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PIETER DE LA COURT VAN DER VOORT AND INNOVATIONS IN PINEAPPLE CULTIVATION IN EARLY EIGHTEENTH-CENTURY GARDENS

Although there had previously been incidental successes in raising and fruiting individual pineapples, the Dutchman Pieter de la Court van der Voort (1664–1739), from the university town of Leiden, was the first in Europe to raise consistently several hundreds of these exotic and desirable fruit each year. De la Court's garden was famous at the time and visited by nobles and ambassadors from all over Europe. Peter the Great of Russia visited on several occasions. Not only did these visitors come to taste the pineapples but also they wanted to find out how to cultivate them for themselves, and so add to the distinction of their own garden and table. De la Court published his experiences with gardening and his recommendations for the cultivation of pineapples in 1737, two years before his death. This paper describes the person and background of De la Court and, using some previously unpublished letters from the archives of Leiden, Amsterdam and St Petersburg, explores his contacts with the courts of England, France and Russia. It then examines the factors contributing to De la Court's success, including his experiments with the design of heated glasshouses and the importance of weather glasses or thermometers. Some new information is given about De la Court's gardener, Willem de Vinck, and particular attention is paid to De la Court's friendship with Dr Herman Boerhaave.

ORIGINS

The English botanist Richard Bradley (1688–1732) spent several months in the Netherlands in 1714, and during that time became acquainted with 'Mr. Le Cour of Leyden' and his pineapples.[1] Writing in 1721, he acknowledged him as a 'gentleman of extraordinary skill in the affair of gardening […] he resolved to spare no pains or expense to bring this delicious fruit to perfection'. De la Court

> built Stoves of divers kinds, as I am inform'd, to a great Number, before he met with one that would answer his Design, and at length had the Happiness of producing and ripening several hundred Fruit in a year, and increasing the Plants to that degree, that his Gardener told me he often bury'd or flung away some Hundreds of them.

Ever since its first introduction into Western Europe, the rare and exotic pineapple was considered to be a suitable gift for the royal table, conferring prestige on those able to acquire and grow them. In 1516, Ferdinand of Spain was famously recorded to have said that he preferred its flavour to that of all other fruits.[2] In 1661, and again in 1668, Charles II of England was presented with one of the rare 'King-Pines' to survive the long journey from the West Indies. Pineapples require high year-round temperatures for successful propagation and it was only after the introduction of the first heated

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glasshouses in the 1680s that fruits could be ripened from already-growing pineapple plants. In 1682, the city council of Amsterdam sent Louis XIV two pineapples ripened in the new heated glasshouse in the Hortus.[3] Agnes Block, the wife of a wealthy silk-merchant, also had a glasshouse on her country estate outside Amsterdam, her portrait (*c.*1690) showing her with a pineapple plant bearing fruit. In 1700, she had a medal cast made of the fruit, further celebrating her success.[4]

At the beginning of the eighteenth century, the propagation of a single pineapple fruit was considered nothing short of a miracle, and the fact that De la Court was producing and ripening several hundred a year was met with complete astonishment. Visitors from all over Europe came to see this wonder, and contemporary and modern writers all pay their homage to De la Court as the first to cultivate the pineapple on a larger scale. But who was this man and how did he come to have such success with this tropical fruit?

The De la Court family were cloth workers from Flanders who came to Leiden in the early seventeenth century. At the time, Leiden was a flourishing textile centre attracting many immigrants from the southern Netherlands. Leiden was also home to the first Protestant university in the northern Netherlands. Founded in 1575, Leiden University and botanical garden (1590) became a leading centre of learning, with students and professors from all over Europe. Pieter de la Court (1618–85) was a wealthy manufacturer and influential writer, promoting free trade and the republican cause. His second wife, Catharine van der Voort (1622–74), was wealthy in her own right. Their son, Pieter (1664–1739), the subject of this paper, used both his parents' surnames jointly, but for the purpose of this paper, the shorter form of his name is used instead (Figure 1).

The younger Pieter de la Court inherited his parents' wealth and country estates: Meerburg in Zoeterwoude and Allemansgeest in Voorschoten. Like his father, De la

Figure 1. Willem van Mieris, attrib., portrait of Pieter de la Court van der Voort, 1708 (detail). Courtesy: Amsterdam City Archive (ACA), Album Backer, A31910000229

Court was interested in gardening and at Allemansgeest (now Berbice) he built an orangery and started experimenting with sloping and niched garden walls to find the best growing conditions for fruit trees and grapevines (Figures 2 and 3). In 1700, he travelled to France to visit royal gardens, including Versailles, where he was critical of the dark and damp orangery, but rather more impressed by the fountains and garden urns.[5] In the same year, he bought a large and prestigious town house at Rapenburg 65, the elite canal of Leiden, just a few doors away from the academy building of the university and with a garden backing directly onto the Hortus Botanicus (Figure 4). The house was immediately rebuilt to accommodate De la Court's considerable library and large collection of paintings, which included works by Rubens, Potter and Van Dyck.

By 1710, aged only forty-six, De la Court had retired, handing over the daily running of the family business to his son, Allard, and devoted himself entirely to his main interests: his art collection and the cultivation of exotic fruit. He sold both Meerburg and

Figure 2. Orangery, Berbice. Courtesy: Stichting Berbice

Figure 3. Niched wall, Berbice. Courtesy: Stichting Berbice

Figure 4. Rapenburg 65, Leiden. Photo: author, 2017

Allemansgeest in 1716 and so could concentrate his gardening activities in the garden behind his town house and, in particular, in his *speeltuin*, an informal pleasure garden outside the city. Little is known about the garden behind his town house, although it was probably in a formal style and had fruit trees and grapevines along the walls. It also contained four large, bronze garden urns representing the seasons, designed for him by Willem van Mieris.[6] The pleasure garden was located in the *banlieue* of Leiden, the multifunctional, transitional area outside the Rijnsburger gate. Unfortunately, no plan for this garden is known. The land was acquired piecemeal over several years and records show that, in 1710, preparations had already been started for an orangery, which eventually housed a hundred and thirty orange trees. By 1713, a water reservoir had been installed to supply a fountain.[7] Heated glasshouses and brick-and-wood hotbeds were built, along with two fully equipped garden houses. This was where De la Court grew his pineapples and took his visitors to display his success.

INTERNATIONAL RELATIONS

One of the first visitors to record his impressions of De la Court's pleasure garden was the French traveller Aubry de la Mottraye, who visited Leiden in 1713.[8] He described the orangery where 'by means of the stoves and the degrees of heat he is able to communicate to the trees and plants they bear flowers and fruit in the midst of even the most rigorous of winters'. He had heard reports from several reliable people who had eaten grapes there in the winter, the fruit being just as good and ripe as those in France and Spain in the autumn. Edward Wright saw the garden in 1720, and also recorded his visit in detail.[9] First, he was shown the paintings in De la Court's Rapenburg house, and then taken to see his pleasure garden:

> Besides the garden adjoining to his house, he has a large one at some distance, in which he is particularly curious for raising the best of all sorts of fruits. He has grapes ripe in May; when we were there in June, they were all gone, and the leaves brown as in autumn. The heat of the stoves, which accelerate them, is regulated by thermometers.

> He raises the pineapple and several other curiosities. He treated us with excellent wine, nor was his water a less compliment; the fountain playing all the while, in a large basin, which is not very frequent in the Dutch gardens; for the country being flat, the water is all raised by force; not without a considerable expense.

Albrecht von Haller (1708–77) studied with Boerhaave in 1725–26 and wrote enthusiastically about the many times he had seen De la Court's garden and tasted the 'incomparable pineapple' (Figure 5).[10]

Not only did De la Court receive visitors in Leiden but he also sent pineapples and other fruit as presents to well-connected aristocrats and royalty throughout Europe. The family archives in Amsterdam and Leiden contain fifty-seven letters written to De la

Figure 5. Pineapple; from *Bijzondere aenmerkingen* [Special Remarks] (1737) (detail).
Courtesy: Amsterdam University Special Collections (AUSC), OTM: OG 63-1615

Court in the period 1712–32 from princes, bishops, nobles and monarchs, including Emperor Charles VI and Cosimo III, all concerning his garden and thanking him for gifts of the pineapple.[11] Of particular interest here are De la Court's contacts with England, France and Russia.

ENGLAND

The De la Court family had long maintained contacts with the business community in London, particularly for their banking activities. Many Dutch merchants were active there, including Matthew Decker, a friend of the De la Court family, who arrived from the province of Holland in 1702 to establish himself in the city. From humble beginnings Decker rose to become baronet, director of the English East India Company and Sheriff of Surrey. His success with pineapples helped him on his way. In August 1717, when De la Court returned from a stay with Van Borssele van der Hooghe, the Dutch ambassador in London, he sent a present of fruit to thank him. Van Borssele replied:

> The peaches and grapes were excellent, the melons rather ripe but one of them was better than I have tasted here, of the pineapple, the first I have ever eaten, I can only say that the smell and taste are superior to all other fruit. I gave a *spruyt* [sucker or slip] of the pineapple to Mr Decker who seems inclined to try and grow it himself.[12]

Using techniques and pineapples supplied by De la Court, Decker, with his Dutch gardener Henry Telende, was the first to establish a reliable method of growing pineapples in England and, in 1720, he commissioned a painting by Netscher to commemorate his achievement. Decker is also said to have presented a pineapple to George I at a banquet to celebrate his induction as a baronet in 1716, but whether this was a present from De la Court or one he had raised himself in Richmond is unknown.[13]

James Brydges, later Duke of Chandos, was another successful and wealthy man who had help from De la Court with his garden at Cannons. These extensive and sumptuous gardens just north of London were possibly the largest in England at the time.[14] Chandos wrote to De la Court on 11 August 1719: 'Your gardener has arrived with the pineapples, the trees and the grapes which you had the goodness to send me.'[15] This is the first and only known occasion that De la Court let his own gardener go abroad to share his techniques. Later, in 1729, Chandos wrote again to De la Court letting him know that thanks to his instructions he had been able to raise pineapples to great perfection – and now asked for his advice on grapes.[16] He must indeed have been successful with pineapples because by 1733 his gardener was selling them at half a guinea a time from his Shaw Hall estate in Berkshire.[17]

FRANCE

De la Court had also travelled to France in his younger years and kept up his contacts with the French court through the French ambassadors in Holland, the Count de Morville and then his successor, the Marquis de Fenelon. On 19 August 1719, Morville wrote to thank De la Court for the pineapples he had received and forwarded to the Duke of Orleans, at the time regent for Louis XV.[18] The contacts with Fenelon were particularly frequent and friendly and dinners included Dr Boerhaave, the physician, botanist and natural scientist, and his wife; on many visits Fenelon's French guests were taken to see De La Court's paintings and garden.

The marriage of Louis XV to Marie Leszczynska in 1725 was the perfect opportunity to present pineapples to the royal couple. This required skilful planning and efficient transport to get the pineapples to France in perfect condition. On the 22 August 1725,

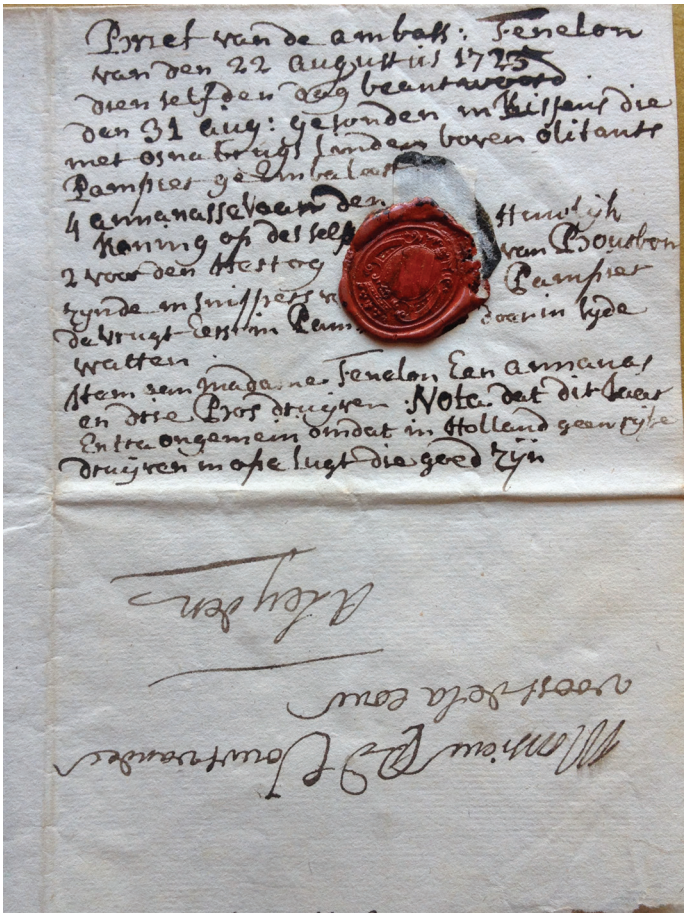


Figure 6. De la Court records sending pineapples for the wedding of Louis XV on the envelope of Fenelon's letter, 1725. Leiden City Archives (LCA), NL-LDnRAL-0023

Fenelon penned a quick note to De la Court on learning that the wedding was to be on 5 September at Fontainebleau: 'So that the pineapples arrive at the same time as the Queen I now need to receive them on Friday 31 instead of Monday 3 September. With good luck they can go by the courier who leaves the same day at nine o'clock in the evening.'[19] On 31 August, De la Court sent four pineapples for the king and two for the Duke of Bourbon, his prime minister, all in cases lined with Osnaburg cloth and carefully wrapped in elephant paper (Figure 6). The author has not found any record of whether the pineapples arrived in time for the wedding or if they were appreciated by the royal couple, but De la Court certainly upheld his contacts with the French court. When the Duke of Richelieu visited Holland, Fenelon took him to see De la Court's garden and, at Richelieu's request, De la Court sent him pineapple plants with designs of his stoves. In 1731, he also sent tuberose bulbs to be planted in the king's gardens.[20] Louis le Normand, the king's gardener at Versailles, presented Louis XV with the first pineapple grown in France in 1733 and, by 1738, a dedicated hothouse had been built housing over eight hundred pineapple plants.[21]

PINEAPPLES IN ST PETERSBURG

Perhaps De la Court's most famous visitor was Peter the Great of Russia. The tsar first came to Western Europe in 1697/98 accompanied by a large delegation of Russian nobles – the grand embassy. His primary aim was political, but he also wanted to modernize Russia and learn about the new ideas and discoveries emerging in Western Europe. He met

leading political figures, and also shipbuilders, artists, intellectuals, collectors, inventors and gardeners. In 1703, Tsar Peter had transferred the Russian capital from Moscow to St Petersburg and, in 1710, an office was created to purchase plants for the gardens being created in the new capital. At first it was staffed by only two foreign gardeners and two pupils, but soon more gardeners were invited to St Petersburg and Russian pupils sent to be trained in Western Europe. Several gardeners from Holland were employed to design and plant the gardens of the tsar and his wife Catherine, and pupils were sent to Holland to study flower gardens and ornamental garden urns.[22]

In 1716/17, Tsar Peter came on a second visit to Europe and, even before arriving in the Netherlands, he had been introduced to the pineapple. He is recorded as having visited Schwobbe, near Hameln, Lower Saxony, where Otto I van Münchhausen (1643–1717) was the first in Germany to raise the fruit in buildings specifically designed for that purpose.[23] A golden pineapple memorial on the site commemorates the occasion.[24] When in Amsterdam the tsar visited the Hortus and Maria Schaap, the burgermeester's wife, who accompanied him, observed that 'the Czar examines all the plants, trees and herbs so closely as though he were a gardener, and he writes down everything that pleases him'.[25] Tsar Peter was also invited to the houses and gardens of wealthy merchants along the River Vecht. One of these was Ouderhoek, where, in 1717, he was presented with a pineapple by the owner's gardener. According to later accounts, the tsar persuaded the gardener to go to Russia, where he became head gardener at one of the imperial gardens.[26]

Tsar Peter also came to Leiden to meet Hermann Boerhaave (1668–1738) (Figure 7), who had been appointed professor in botany and director of the Hortus in 1709 and took his responsibilities seriously. In 1710, a new heated glasshouse was built to house the large number of plants arriving daily as a result of his international contacts.[27] Boerhaave taught his students in the Hortus early each day and, at the tsar's request, he also received him at five o'clock in the morning. The tsar showed great interest in the Hortus, also asking many questions on medical matters during his two-hour visit.[28]

Figure 7. Portrait of Herman Boerhaave. Copper etching after a drawing by J. Wandelaar. Courtesy: RKD – Netherlands Institute of Art History, IB02000519

Tsar Peter also visited Pieter de la Court. As with his other guests, De la Court would have first shown him his paintings in his Rapenburg house and then taken him to see his pleasure garden. According to Johan van Gool, the tsar came to see De la Court several times where they spoke on familiar terms.[29] This seems to fit the image of an enthusiastic ruler who was not concerned with court protocol but wanted to talk directly to people about their practical experiences and discoveries.

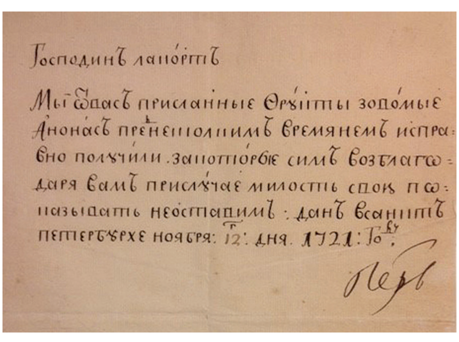
Tsar Peter wanted a *kunstkamera* or cabinet of curiosities in his new capital and sent his librarian, Johan Schumacher, to Europe to acquire books, scientific instruments and people who could demonstrate them. De la Court helped Schumacher with the purchase of paintings for the imperial collection, including works by Rembrandt, Van Dyk, Potter and Wouwerman.[30] In February 1721, Schumacher was again sent to Europe, now also with the task of persuading De la Court to send his gardener to Russia.[31] In July of that year Schumacher arrived in Leiden and attempted to carry out the tsar's request. His visit led to a flurry of activity from De la Court and, on 5 July, he sent carefully packed pineapple fruits and drawings for a glasshouse to the tsar requesting that these be handed to him personally.[32] Two days later, De la Court sent four pineapple plants and improved drawings for the glasshouse – but not his gardener. He explained to the tsar that he thought it better to send a young man from Russia to be trained in Leiden:

> This young man should be between 20 and 30 years of age, with a good mind and obedient nature, of humble parents, speaking Dutch or high German, working in gardening and having worked under someone, because it was better to have someone inexperienced than someone who thinks he knows something.[33]

It would take De la Court two years to train the apprentice, but he did not think this was a problem as the tsar did not yet have a heated vinery, nor was he familiar with the methods for heating them. He therefore sent drawings for a heated vinery and an improved design for a heated glasshouse with an extra internal door to keep the frost and cold out when visiting. The previous drawings, presumably those he had sent on 5 July, only showed one stove for a length of forty Rijnlands feet. This was probably not sufficient in view of the colder Russian winters, so De la Court then sent a design for a longer glasshouse with two stoves, one at each end.

On 18 July, De la Court sent four pots with pineapple plants. They were small but he thought them the best to produce flowers in the winter and so sent them on the advice of Schumacher. De la Court was afraid the young plants and the crowns of the fruit would arrive too late to take root before the winter, but if necessary he was always happy to send more.[34] In November 1721, Peter the Great sent De la Court a personally signed letter to thank him for the pineapples (Figure 8).[35]

In May 1723, Schumacher was back in Petersburg after his long journey through Europe and wrote to De la Court to tell him that the tsar had spoken of him, referring


Господинъ лапортъ

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Петръ

Figure 8. Letter from Peter the Great to De la Court, 1721 (detail). Courtesy: Amsterdam University Special Collections (AUSC), OTM:hs, 134 A 1–4

to the productivity of his pineapples. He also told him that the original four plants had now produced fifteen: 'They carry fruits as delicate as those I had eaten with you. Our gardener is quite diligent and skilled at looking after them.'[36] Schumacher went on to ask De la Court to help him again with the purchase of more paintings for the tsar's collection. Two months later, Johannes van den Burgh, the imperial agent in the Netherlands and Schumacher's contact, also visited De la Court to persuade him to help with the paintings. Van den Burgh reported back to Schumacher that he had spent several hours talking to De la Court in his garden and that he and his gardener said it must have been a very competent gardener indeed to have propagated and fruited the pineapples.[37] De La Court later wrote that it took three years from first rooting a sucker or crown of the pineapple to flowering and fruiting, and then another six to eight months before the fruit was fully ripened. No wonder he and his gardener were surprised. Perhaps Schumacher was bluffing?

On the 18 July 1723, De la Court replied he would look out for more paintings if they were on offer for a reasonable price and sent a weather glass to be handed to the tsar in person, together with his notes and meteorological observations.[38] Apparently all was not going smoothly in the gardens of St Petersburg and the young apprentices working for the tsar – 'still children' as De la Court remarked in another letter – were not having much success with the fruit trees.[39] In March 1724, Schumacher wrote again asking for more information about the right temperature for exotic fruit: 'It is true we have a skilled gardener but he doesn't have the observations and doesn't know the exact degrees of heat necessary for each exotic plant.' Now Schumacher tried flattering De la Court: 'His Majesty knows that you have noted all this by your experience through so many years and it would take a lifetime to come to this perfection.'[40] De la Court replied saying that it would indeed take the young gardeners at least one year of observations with the weather glasses in the St Petersburg climate: 'No fixed rules can be given for the observation of warmth and cold for Exotics and plants from warmer climates. An orange tree from Lisbon only gave me fruit after fourteen years.'[41]

Tsar Peter died in 1725, so their correspondence ended. To date it is unknown whether the orangery in his summer garden, designed by the Dutchman Jan Roosen, was rebuilt to house tropical plants or if new heated glasshouses were built for pineapples using De la Court's designs.[42] Pineapples certainly appealed to the Russian taste for extravagance, and after their introduction at the beginning of the eighteenth century, members of the imperial court and nobility spent fortunes on their cultivation and consumption. After his journey to Russia in 1813, John Claudius Loudon famously remarked that more pineapples grew in the hothouses around St Petersburg than in the rest of continental Europe.[43] Further research in the Russian archives and literature is needed to shed more light on the influence of De la Court and his role in the introduction of pineapple cultivation in Russia.[44]

De la Court was a dedicated gentleman scientist who spent years of his life recording weather conditions and temperatures in his garden. His purpose was not simply scientific enquiry but a means to grow the exotic and desirable fruit with which to impress his visitors. He was well aware of the powerful status a pineapple could offer. He was one of the wealthiest men in the country, but only the next generation of his family from the southern Netherlands was finally admitted to the governing class of Holland.[45] Van Gool noted in 1750 that De la Court had been so famous throughout Europe that all the kings and princes who came to Holland honoured him with a visit. He surely savoured the prestige this conferred on him.[46]

SECRETS OF SUCCESS

Pineapples grow naturally in the tropics in year-round hot and humid conditions. Optimum growth is achieved with air and soil temperatures between sixteen and thirty-two degrees centigrade, and for ripening, constant mean daily temperatures of twenty-three to twenty-four degrees are required. How did De la Court meet the challenges of pineapple propagation in the temperate and changeable conditions of Northern Europe? He published the results of his gardening experience towards the end of his life in 1737 in *Bijzondere aenmerkingen* (Special Remarks).[47] This text and other correspondence are used to look more closely at three essential aspects of his success: his experiments with heated glasshouses and hotbeds; the use of weatherglasses or thermometers; and his knowledgeable and skilled gardener, Willem de Vinck.

'STOVES OF DIVERS KINDS'

Bradley wrote that De la Court built a great number of 'stoves' or heated glasshouses 'before he met with one that would answer his design'.[48] De la Court's earliest experiments were with grapevines in unheated and heated frames against a wall (Figure 9). At Allemansgeest he tried forward- and backward-sloping walls to find the best angle for the sun's rays. In 2012, volunteers working in the garden found the remains of two old frames on forward-sloping walls. These look similar to the vinery shown in De la Court's book, but it seems unlikely that he grew pineapples here.[49]

In his book, De la Court described how he grew pineapples from shoots or crowns that were first planted in small pots in June and then put in a heated summer *broeibak* – a hotbed or frame. These hotbeds were brick-built constructions backing onto a wall (Figure 10). To keep the ground at a high temperature thick layers of *run* or tanners bark were used on top of horse manure. Tanners bark was in plentiful supply and used in horticulture in the Netherlands as it could provide a high constant ground temperature for several months. In the autumn, the plants were potted on and transferred to a heated *stookhuis* or forcing house to grow on through the winter months (Figure 11). Peat was

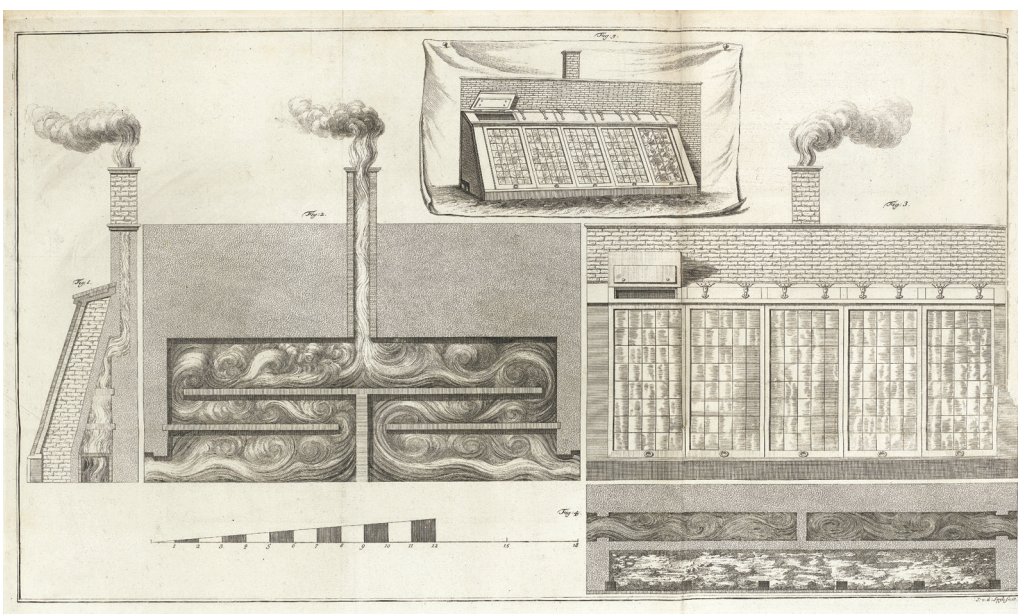

Figure 9. Heated vinery; from *Bijzondere aenmerkingen* [Special Remarks] (1737). Courtesy: Amsterdam University Special Collections (AUSC), OTM: OG 63-1615

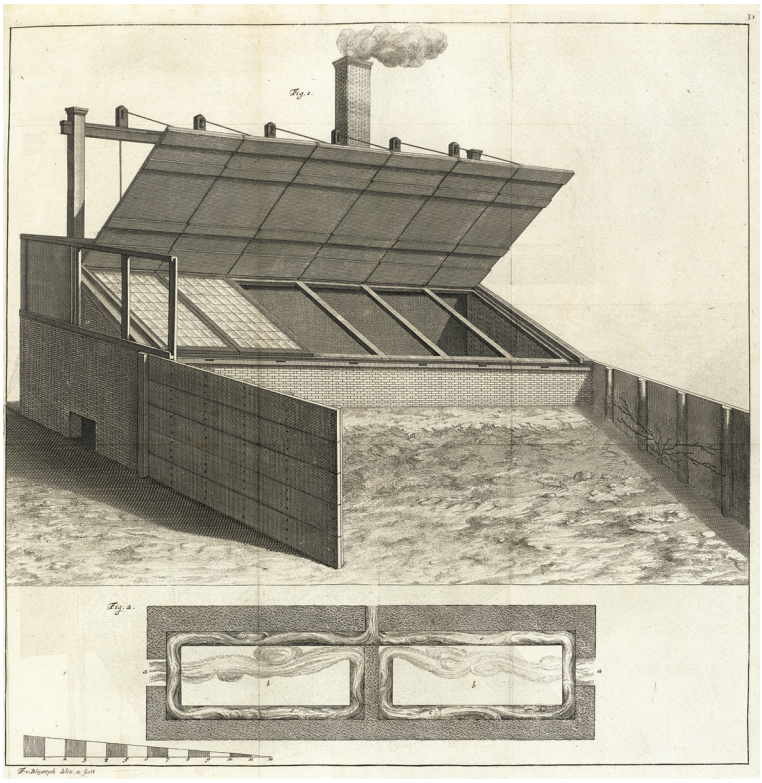

Figure 10. Heated summer hotbed; from *Bijzondere aenmerkingen* [Special Remarks] (1737). Courtesy: Amsterdam University Special Collections (AUSC), OTM: OG 63-1615

burned in the stoves and the hot air channelled through flues in the floor and the rear wall to keep the air at the required temperature. This cycle continued for three years until finally a fruit appeared that could be ripened and harvested.

De la Court's experience was that glasshouses were best with a due south orientation and the glass slanting at such an angle that the sun's rays would fall perpendicularly on them between ten and ten thirty in the morning.[50] Previously, orange houses had had perpendicular glass sides and a flat covered roof so the interior was in shade for most of the day. In his book, De la Court included not only the technical drawings for heated glasshouses and frames with their exact measurements but also gave detailed instructions on the best types of wood and glass to use. Buckwheat grains were recommended for insulation. The six different sorts of canvas curtains, cloth and reed coverings used to provide the most appropriate protection throughout the course of the winter are described extensively and particular attention was also paid to the necessity for *damp-tregters* – funnels or channels to allow excessive condensation to escape.

De la Court was not the only one interested in the glasshouse design. His learned friend and neighbour, Herman Boerhaave, was also experimenting. Boerhaave's extensive correspondence with botanists and collectors all over the world shows he was interested in acquiring specimens and also in finding the best conditions to keep them healthy. Writing to William Sherard (1659–1728) in 1720, Boerhaave confirmed that 'the stoves which you saw here were all invented by me. Without trouble and at minimum cost they give a temperate and even heat. Of these apparatuses this is the best form'.[51] In 1718, Sherard had already described Boerhaave's new stoves to Dr Richard Richardson, a practising physician and intimate friend of Sir Hans Sloane: 'I mention Dr Boerhaave's new stove to

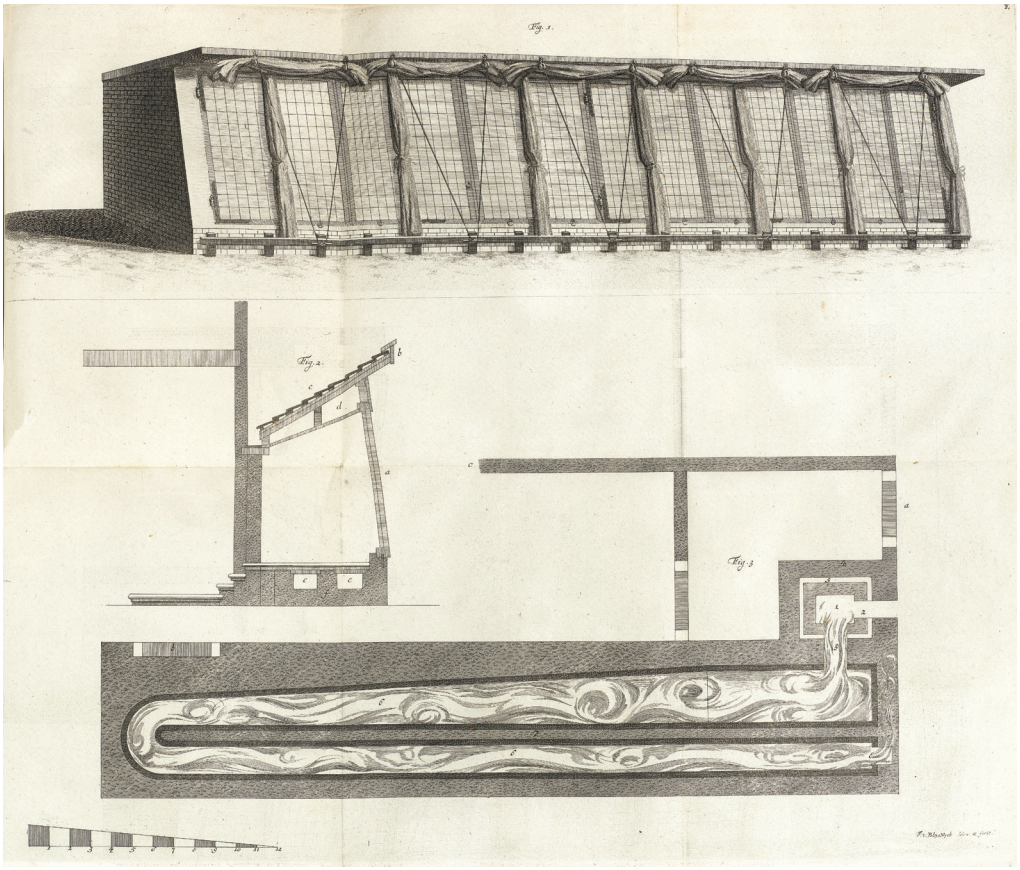

Figure 11. Heated winter glasshouse; from *Bijzondere aenmerkingen* [Special Remarks] (1737). Courtesy: Amsterdam University Special Collections (AUSC), OTM: OG 63-1615

you […] it consists in one thought in mathematicks and another in philosophy, and costs not a shilling more than another.'[52] In a following letter dated October 25 of the same year, Sherard explained the system in more detail:

> The secret of Dr Boerhaave's stove consists in making the angle of the glass shutters equal to the elevation of the pole, which with you is about fifty-two degrees. This causes the rays of the sun to fall in a straight line without any angle of reflection. The other secret is in philosophy, is the having the glass to go to the top of it. If any such place be left in shade, the vapours will be raised into it, and after the sun is off, fall down on the plants, and mould them.[53]

This sounds very similar to the description of De la Court's glasshouse, especially the 'secret' of Boerhaave's design, both in the relationship between the angle of latitude and the appropriate perpendicular angle of the glass to the sun's rays, and also with the need for effective measures against condensation. On several occasions in his correspondence De la Court refers to his consultations with someone he considers very competent and whose opinion he values. Boerhaave is known to have entrusted the care of rare seeds to De la Court. This was not always successful, as the following letter shows.[54] Writing 'to the most learned and wise man' Sir Fr. Cornelius on 10 March 1722, Boerhaave tells him about some rare seeds he had found for him:

> Formerly I had with might and main gathered the best, and I had, not without deep grieve [*sic*], learnt that the most select which were entrusted to the care of my good friend Petrus de la Court, perished! Yet I had expended all my care to preserve them. It is very seldom that one has the opportunity to find such seeds.

Boerhaave excused his friend by adding: 'I must believe that the parcel perished in the hospital where they had to remain so long.' Here we catch a glimpse of two good friends exchanging information and experiences and sharing the results of their own practical experiments.

WEATHER GLASSES

In his book De la Court devoted a whole chapter to describing how to make, fill and calibrate the weather glasses – or thermometers – he considered essential for raising fruit out of season.[55] These were the key factor in his success, enabling him – and his gardener – to make accurate and replicable measurements of the specific temperatures required for the pineapple at each stage of their growth. After describing the exact length and diameter of the hollow tube to be made by 'an able and attentive glassblower', he then discussed the best liquid with which to fill it. Although De la Court acknowledged that in general mercury was the best medium for thermometers, for gardening purposes he preferred alcohol as it could be given a colour and thus better seen from outside the glasshouses. He recommended a mixture of dried elderberries soaked in brandy to obtain a strong red colour.

De la Court had thermometers placed at several positions in his winter stoves and summer frames, and personally recorded weather conditions, temperatures and their effects on his fruit for more than twenty years. He calibrated the thermometers by first putting them 'in the mouth of a healthy individual between 30–70 years old' given that the liquid in the tube will always rise to the same level. This point was marked as forty-five degrees blood warmth which De la Court had also found to be the best heat for pineapples in the summer. He then marked a range of temperatures with a maximum of fifty degrees, this being the hottest temperature for pineapples in the summer frames, down to nineteen degrees as the minimum for pineapples in the winter glasshouse. Within this range he indicated the exact temperatures required for pineapples in the stoves and frames at different times throughout the year, including for example the temperature for the first fourteen days in the summer frame and the temperature for the winter heated glasshouse until 20 January. This ability to accurately and consistently measure the temperatures required throughout the three-year growing period meant that pineapples could now be grown and ripened in much greater numbers than before.

Regarding his use of the standard body temperature of healthy people, De la Court acknowledged the observations of 'a very experienced Natural scientist'. Here, again, he was surely referring to Boerhaave, who was pioneering the introduction of both alcohol and mercury thermometers in his medical and chemical practice. Daniel Fahrenheit (1686–1736), the Polish-born instrument maker, had begun making thermometers in 1706. In 1716, he settled in Amsterdam and, in 1718, he presented a set of his alcohol and mercury thermometers to Boerhaave and went on to perform various experiments with them at Boerhaave's request.[56]

De la Court and Boerhaave would also have known the Musschenbroeks. These innovative instrument makers working from their workshop the 'Oriental Lamp' opposite the academy at Rapenburg 66, made vacuum pumps, microscopes, barometers and thermometers for universities and private patrons throughout Europe, including Peter the Great.[57] De la Court was not only familiar with the latest thinking in science

and medicine as a result of his friendship with Boerhaave, but also had easy access to the leading instrument makers of the time to provide the equipment he needed for his own experiments in the garden.

WILLEM DE VINCK, GARDENER

De la Court's writings show that he was actively involved with and knowledgeable about all aspects of his garden, and that he worked closely with his gardener. At the time, Leiden was the leading centre for horticulture in the country and De la Court could choose his gardener from the ranks of highly skilled workers in the region.[58] However, the task of nurturing and protecting pineapples through the cold Dutch winters and maintaining just the right temperature and humidity at all times of year presented an exceptional challenge. The gardener needed to be constantly alert to the changing weather and adjust conditions in the glasshouse to maintain the right temperature, light and humidity. Is there snow on the way? The stove needs to be stoked up again. The sun is shining brightly so some of the blinds need to be lowered to prevent scorching. The plants need more water, but not too much or condensation will form and drip down causing mould to form on the leaves.

Most gardeners from this period remain anonymous, but fortunately the name of De La Court's gardener, Willem de Vinck, was mentioned in earlier texts, although nothing more was known about him.[59] The Leiden Archives hold the marriage banns for a Willem Arentz de Vinck, *Tuynman* (gardener), on 6 April 1698 to Lijsbeth Nieuwsloot (Figure 12).[60] De Vinck's birthplace is recorded as Rijnsburg, a small village near Leiden, then as now an important centre for vegetable and flower growing, and his address is given as Noordeinde, a street about halfway between De la Court's town house and his pleasure

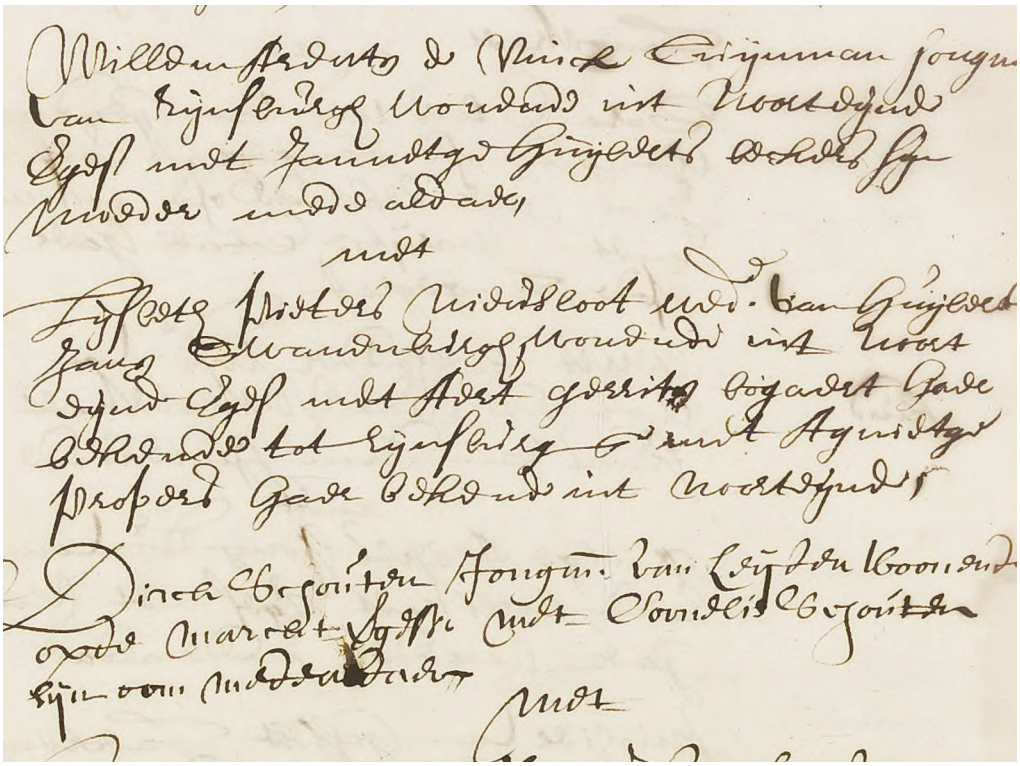

Figure 12. Announcement of marriage banns for Willem de Vinck.
Courtesy: Leiden City Archives (LCA), 1004-no.26

garden. One year later the couple's daughter Jannetjen was baptised.[61] Perhaps De Vinck was already working for De la Court at the time of his marriage. While he was in France in 1700, De la Court had written to his uncle that he did not see the point of bringing French gardeners to Holland: 'even the best are not as good as our own'.[62]

It would seem that De la Court sent his gardener abroad only once – to England for the Duke of Chandos. A letter from Chandos after De Vinck's arrival in August 1719 gives a unique insight into Willem de Vinck's personality and the nature of his relationship with De la Court:

> The poor man, not being used to the sea, and being tired because of the many inconveniences he has suffered, was seized by fever – very violent; but of which the doctor gives us hope that he will be cured soon: and actually he seems a little better today, but the misfortune is that he is stubborn and doesn't want to take what the doctors think best for him: he only wants to eat some salad which is no use at all for his illness. My cook is going to prepare a portion of fish as he wished, and you can be assured that we will take all the care necessary of your servant who is so close to your heart, who is so skilled at his trade.[63]

After this experience De Vinck probably had no inclination to travel again and De la Court politely but firmly refused all further requests – even from the emperor and Peter the Great – for his services. He clearly valued De Vinck and knew how important he was for his own success.

Pieter de la Court had the leisure and wealth to pursue his joint interests of gardening and art. Living in Leiden he could draw on the many resources of this university town and make use of the best horticultural practices of the time. His long friendship with Herman Boerhaave is considered especially relevant. In particular, the thermometers pioneered by Boerhaave provided De la Court with the means to successfully grow and ripen large numbers of pineapples.

DE LA COURT'S LEGACY

As has been seen above, Richard Bradley visited De la Court in 1714. Bradley came to the Netherlands to collect natural history specimens for James Petiver and the Duchess of Beaufort. Back in England he was employed for a while at the Duke of Chandos's garden, Cannons, before being dismissed in 1717 for his mismanagement of funds, physic garden and hot houses alike.[64] However, by 1720, his reputation was such that he was elected a Fellow of the Royal Society, and three years later was appointed Professor of Botany at Cambridge University.[65] Bradley was the first to publish a practical method for cultivating pineapples and, writing in 1721, paid his tributes to De la Court and his gardener, before giving an account of the method which the 'judicious gardener', Henry Telende, Sir Matthew Decker's gardener at Richmond, 'has rendered so easy and intelligible'.[66] Perhaps Willem de Vinck had been less willing to share his secrets with Bradley?

Bradley's description of Telende's method was detailed and practical and included the introduction of tanners bark for hotbeds in England. Bradley also provided the addresses of suppliers of pine plants and thermometers, thus laying the basis for the pineapple fashion that engulfed the country for the next one hundred and fifty years.[67] Following Bradley's account, Philip Miller, director of the Chelsea Physic Garden, built a pineapple stove there in 1723. Miller's experiments and his own visit to De la Court formed the basis for his entry on the subject in his *Gardeners Dictionary* (1731). This was to become the standard work of reference for the most prominent horticulturalists in the country.[68]

In the Netherlands things took a different course. De la Court published the results of his fifty years of gardening experience and pineapple cultivation anonymously in

Bijzondere aenmerkingen in 1737. In the introduction to this first edition he explained that he had written the book at the request of a prominent person who had emphatically asked him to pass on his notes and observations. De la Court had also received many requests for the designs of his glasshouses. Maybe this was just a literary convention of the time or had Boerhaave persuaded his old friend to publish his gardening experiences? Boerhaave bought Oud Poelgeest, a country estate outside Leiden, in 1724 to house the many plants and trees he had no space for in the Hortus and De la Court would have discussed the design and management of the estate with him and visited him there. Boerhaave fell ill in 1727, but continued to give private lessons to his medical students until his death in his town house Rapenburg 31 in September 1738. De la Court died one year later in September 1739, aged seventy-five. A French translation of *Bijzondere aenmerkingen* appeared in 1750, and in 1758, a German edition was printed in Leipzig. In 1763, a second Dutch edition was published in which De la Court was named as the author. His work was widely read and in demand throughout continental Europe for a quarter of a century after his death.

Now, apart from his correspondence, no traces remain of De la Court's pineapple triumphs. Unlike other pineapple pioneers and their gardeners, no memorial, plaque or painting commemorates his achievements. His town house on the Rapenburg now houses the International Tax Centre and the only plaque on the front of the house commemorates the Association for Women Students, which occupied the building from 1900 to 1972. De la Court's pleasure garden, the main location of his pineapple experiments, has been lost in the course of the expansion of the city of Leiden and is now the site of the University Medical Centre. De la Court commissioned paintings by several artists, including Weenix, Ruysch, Ruyven and Mortel, but the inventory he drew up of his possessions in 1731 contains no specific mention of paintings with pineapples. Jan Weenix (1640–1719) had previously painted the portrait of Agnes Blok celebrating her success with the pineapple, but it would seem that he only painted dead game for De la Court.[69] Jan Mortel (1652–1719) was the official artist of the Leiden Hortus and De la Court commissioned him to paint the 'flowers and fruit from East and West Indies, grown in my garden'.[70] One hopes he would have included a pineapple, but the identity and present location of this work are unknown. For now, the words of Bradley will again have to serve as a memorial to De la Court and De Vinck and their pineapple triumphs:

> Mr *Le Cour* of Leyden, a Gentleman of extraordinary Skill in the Affair of Gardening […] resolved to spare no Pains or Expense to bring this delicious fruit to perfection […] and at length had the Happiness of producing and ripening several hundred Fruit in a year. […] By this Gentleman's Curiosity and generous Disposition, the excellent Flavour and rich Qualities of this fruit became known to most of the great Personages in and about his nation.[71]

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[8] Ibid., p. 376.

[9] Scheurleer *et al.*, *Het Rapenburg*, VIa: p. 376.

[10] Ibid.

[11] De la Court's correspondence is held in the city archives of both Amsterdam and Leiden, the Amsterdam University Special Collections (AUSC), and the Archive of the Russian Academy of Sciences (ARAS), St Petersburg. All transcriptions and translations are the author's own. Jozien Driessen-van het Reve, *De kunstkamera van Peter de Grote* [The Kunstkamera of Peter the Great] (Hilversum: Verloren, 2006), gives essential references for the correspondence held in St Petersburg. Many thanks to Elena Annenkova, St Petersburg Archives, for friendly and helpful assistance.

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[24] See https://de.wikipedia.org/wiki/Schloss_Schwöbber (accessed 1 September 2018).

[25] Quoted in Driessen-van het Reve, *Kunstkamera*, p. 148.

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[31] Driessen-van het Reve, *Kunstkamera*, p. 193.

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[33] Letter from De la Court to Tsar Peter, 7 July 1721; ARAS, 1.3.7., 236–7.

[34] Ibid., 18 July 1721; ARAS, 1.3.7., 242–3.

[35] Ibid., November 1721; AUSC, OTM:hs, 134A (1–4).

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[69] Erik de Jong and Marleen Dominicus-van Soest, *Aardse Paradijzen: De tuin in de Nederlandse kunst, 15de tot 18de eeuw* [Earthly Paradises: The Garden in Dutch Art, 15th to 18th Century] (Ghent: Snoeck-Ducaju & Zoon, 1996), p. 193. Interestingly, a portrait of Peter the Great by Weenix hangs in the Menshikov Palace, St Petersburg.

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