A guide to BONNOX Game Fencing

Bonnox is a very innovative Company, constantly listening to their customers, and trying to satisfy their needs - hence the large range of products to fit most requirements.

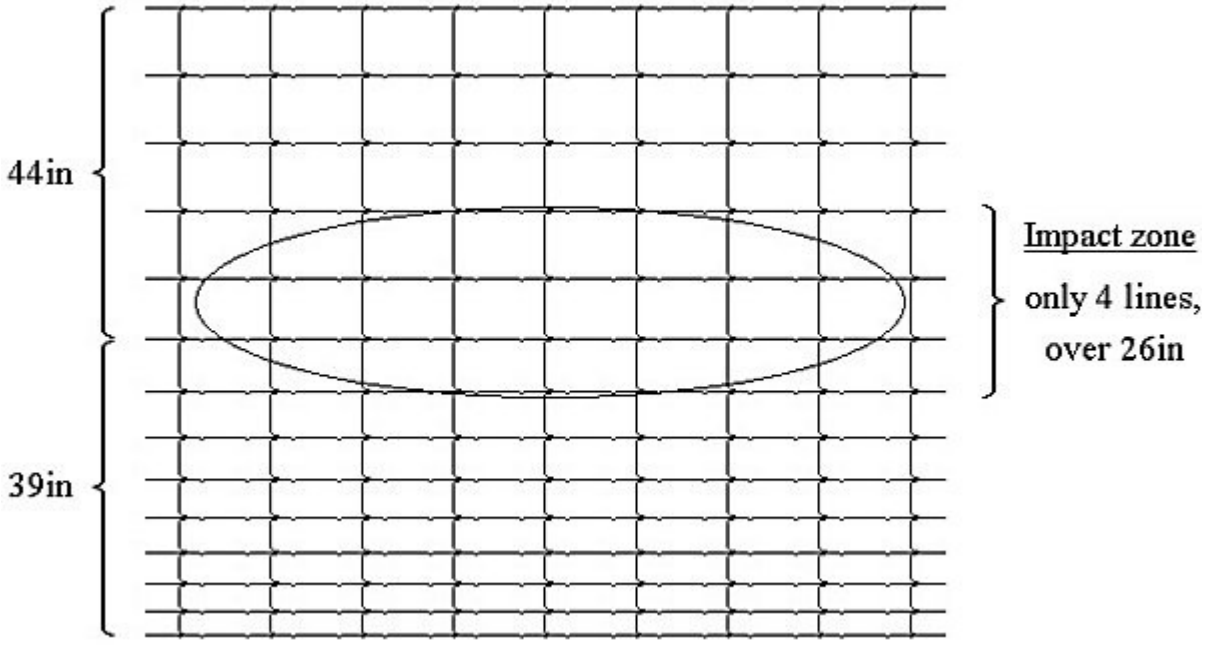
Conceived in 1938, "**Hinge-joint**" field fencing has been available for more than 50 years. This pre-fabricated fence is made up as follows:

- a number of horizontal wires (**line wires**), normally 100m in length;
- these are joined together, normally every 6in (150mm) or 12in (300mm), by short pieces of wire (**stay wires**) which are wrapped around the upper and lower line wires, as per the diagram;

Hinge-joint construction

- the line wires, together with the stay wires, thus creating a series of rectangular boxes.

The pattern of the hinge-joint fence was originally designed in the USA in 1885 to provide for incremental spacing between the horizontal line wires - i.e. small spacing at the bottom (3in, or 75mm) and increasing in size, with the spacing of the upper half of the fence being 9in (229mm) - for example,



The style number for this would be **1483/12** - see numbering system on next page.
This pattern is still used extensively throughout the world today.

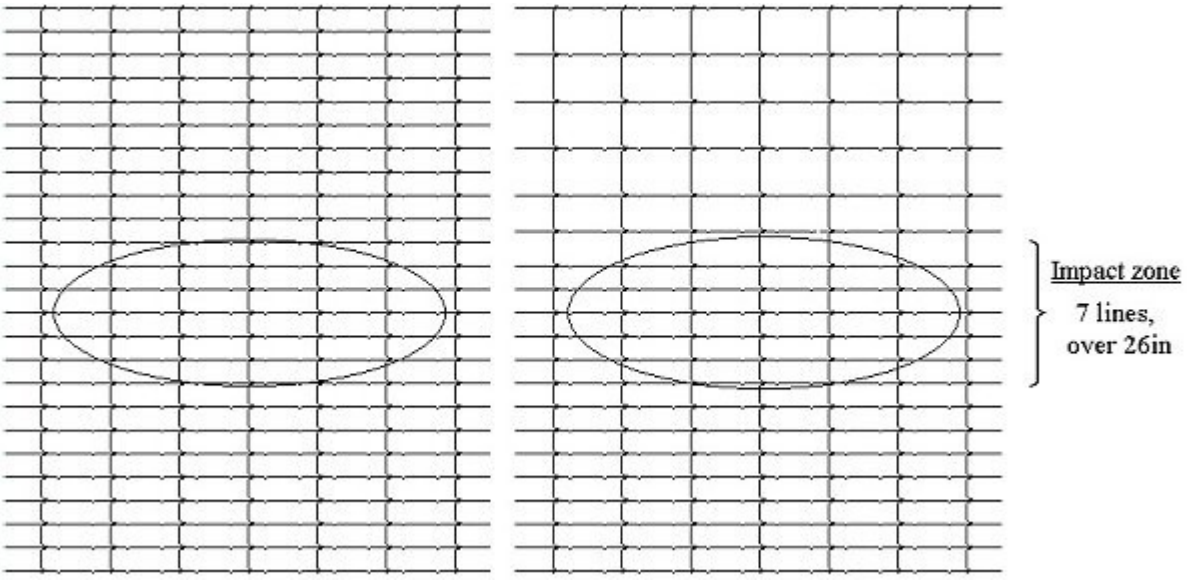
However, when it came to keeping African game in/out, it was discovered that some animals could

break through the fence, as the gaps between the line wires in the area where they jumped into the fence (**impact zone**) were too large.

This prompted Bonnox to design a new pattern and call it **"Close Mesh" Africa Pattern™**.

The Bonnox pattern provides for equally spaced (4in, or 100mm) horizontal line wires, either from the bottom up to the full height of the fence (8ft or 2,44m max.), or equally spaced up to the "impact zone" and then larger spacings up to the full height.

Below are two examples of an 8-foot high Bonnox fence, showing these options:



Product code **2596/12** **2096/12**, where

- "25" or "20" indicates that there are 25 or 20 horizontal line wires;
- "96" indicates the height of the fence in inches - i.e. 96in (or 8ft, or 2,44m);
- "12" indicates the spacing between the vertical stay wires in inches - i.e. 12in (300mm)
- options are 12in (300mm) or 6in (150mm)

All of our products use this numbering system.

Through feedback from some of our customers, it was discovered that there was a need for a denser mesh in certain sectors of the market place - particularly, the lion breeders.

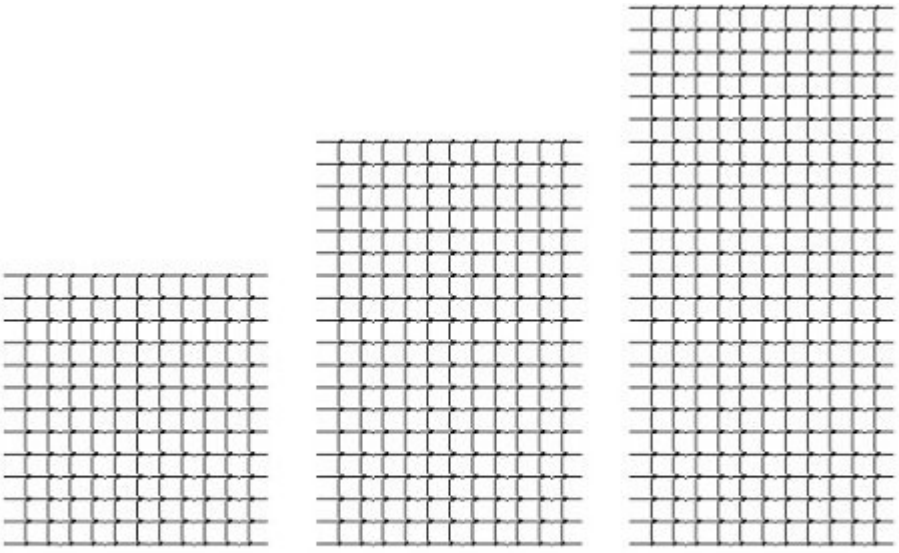
Bonnox then designed the **"Square Mesh" Africa Pattern™**, or **"4 x 4 Mesh"**

The spacing of **both** the horizontal line wires and the vertical stay wires is 4-inches (100mm) - hence the name, "4 x 4" - unique to Bonnox!

It also proved to be an ideal option for the traditional Diamond Mesh (Chain Link) marketplace.

Examples of a 4ft, 6ft and 8ft high "4 x 4" fence are shown.

Product codes



Obviously, a fence with 6-inch spacing between verticals is more expensive than 12-inch spacing, as it contains more wire. Where a farmer stocked only larger game, the 12-inch option was ideal.

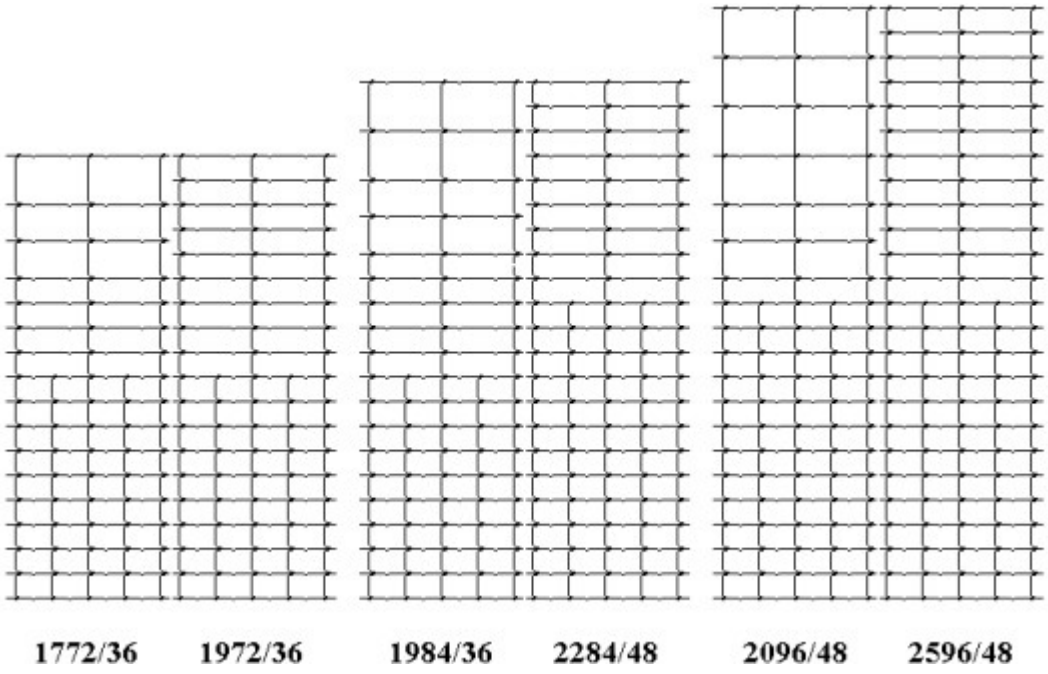
However, where both large and small animals were kept, the farmers had to opt for the 6-inch version in order to protect the smaller animals.

An alternative was to erect a 12-inch fence above the 6-inch fence, even though it almost doubled the erection time and effort. The need thus arose to create a combination of both, in a single one-piece fence.

With new, sophisticated machinery, this was achieved, and the **Bonnox "Kombi-Fence" Africa Pattern™** was born.

Theoretically, any of the **"Close Mesh"** range can be converted to the "Kombi-Fence", and the bottom portion can virtually be set to any height. However, for practical purposes, only certain standard heights and combinations are stocked - 6ft, 7ft and 8ft high fences, with 3ft or 4ft lower portions.

Some examples are as follows:



In the case of the "Kombi-Fence", the last two digits of the product code indicates the height of the lower portion in inches - spacing of the vertical stay wires is always 6-inches for the lower portion and 12-inches for the upper portion.

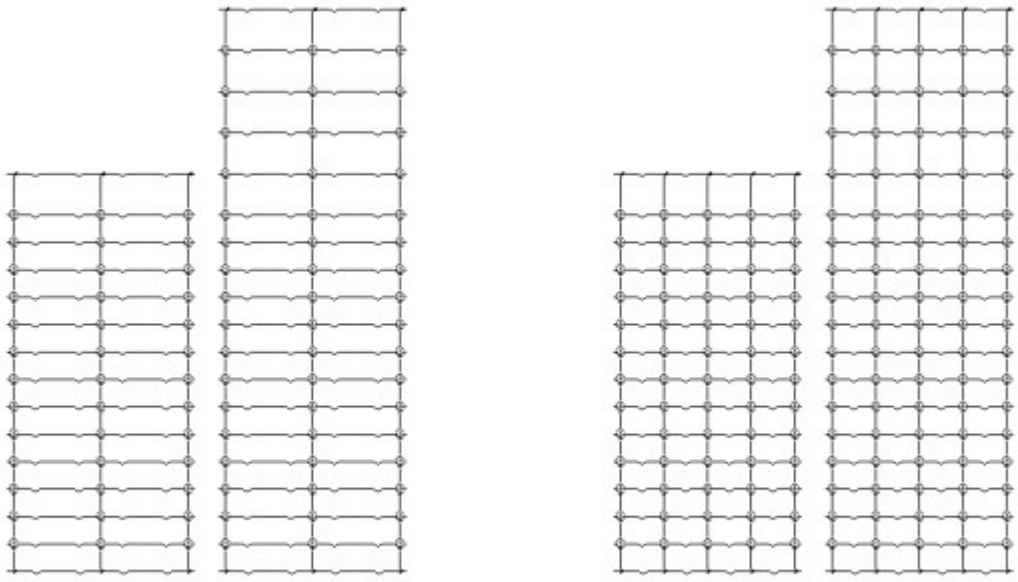
When it comes to uneven terrain, the Bonnox **"Close Mesh"** can follow gradients of up to 20 degrees - steeper than that, erection becomes more difficult.

Bonnox thus acquired a machine that utilises the **"Ringlock"** construction method. Instead of the **stay wires** being short pieces joined to the **line wires**, the vertical stay wires are single pieces from bottom to top, and are attached to the horizontal line wires by means of a **"ring"**, as shown below:

Ringlock construction

This construction gives the fence tremendous flexibility: the stay wires will always remain vertical, no matter what gradient the fence follows - up to more than 45 degrees.

Bonnox named this product range the **"Flexi-Fence" Africa Pattern™**, and some examples are shown below:



1558/12 1982/12 1558/6 1982/6

Specifications and other important information.

Most Bonnox pre-fabricated wire fencing products are manufactured with Fully Galvanised wire, for longer life. For large orders only, in areas where fully galvanised is not necessary, lightly galvanised products can be manufactured.

Most of these products are manufactured with **2,00mm** diameter wire, resulting in lighter, more compact, and easier to handle rolls. Unless otherwise specified, all rolls are 100m in length.

The real strength and effectiveness of a fence lies in the horizontal line wires. Each line wire in a Bonnox fence is a **high tensile steel wire**. As a result, although only 2,00mm in diameter, **each** line wire has a breaking strain of ±400kg. 2,00mm Mild steel wire is used for the vertical stay wires.

It will be noticed that, during the manufacturing process, the horizontal line wires are "kinked" every so often. When correctly erected, this allows for a great deal of elasticity when, for example, an animal runs into the fence, or when there are climatic changes in temperatures.

To be effective, it is most important that the fence be properly erected and strained. Detailed instructions are available on request.

BONNOX products used for applications, other than fencing.

1. "Backfill" in Gold mines

   Once gold-bearing rock has been transferred to the surface for processing, large empty areas are left underground which could cause rockfalls and seismic disturbances such as earth tremors. To prevent these problems from arising, the empty spaces are "backfilled" with rock waste, ground into a fine powder with the remnants from the gold extraction process. The waste, mixed with water, is called slurry.

   Starting at the end of the "tunnel", a small area is filled with the slurry and left to set. Once set, another area is filled and left to set, and so on, working backwards to the beginning of the tunnel.

   In order to hold the slurry in place, a plastic "sock" is used. To hold the sock in place, and allow the slurry to fill the area up to the ceiling, a wire mesh is used.

   This is where Bonnox comes in. Using the **"Close Mesh"** pattern of 100mm x 150mm, 30m rolls of 0,80m (**932/6**) or 1,00m (**1140/6**) high fencing is installed to keep the sock in place.

   Once the slurry has set, it does not matter if the fence rusts, as it has done its job - fully galvanised wire is thus not necessary.

2. Flower Growers

   a. Problems with long stem flowers

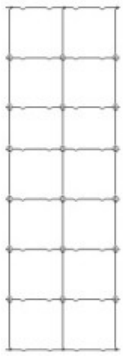
      "Long-stem" flower growers need to support each flower as it grows taller and taller. Continuous tying of the stems to a vertical support or horizontal line, is time-consuming and labour-intensive.

      The trend now is to horizontally suspend a number of meshes above each other over the flowers, and cause the flowers to grow taller through the gaps created by the mesh.

      Because of the thickness of the wire, a normal Bonnox fence could not be used for this purpose, as it would prove to be too heavy. A new, smaller machine, based on the Bonnox Close Mesh concept, but using 1,25mm diameter wire, was built specifically for this market place.

      Although still a "fence", it proved ideal for this purpose. Available "gaps" are 125mm x 125mm, or 125mm x 260mm, with heights (or breadths) of 1,00m, 1,12m or 1,25m.

   b. Alternative to "Tunnels"



A new technique has been developed in the flower and vegetable growing industry. Instead of using plastic tunnels, large sheets of plastic are suspended horizontally a few metres above the beds.

The **"Flexi-Fence" 1982/12** product was modified whereby some of the horizontal line wires were removed, to create larger openings - 300mm x 300mm (12in x 12in).

Plastic sheeting is placed between two "sheets" of the **882/12** (shown here) - one for the plastic to lie on, and the other to stop it from blowing off.