with cereal or potatoes to the market as well as chickens, geese, or even a pig. Photographs on the board behind the wagon illustrate its massive popularity in the not-so-distant past.

3034 Harvest wagon

3034a

A large harvest wagon used to transport cereal or hay originates from the Wielkopolska region. It was built after World War 2. Such impressive farm vehicles were very much needed by local farmers who had several dozen hectares of land.

3034b

On the other side of the extension we see a harvest wagon from the Radom area. It is visibly smaller than its counterpart from Wielkopolska. Interestingly, it's the oldest vehicle on display in the pavilion - it is more than 120 years old.

3036 Yokes

3036a

Exhibited on the wall in front of us are wooden yokes for oxen and cows. Let me remind you that an ox is a castrated bull, strong and docile. Oxen were used for field labour and to pull wagons even after World War 2. A horse harness was unsuitable for ox teams. Instead farmers used simple yokes invented many centuries ago which, depending on the type, were put on the ox's shoulders or horns.

3038 Szreniawa wagon

3038a

The horse and cart we see in front of us is a very special exhibit. This giant box wagon was built in Szreniawa in the 1920s. The Poznań-type wagon was used to transport beetroots within the local estate which was transformed into a state-owned farm after World War 2. It was drawn by two, four or even six horses. Let us take a closer look at the harness. We won't see collars on animal necks. They are replaced by a sturdy belly girth with a wide breastplate.

3040 Lada – crane

3040a

The collection of wheeled and skid vehicles features an intriguing device called *lada*. It's a manual crane for lifting heavy tree trunks and placing them on the wagon. Its practical application has been depicted on photographs on the board behind the exhibit.

3042 Butcher's wagon

3042a

The butcher's wagon is an example of a specialist vehicle, known as the trading wagon. It belongs to Feliks Majewicz, a butcher from Stęszew, a small town in the Poznań county. Its

body has a shape of a large box with a top lid. The interior has been lined with metal to make meat transport more hygienic and comfortable. The wagon is fitted with metal springs and block brakes, which are naturally wooden.

3042b

Standing next to the butcher's wagon is a trading wagon used to transport large animals. Its body features the name of its original owner, Stefan Tomaszewski of Śrem. Interestingly, we also know who made the vehicle. It was probably constructed in the Śrem-based factory of Stanisław Malinowski. It has a wide wheelbase distinctive for Wielkopolska region where dimensions were unified in the 19th century by a decree of the Prussian king.

3044 Milk wagon

3044a

The vehicle in front of us is a milk wagon used to deliver milk cans similar to those which have been displayed on the table on the left. Its platform sits on the undercarriage of a typical Polish britzka fitted with sturdy metal springs. One of the drawings on the wall behind the wagon depicts another type of the milk wagon body. Its interior has been divided into more than a dozen sections accessed via moving flaps and a folded roof.

3046 Horse-drawn fire engine

3046a

The black and red cart with a fire pump is an intriguing addition to our collection. It was constructed in Germany, but was used in the interwar period in Więckowice near Poznań. Rushing to fire, it was drawn by four or even six horses. The loud clang of the bell - which was a mandatory accessory of the fire engine - would pierce the air. A manual pump used to efficiently feed water from a river or a pond was attached to the undercarriage alongside essential equipment.

3048 Water carts

3048a

In front of us we see two water carts. The smaller one with a metal container was used to transport water. Photographs behind the water cart illustrate its practical application. The largest one depicts it parked next to the steaming portable engine that drove a threshing machine. A lot of water was used to generate steam essential to put the machine in motion, and water carts were the best transport option.

3048b

The large wooden water cart on the left has a very special application. Distillers grains, or a by-product of distilling alcohol from cereal, were poured inside it. Today, distillers grains are used as livestock fodder.

2060a

The exhibit in pavilion 13, which we have just entered, examines the history of traditional transport. As we will see shortly, this is another area where our ancestors showed great ingenuity and significant skill.

2060b

Facing away from the entrance door, let's turn right and take a look at the two primitive boats. The smaller one is a so-called dugout, made of a single tree trunk. Similar boats floated on Polish rivers and lakes a millennium, five centuries, or even one century ago, since water

transport was once much more popular than today. Before hydroengineering, rivers formed numerous branches, and many towns could be reached only by boat or ferry. Importantly, water travel was often more comfortable and faster than overland, especially if you had to go on foot.

2060c

On the left we can see equipment people used when travelling on foot. The simplest is of course a stick, which could be used to carry a bundle holding necessary possessions. Various kinds of yokes, placed for instance on the shoulders or back, have also been used since time immemorial. Finally wheelbarrows, trolleys and carriages were used. But these required an invention considered one of the most decisive in the history of humanity: the wheel.

2060d

Various types of wheels can be seen on the wall opposite the entrance to the pavilion. Let's go up to them. The wheel was invented around 5,500 years ago in the centre of civilization at the time, meaning the Middle East. From there it spread all over the world. Initially they were solid, but in time their design was refined and spokes began to appear. For a long time the basic production material was wood. Only in modern times did they begin to be reinforced by metal elements, for instance rims, and later, rubber. Finally metal wheels dominated the market.

2060e

This pavilion holds a collection of the most interesting vehicles – wheeled and otherwise – used long ago by Polish villagers. Now please take a moment to explore the exhibit on your own. By certain items you'll see round labels with a headphones symbol. These allow you to hear commentary. To remind you, you can activate the recordings by aiming your audio guide at the label (like a TV remote) and then pushing the round button.

2060e_apk

This pavilion holds a collection of the most interesting vehicles – wheeled and otherwise – used long ago by Polish villagers. Now please take a moment to explore the exhibit on your own.

2060f

After you're done, please exit through the door on the opposite side of the pavilion. I'll meet you there.

2060f_apk

After you're done, please exit through the door on the opposite side of the pavilion. Once outside, pause for a moment and play the next recording.

2062 In Front of No. 13

2062a

After leaving Pavilion 13, let's pause for a moment. Soon I'll invite you to the home farm, meaning to the agricultural area of the former landed estate in Szreniawa. But before we go, let's take a look at the grand building in front of us. This is the seat of the estate's owners,

known as a manor house. It was built in the mid-19th century by the German Bierbaum family. In the 1920s it was bought by the Polish landowning family the Glabiszes. It stayed in their hands until the Second World War. Later the estate was nationalized. Currently the manor house holds an exhibit of a landowner's residential interior. Our audio guide will take you through it. I encourage you to visit it, but only once we've finished our tour of the museum.

2062a_apk

After leaving Pavilion 13, let's pause for a moment. Soon I'll invite you to the home farm, meaning to the agricultural area of the former landed estate in Szreniawa. But before we go, let's take a look at the grand building in front of us. This is the seat of the estate's owners, known as a manor house. It was built in the mid-19th century by the German Bierbaum family. In the 1920s it was bought by the Polish landowning family the Glabiszes. It stayed in their hands until the Second World War. Later the estate was nationalized. Currently the manor house holds an exhibit of a landowner's residential interior. You can tour it using your application or with an audio guide. I encourage you to visit it, but only once we've finished our tour of the museum.

2062b

Now let's go left and in a few steps we'll turn left again. The wide walkway will take us to the home farm. I'll meet you there.

2062b_apk

Now let's go left and in a few steps we'll turn left again. By the brick building on the right, activate the next recording.

2064 Estate Manager's House

2064a

We're on our way to the home farm. On the right we are just passing the Estate Manager's house. Under the Glabisz family, the estate manager lived and worked here. After nationalization and the foundation of a collective farm in Szreniawa, this building served the agronomist and chief accountant. Today it also holds an office, whilst a tavern operates in the basement, serving traditional local dishes.

2064b

Once we've passed the estate manager's house, we'll see two long white buildings. These are the former cowsheds, now converted into exhibition rooms.

2064c

Let's go into the shed on the left. We'll continue our tour there.

2064c_apk

Let's go into the shed on the left and play the next recording.

2066 No. 15 Tarpan Museum



2066a

Welcome to the Tarpan Museum. Let's pause at the start of the main walkway, standing with our backs to the entrance. To the right we'll have a large truck and on the left, among other things, some once-popular passenger cars – Syrenas. But let's focus our attention on the grey truck next to the Syrenas with the caption reading TARPAN. This is the star of this museum, whose arrival on the roads in 1971 was announced by the Polish Film Chronicle:

2066b

"The truck can seat six. It has an openable rear and roof. You can load it with three cubic metres of potatoes or grain, and even transport a cow or construction materials larger than the dimensions of the vehicle. All this with a speed up to 90 kph.

The Warta and the Tarpan are manufactured in Poznań. Both types of vehicles, produced as a gift for the conference of the Polish United Workers' Party, will now face a practical test from farmers. The court of direct use and economic calculus will determine whether this is the truck the countryside has been waiting for."

2066c

Finally a third, completely different truck was built, but the name Tarpan was carried over from one of the prototypes.

2066d

The Tarpan was manufactured by the Agricultural Automobile Factory in Poznań. The first series rolled off the production line in 1973. This vehicle here is one year younger.

2066e

Let's take a look at its outline. The 233 Standard isn't a typical pick-up truck. The simple, even angular line of the body reflects automobile fashion of the late 1960s and early 70s. The indicators and door handles come from the Polish Fiat 125p. The high suspension was meant to help with driving on dirt roads. The Tarpan stood out for its universality. Thanks to a moveable rear wall on the cab, it could be a three-person vehicle with a large cargo bed or a seven-person

family vehicle. Of course this wasn't a luxury available to everyone. In the 1970s, this truck cost more than a large Fiat and almost as much as building a new house in the countryside.

2066f

The price also differed depending on the type of body. We can see the most expensive type on the right. This is a van with an interior cargo hold. These were produced under the name the Kombi.

2066g

Now let's go up to the orange car on the platform in the middle of the room. By the late 1970s people were thinking about a new, improved Tarpan. It was decided to produce them in collaboration with Fiat. Soon the Italian workshop sent a design for a car with the working name the Tarpanol. In front of us is a full-size plaster model of one. This car was meant to be a modern construction blending the characteristics of a van and a Kombi. Unfortunately the economic crisis of the 1980s thwarted the plans to build them.

2066h

Polish farmers had to content themselves with a truck modernized using domestic capabilities. We see it to the left of the Tarpanol. This is a yellow Tarpan 237 Standard from 1984. Visually, it is distinct from the older model only in the details. The front is different, with new headlamps. The mirrors and door handles are different. But additionally the underframe is significantly redesigned. These changes allowed, among other things, for an increased carrying capacity.

2066i

Now let's turn so the Tarpan is on our left. In front of us, on the right-hand side of the room we'll be able to see more vehicles of this make. Let's go up to the dark-green lorry.

2066j

This is a Tarpan 239D. You can see the name on the door. We could call it the last incarnation of the agricultural truck from Poznań. This vehicle arrived on the market in the late 1980s, as communist Poland was dying. The whole economy was in the throes of a crisis. Petrol was rationed, so the new Tarpan came with a diesel engine. The sub-assembly was also modified. According to tests run by *Motor* magazine, the vehicle had many positives. In summary, they wrote:

"It's a shame this vehicle won't be refined any further. We must hope that its successor, manufactured with more modern methods, will be an equally useful lorry, well-adapted to our conditions. For now the Tarpan Diesel as a vehicle for a variety of terrain conditions is without equal in Poland."

2066k

The last agricultural Tarpan rolled off the assembly line in 1995. Then all hopes in Poznań were put on off-road vehicles. You can see some in front of us. These are Tarpan Honkers. Designed for the military by engineers from Warsaw and Poznań in the 1980s, and based on the Tarpan,

they lasted until the early 21st century. The end of Honker production also marked the close of the history of communist-era agricultural trucks.

2066l

Now take a minute to explore the Tarpan Museum on your own.

2066m

When you're done, please exit the building through the door opposite the entrance. We'll continue our tour outside.

2066m_apk

When you're done, please exit the building through the door opposite the entrance. Once outside, please head to the right and go into the identical white building. We'll continue our tour inside when you play the next recording.

2068 In Front of Nos. 15 and 16

2068a

Let's go to the right and enter the long, white building next door.

2070 No. 16 Carriages



3050 Britzkas

3050a

Britzka, or the most Polish of all travelling vehicles stands closest to the entrance. It became popular as early as in the 18th century. Less than a hundred years on its advantages and disadvantages were described as follows: “Britzkas - light, perfect for faster, yet not very comfortable journeys and seldom spacious, would bounce on the road like any other carriage”.

This britzka version is known as the field carriage as it was used by the landowner or steward to drive around a vast estate.

3050b

Further on the right hand side stands a britzka known as the park carriage. You will easily identify it as it carries two elegant passengers in period costumes. The carriage was used in Wielkopolska for recreational rides.

3052 Hunting carriage

3052a

The carriage with a flat roof on four posters is known as *polowiec*, or the hunting carriage. Its name does not allude to fields but to hunting, which was the favourite pastime of landed gentry. It was used to transport hunters to shooting locations and was able to carry up to several people. The front wicker basket was designed for walking sticks or umbrellas. Attached to the back is a small ladder used to carry hunted animals.

3054 Carriages

3054a

A carriage is a vehicle that spells sophistication. Our exhibition presents several types of carriages. The coupé has a distinctively vivid yellow body. It's a short two-seater version of a full-size carriage. It comes with windows that would slide into the door panel like in modern cars. With their small sizes, carriages were the perfect runabouts to navigate jam-packed streets of the 19th century cities, which were growing rapidly. Next to it on the right hand side stands a black fiacre. It is clearly bigger than the coupé. Such cabs were often used in spa resorts as taxi cabs. The cabman, or the driver, was sitting at the front under a small tilt.

3056 Mylord

3056a

A ride in a beautifully decorated coach is just one out of many attractions Poznań, Kraków or Warsaw has to offer. Interestingly, these coaches are a copy of the vehicle in front of us. It's a Mylord. The first one was built in Great Britain in 1835. Very soon it became the most popular travelling vehicle on the Old Continent. It guaranteed a comfortable trip for two people. In case of bad weather, it benefited from a folding top.

3058 Harnesses

3058a

Different types of harnesses are exhibited across the back wall of the pavilion. Affluent carriage owners appreciated their practical application and impressive appearance. Most popular harnesses were modelled on the English ones. Decorations were meant to add the final touch. Horses were selected very carefully. Ideally, they sported matching colour, build and personality. Equal attention was given to vehicle decors. Large boards on the wall depict different types of upholstery, lamps and crests placed on carriage bodies.

3060 Landaulet

3060a

A smartly dressed young female and a child are descending from the black carriage which is a landaulet. It originates from France, but this particular carriage was made in the 19th century Wrocław. Unlike the four-seater landau exhibited two places further, it could only carry two passengers. The coachman, obviously dressed for the occasion, would sit on a tall seat

mounted at the front. This carriage is drawn by two beautiful chestnut horses with black manes and tails.

3062 Victoria

3062a

English victoria belongs to a group of chic carriages. It's only natural as its name pays homage to Queen Victoria, the 19th century ruler of the mighty British Empire. The soft bench under the folding top could fit only two people. Two more passengers could sit on a less comfortable coachman's seat. Our victoria features an august passenger. It's Florian Stablewski, the Archbishop of Gniezno and Poznań and the Primate of Poland who rode the carriage at the turn of the 19th and the 20th century.

3064 Phaeton

3064a

A phaeton we see in front of us was appreciated for its light, compact construction and ease of driving. Its owner was able to drive it himself, sitting in the front seat next to his wife. In the back, behind the covered seat was an additional bench usually used by stablemen. The name of the carriage needs some explanation. It derives from Greek mythology. Phaëthon was the son of Sun-god Helios. He once pleaded his father to let him drive the chariot of the sun, what almost led to the destruction of the Earth. Luckily, the young man was unable to cope with the celestial cart was struck by Zeus with a bolt of lightning.

3066 Gigs

3066a

Our exhibition presents a pair of two-wheeled gigs standing side by side. On the left hand side we see the French gardener's cart, and on the right, an American sulky. The gardener's cart was used to carry people and agricultural produce. Passengers sat sideways to the direction of travel. Meanwhile, sulkies drawn by fast horses known as trotters were driven by American farmers. Interestingly, trotting races became a sport, and trotting competitions are also held in Poland.

2070a

We're now at the exhibit titled "The Rescued Splendour of Carriages", which displays vehicles purchased from the collectors Stanisława Łowińska and Bogusław Łowiński. In it we can see a series of vehicles that graced the Polish roads at the turn of the last century. In contrast to the peasants' carts or sleighs we saw earlier, here we can see elegant carriages used by wealthier landowners.

2070b

I'd like to invite you to explore the exhibit on your own. Next to certain items you can see round labels with a headphones symbol. You can use these to hear additional commentary. To remind you, you can activate the recording by aiming your audio guide at the label (like a TV remote) and then pressing the round button.

2070b_apk

I'd like to invite you to explore the exhibit on your own.

2070c

When you're done, please exit through the same doors you entered. I'll meet you outside.

2070c_apk

After you're finished, please exit and play the next recording.

2068od2070 In Front of No. 15 and 16

2068od2070a

After leaving the carriage exhibit, let's pause for a moment. In front of us is a complex of historic storage buildings, which formerly held grain and some farming equipment. Its central part is an over one-hundred-year-old granary. Currently these structures mainly hold exhibits on large-scale farming, such as at rural estates, agricultural cooperatives and state collective farms. You can visit these on your own after you finish your audio tour.

2068od2070b

Meanwhile let's go to the left, passing the wide vehicle gate. Find the door with the large number 19 next to it. We'll continue our tour in there.

2068od2070b_apk

Meanwhile let's go to the left, passing the wide vehicle gate. Find the door with the large number 19 next to it. We'll continue our tour in there, when you play the next recording.

2072 No. 19 Crop Dusting

2072a

I'm sure many of you are wondering: why does an agricultural museum have a Soviet warplane in Polish colours? All will soon be revealed...

It's the late 1940s and early 1950s. Poland has new borders and a communist system of government imposed from the East. The country is rebuilding from the destruction of the war, and at every step encountering yet more difficulties, even affecting areas of the economy like forestry and farming. First, Polish forests are attacked year after year by swarms of pests, later a plague of Colorado beetles attacks potato fields. Propaganda declares this the doing of Western imperialists. We must resist them and show the strength of the socialist state. Following the Soviet example, aeroplanes are sent into battle. The seats were removed from a passenger LI-2 and replaced with containers of pesticides. People also turn to war-tested Kukuruzniks, manufactured in Poland as CSS-13s. Now the enemy doesn't have a chance...

2072b

We can see one of these CSS-13s in front of us. This is a licensed version of the legendary Soviet Po-2 plane, known as a Kukuruznik. They became famous during the war as night bombers. In post-war Poland, the CSS-13 was used as a training and liaison aircraft. In the early 1950s it was adapted for agricultural purposes.

2072c

Let's take a closer look. The plane was initially a two-seater. In the agricultural version, the seat behind the pilot was removed and replaced with a pesticide tank. The black cylinder you see is the upper part of it. One curiosity is the red pinwheel in front of the cylinder. In flight, the wind would turn the pinwheel, setting in motion a mixer installed in the container of chemicals, which were then released via the black nozzles you can see under the fuselage.

2072d

The experience gained in the 1950s soon bore fruit in the creation of a strong crop-dusting tradition in Poland. Its services have been used both domestically and abroad. For years, Poles dominated crop-dusting services in countries like Egypt and Sudan. You can learn more about this in the exhibit in this room. Please take a moment to explore it on your own.

2072e

When you're done, please exit through the doors opposite the entrance. There we'll take a look at a collection of agricultural planes. See you there.

2072e_apk

When you're done, please exit through the doors opposite the entrance. There we'll take a look at a collection of agricultural planes, by playing the next recording.

2074 Aeroplanes



2074a

Let's go up to the yellow-and-black plane on the right. This is a PZL-101 Gawron, which made it possible to expand Polish crop-dusting beyond the country's borders. It was created in the late 1950s as a prototype version of the Soviet Yak-12. The Poles fitted it with a larger tank for pesticides. This plane appeared in the cult comedy *Take it Easy*. One of the main characters, Pawlak, gets angry when he sees the plane flying over a field. He shouts the memorable line: "Who gave them the right to come flying in on my sky?!"

2074b

Let's look at the next plane on the left. It was officially called an An-2, but in Poland it was nicknamed the Antek. A Soviet machine produced mainly in Mielec in south-eastern Poland,

despite its seemingly primitive construction conquered the hearts of Polish pilots by being simple to use, reliable and easy to fly. The Antek proved itself as an agricultural plane, and not just for crop dusting. They could be used to transport material or luggage to the most distant countries in the world. This biplane was produced from the late 1940s to the start of the 21st century. In Poland a record number of them was made – over 12,000.

2047c

Along with aeroplanes, helicopters are also used in crop-dusting. To the left we can see an agricultural version of an Mi-2, produced in Świdnik, near Lublin. Machines like these were used for tasks like spraying date palm plantations. Containers for liquid pesticides are found on either side of the helicopter.

2074d

Another plane equipped for spraying liquid chemicals is the small blue one next along in line. This is a PZL-104 Wilga, entirely Polish-built, made in Warsaw and on license in Indonesia. It was not a great success as an agricultural plane because it was usually too small.

2074e

Now let's go up to the largest plane in the exhibit, behind the Wilga and facing away from us. We could call this the pearl of the whole collection, since only a few examples have survived in the world. This is an M-15 – the only agricultural biplane with jet propulsion. It got its popular name Belphegor in honour of the ugly monster of the Louvre, star of a French TV series from the 1960s. The plane was designed by Soviet engineers in the 1970s, but it was produced in Poland and used in the USSR and East Germany. Its builders intended it to replace the out-of-date Antek. But in practice the plane had more drawbacks than advantages. Production was halted after a hundred-odd planes were built.

2074f

Let's leave the Belphegor and take a look at the two last planes in the exhibit. The yellow one is a PZL M18 Dromader, and behind it is a PZL-106 Kruk. Both machines date to the 1970s and are considered very successful. Interestingly, the Dromader was built on the base of an American plane, with a Polish-manufactured engine added. The distinctive hump of the cockpit comes from the fact that the pesticide tank is located just in front of it. The Dromader in this exhibit is a version for fighting forest fires. Meanwhile the Kruk marks the start of the second generation of Polish crop dusters, meaning those built specially for agriculture. If you're interested in this subject, please take a moment to look at the planes up close on your own.

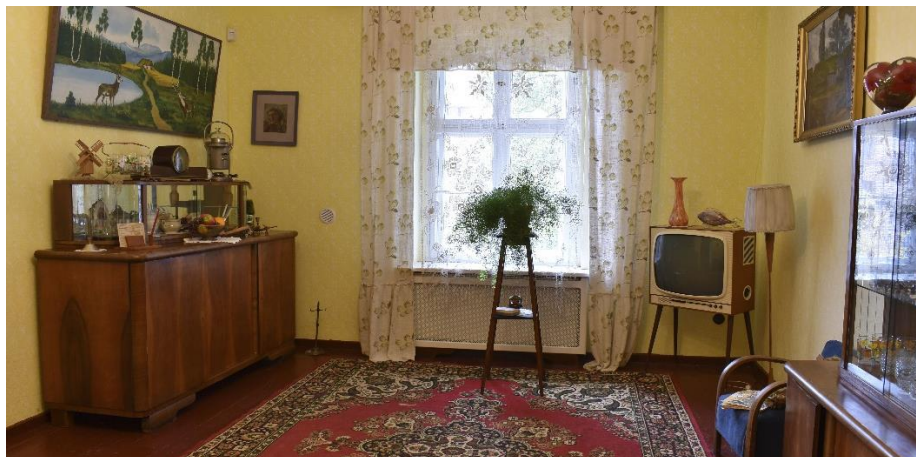
2074g

When you're done, please go into the brick building behind us. We'll continue our tour on the ground floor, in the room with the gigantic, metal, copper-coloured cylinder. I'll see you there.

2074g_apk

When you're done, please go into the brick building behind us and, in the room with the gigantic, metal, copper-coloured cylinder, and play the next recording. I'll see you there.

2076 No. 1 Distillery



2076a

We've entered the distillery building, used to produce raw spirit, known as grain alcohol or fire water. This facility was founded in the late 19th century by the private owners of the Szreniawa estate. It was meant to generate extra income. It also operated after World War II. We'll start our visit in the very heart of the distillery, meaning in the apparatus room.

2076b

Now let's go up to the tall copper column, which is the reflux apparatus. To the right stands the original steam engine that drove all the machines and equipment in this room. In days when the distillery was working at full steam, there was a powerful stench everywhere of mash. This was a mix of liquefied potatoes with added germinated grain seeds, or malt, and yeast. After a short fermentation, this went into the lower part of the reflux apparatus in front of us. Here the muck was heated. Differences in the boiling temperatures of alcohol and water were taken advantage of to evaporate the spirit. The mixed vapours floated upwards whilst repeatedly condensing and evaporating again. As they moved up the levels of the machine, the alcohol grew stronger, while the water ran downward. The fermented residue collected at the bottom of the machine was valuable as animal feed.

2076c

The whole production process was closely monitored. Let's look at two pieces of equipment in front of the window, near the entrance. These, placed in a wooden booth, were used to test the quality of the spirit. Meanwhile the machine on the small brick platform measured how much spirit had been produced. The mechanism was sealed behind glass. Only tax officials had access to it.

2076d

Raw alcohol at a concentration of 90 per cent was poured into enormous 500-litre barrels. Next it was transported to distilling plants, where it was purified, or "rectified". Only then was it suitable for use in the food, chemical or pharmaceutical industries. Currently the industrial

traditions of this building are continued by the Szreniawa brewery, which operates in a separate section. A brewery, of course, produces beer, whilst distilleries produce liquor.

2076e

Now let's return to the wooden staircase and go up to the first floor. There we'll go into the open room on the left. See you there!

2076e_apk

Now let's return to the wooden staircase and go up to the first floor. There we'll go into the open room on the left and play the next recording.

2078 No. 21 Office

2078a

We're in the office of the distillery manager. It's arranged in the décor of the late 1950s and early 60s, when the leader of Poland's communist government was Władysław Gomułka. His portrait hangs on the wall next to the state coat of arms. From here the distiller could constantly observe through the window what was going on in the apparatus room. During inspections the room was made available to tax officials.

2078b

Please explore this exhibit on your own, and then go into the room across the corridor. I'll meet you there.

2078b_apk

Please explore at this exhibit on your own, and then go into the room across the corridor, which the next recording will tell you about.

2080 No. 21 Flat

2080a

Neighbouring the distiller's office is his official flat. It consists of two rooms and an adjacent kitchen. The rooms are furnished to be deceptively similar to a communist-era apartment from the 1960s. Please take a minute to explore on your own.

2080b

When you're done, please go downstairs and exit the distillery. Outside, turn right and go into the spacious shed with the collection of agricultural machines. I'll meet you there.

2080b_apk

When you're done, please go downstairs and exit the distillery. Outside, turn right and go into the spacious shed with the collection of agricultural machines. We'll continue our tour there when you play the next recording.

2074od2080 Aeroplanes

2074od2080a

Let's go to the right. In a moment, past the distillery building, we'll see a spacious shed with a collection of agricultural machines. We'll continue our tour there.

2082 No. 22 Energy Sources



also held in Poland.

3068 Steam plough

3068a

The centrepiece of the extension is the steam plough with two impressive portable engines. Let's try to imagine the engines at work in a field in Szreniawa a hundred years ago... An autumn morning. Fields are still blanketed in fog, but a clear blue sky heralds fair weather. Suddenly, the silence is broken by the sound of operating machinery. As if steam engines were approaching us at a snail's pace. The noise is growing. We already see smoke stacks billowing with black smoke. Both portable engines are driven into the field. You may spot farm labourers and a cart with coal behind them. Machines are slowly moving to two opposite sides of the field. They stop several hundred meters apart. Farm labourers are stretching a steel rope between them. And later use it to mount a mammoth plough. Stokers are feeding coal into their hearths. Portable engines are wheezing and rumbling. The rope tightens and begins to reel one of the machines onto the drum to pull the plough. Its blades are effortlessly biting into the soil. When the plough reaches the edge of the field, portable engines are driven a bit further on and labourers reposition the plough which will move in another direction. When the evening comes, several hectares will be ploughed....

3070 The oldest portable engine

3070a

Made in 1895 by the English company Robey & Company, it's the oldest and still running portable engine in our museum collection. It's a portable engine, which means that it did not move on its own, but was used to power other machines. By means of straps it could be coupled with, for instance, a threshing machine displayed behind the tractor collection.

3072 Titan

3072a

Standing in front of us is the US-made Titan tractor from the early 1920s. It's a notable piece because it inspired the first Polish tractor called Ursus 1921/22. This Polish vehicle was manufactured by the Warsaw-based "Ursus" Engine and Tractor Factory Plc. It was fitted with a two-cylinder engine powered by kerosene and had a power rating of 25 HP. Approximately 100 units were assembled by 1927. Tractors from Warsaw proved to be too expensive for Polish farmers. More affordable options included Lanz Bulldog tractors imported from Germany.

3074 Ursus C-45

3074a

Shortly after the end of World War 2, the Polish authorities decided to launch national production of agricultural tractors. Ursus C-45 in front of us premiered during a first of May parade in 1947. Actually, it's an exact copy of the German Lanz Bulldog. It was powered by a two-stroke 45 HP unit. It took a lot of skill to get it up and running. First, oil had to be heated in a spherical hot bulb located in the front section of the tractor. Later, the steering wheel and column were inserted into a side fly wheel and a violent turn of the steering wheel would finally start the engine. Several dozen thousand tractors were assembled by 1954. Its next generation was Ursus C-451.

3076 Ursus C-325

3076a

The displayed C-325 is one of the key Ursus models. It's an all-Polish design whose volume production was launched in 1960. At the time, it was comparable to tractors from Great Britain or Czechoslovakia. It was the first model to be fitted with a diesel unit with a moderate power rating and to adopt technologies that made field labour easier. The tractor became the prototype of a whole range of popular "30s". The export version of C-335 was manufactured until 1993.

3078 Ursus C-360

3078a

The first volume-produced Ursus-360 in front of us was manufactured in the Warsaw factory in 1976. It turned out to be a smashing success. Nearly 300,000 units were sold in the next two decades. C-360 became the most popular mid-size agricultural tractor in Poland. Even today you may spot it on roads and fields in almost every part of Poland.

2082a

In front of us is a collection of 19th and 20th-century machines that were used in agriculture as sources of energy. These are mainly locomobiles and tractors, including the legendary Polish Ursus. Please take a moment to explore on your own.

2082b

Certain items have a round label with a headphones symbol. You can use these to hear commentary. To remind you, you can play the recording by aiming your audio guide at the label (like a TV remote), and then pressing the round button.

2082b_apk

Please leave the shed and return to the manor house yard. There, please look for the pavilion with a large number 26, and once inside, play the next recording.

2082c

Once you're done, please leave the shed and return to the manor house yard.

2082c_APK

[FX: cisza]

2074od2082 Aeroplanes

2074od2082a

Let's go straight toward the brick complex with the granary. Just past it, turn left and go out into the manor house yard. We'll continue our tour there.

2084 Yard



2084a

We've reached the yard of the manor house. Let's head for the light-colored building on the right. I'll meet you in front of the door with the large number 26.

2086 No. 26 Blacksmith's shop

2086a

Through the open door we can see into this room. Straight ahead we see a large anvil, and behind it a hearth with bellows on the left. Of course this is a blacksmith's workshop, or a smithy. There was a similar one on the Szreniawa estate in days when it belonged first to its German owners, and then to the Glabisz family.

2086b

A blacksmith was essential in the countryside until the era of mechanized agriculture in the mid-20th century. Displayed on the wall to the right are objects these artisans made. They include sickles, chains, keys and locks for doors. Further along we can also see different kinds of horseshoes.

2086c

Various tools of the blacksmith's trade are also collected here. Of course the basic ones included hammers and pliers. But on the right we can also see more complex machines: a lathe and a drill.

2086d

Now let's continue along the front of the building toward the shed with the machines. In a moment we'll continue our tour.

2086d_apk

Now let's continue along the front of the building toward the shed with the machines. When you reach the first of them, please play the next recording.

2088 No. 25 Bizon

2088a

Here we'll get our last look at farming machines. Most of these are well-regarded products of Polish factories.

2088b

Let's pause by the second vehicle along. This red giant is a Bizon Gigant – the largest Polish combine harvester. It was produced from the early 1970s to the end of the 1980s. Its 220-horsepower engine allowed it to reap and thresh up to 20 hectares of wheat in a single day. Farmers use well-maintained Gigants to this day.

2088c

Meanwhile a machine that's almost never seen in use nowadays is next to it on the left: a Vistula – with the enormous silver radiator near the driver's seat. This is the first Polish combine harvester from the Harvest Machine Factory in Płock. They were first made in the 1950s and were notorious for being unreliable and for their lack of durability.

2088d

Let's continue along and pause in front of the tractor attached to the complicated machine. This is a Bizon Z020 Zagon. Linking the two machines together created a combine worth its salt. This seemed like an ideal solution, but it had some disadvantages. The first was low efficiency. The second was problems with the Ursus engine, caused by the dust kicked up whilst this team was operating.

2088e

Let's continue on to the blue machine. Interestingly, this is a combine harvester, only not for grain but for potatoes. It's called an Anna. Because of its large size it was used on big farms, often collective farms or production cooperatives.

2088f

Let's go to the left. As we pass more combines, look out for a blue machine with wooden revolving reel. This is a Warta binder – a standard product of the Poznań Harvest Machine Factory. It cut and bound corn, but did not thresh it, meaning it didn't separate the grain from the chaff. This machine was popular in the 1970s and 80s, especially on small farms. Later, combines successfully relegated them to museum displays.

2088g

Now let's go into the room connected to the shed from the left. There's a number 24 next to the door. See you there.

2088g_apk

Now let's go into the room connected to the shed from the left. There's a number 24 next to the door. We'll continue our tour inside when you play the next recording.

2090 No. 24 Wheelwright's Shop

2090a

We've entered the wheelwright's shop. As the name suggests, a wheelwright makes wheels and wagons. One of these artisans wouldn't have been much help repairing a Bizon or Vistula, but their skills were needed in the days of horse-drawn vehicles.

2090b

Let's look at the equipment in the room with two windows. It looks as if the wheelwright has just stepped out for a moment and is about to return to finish up work.

2090c

In the vice attached to the table is the hub of a wheel. It was made on a lathe out of hardwood, ideally oak. The artisan has already managed to make openings for the spokes. A few of these lie to the left on the table. They are carved of ash wood. After mounting all the spokes in the hub, you just had to attach the curved rims of the wheels. We can see these beneath the vice. Then the wheel was almost ready. You just had to add a metal binding, but the blacksmith would take care of that.

2090d

Here I'd like to encourage you to visit the live animals in the museum's sheds, and exploring the exhibit there on your own. This is the end of our tour of the National Museum of Agriculture and Farm and Food Industry in Szreniawa. Thank you for your attention and perseverance. If you've got time and would like to, I encourage you to visit the museum in the Szreniawa manor house. And if you leave the museum, please return your audio guide to the place where you borrowed it. See you again in places beautifully told!

2090d_apk

Here I'd like to encourage you to visit the live animals in the museum's sheds, and exploring the exhibit there on your own. This is the end of our tour of the National Agricultural and Farm and Food Industry in Szreniawa. Thank you for your attention and perseverance. If you've got time and would like to, I encourage you to visit the museum in the Szreniawa manor house. See you again in places beautifully told!

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Ministerstwo
Kultury
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i Sportu.



SAMORZĄD WOJEWÓDZTWA
WIELKOPÓLSKIEGO