Speech: Amanda Spielman's speech at the Wellington Festival of Education

Thank you for that kind introduction.

It is an absolute pleasure to be back at Wellington for what I think is my fifth time, and for my second as Chief Inspector. Speaking here last summer was one of the highlights of my first year. That speech was a chance to set out what I want to achieve as Chief Inspector, and just as important, it prompted an enormous amount in the way of feedback, engagement and ideas. If I had any doubts that there is a real enthusiasm and appetite in the sector to help shape Ofsted's future, speaking here dispelled them.

That is the way it should be. Ofsted isn't just about bringing in the great and the good to give the benefit of their wisdom to others. Doing that assumes that education is static and uniform. While it can be helpful to identify good practice, we also know that an approach which worked at a specific time in a specific school won't necessarily work well everywhere else.

For that reason, Ofsted absolutely should harness the expertise from the exceptional former leaders who make up our HMI workforce and at the same time make sure that we continue to learn from the sector. We need to keep a direct link with those still in the game, living school life day to day. That's why I'm so proud of our Ofsted Inspectors, who include more than 1,100 serving practitioners, who give up their time to carry out inspections. It's why I, and so many of my team, attend events like this. And it's why, despite the occasional frustrations and incivility of the Twitterverse, we put so much effort into our digital presence as well.

It was that collaboration and engagement that informed the <u>Ofsted strategy we</u> <u>launched last autumn</u>. Through the strategy, we have committed ourselves to being a force for improvement, through intelligent, responsible and focused inspection and regulation. I am determined to make sure that the strategy is one that doesn't just go dusty on a shelf, but actively informs everything we do.

I want to spend some time telling you about what we've been doing, under each of the strategy's 3 strands.

Ofsted's research

First, intelligent inspection: that is, everything we do should be valid, reliable and evidence based.

Many of you will have seen the <u>discussion paper we published after the</u> <u>international lesson observation seminar</u> we held last year. Lesson observation is an important part of our inspections and we wanted to look at the different approaches taken across the world. We won't be importing any

one of these models wholesale — because most are better suited to in-school observation as part of professional development — but they have provided some useful pointers for building on and refining our approach.

This work has been part of a broader revitalisation of Ofsted's research function under Professor Daniel Muijs. Our survey reports take a system-wide view of issues in schools and colleges. We know that these reports have real impact in informing policy and practice. So, we want to do more of them, on the issues that you've told us you care about. We will soon be publishing a full research plan for the next 2 years. But, just to give you a flavour, themes will include:

- science in primary schools, and foreign languages and art in secondary schools
- how pupils with SEND in mainstream schools can get better access to support
- teacher wellbeing and workload
- improving basic skills and knowledge in further education
- how we develop curriculum knowledge in initial teacher education
- what does it mean to a school to be part of a MAT

To make sure that inspector practice is as good as it can be, we have reshaped our training. It now has a real focus on developments in education thinking, research and practice; a new 'inspector curriculum' if you like.

We're also thinking about the role that inspection plays in the school leadership journey. The role of HMI has traditionally been the final chapter in a school leader's career. Now, with the growth of MATs and with other system leadership opportunities, that is often not the case. And I don't think that's a bad thing. I am attracted to the idea of school leaders coming to Ofsted for 4 or 5 years, and then returning to a more senior leadership position, taking with them everything they've learned through inspection.

Responsible inspection

The second strand of our strategy is responsible inspection: here our concern is to use the influence that we have over the education system with deliberation and with care.

I made clear, to my detriment I might add, at my select committee confirmation hearing that I didn't see the role of Chief Inspector as a crusader. And, despite being goaded occasionally by cartoons in the education press that portray me variously as a middle aged Hermione Grainger and as a jousting knight, I have stuck to my view that battle language is generally unhelpful.

There are of course times when I must use the Chief Inspector platform to draw attention to the areas where performance just isn't good enough. I chose to highlight in my <u>annual report</u> the plight of a group of schools that haven't been good at any point in the past decade. And I've taken up my predecessors' work, tackling unregistered illegal schools that leave pupils unsafe and sometimes at risk of radicalisation. And it's why I've been

absolutely clear that Ofsted as an inspectorate will back heads who take tough decisions on behalf of their pupils.

Alongside these relatively high profile interventions, we've been thinking hard about how we can make sure our inspection reports meet the needs of the diverse audiences who read them. We know that parents want us to incorporate more of their feedback, and to give a better feel for the distinctiveness of individual schools. We're also thinking, as I said a couple of weeks ago, about how we can make more space for engagement and interaction with classroom teachers in inspections.

Finally, we are doing more to make sure that our inspections are focused on the right things at the right level. So, for example, we have changed our approach to safeguarding, so that we are genuinely looking at whether a school has a safeguarding culture, rather than, dare I say it, looking at the height of playground fences. We're redesigning our approach to batched inspections of schools in multi-academy trusts, and of course we continue to engage with the department on how to address the assessment of MATs in a way that reflects how they actually operate.

I hope you have noticed that I have been robust in make sure that inspection does not become a catch-all for every worthy aspiration. That is absolutely not because I don't care about these issues, whether it is child obesity, or first aid training or whatever else. It is because, quite simply, the more we load into the inspection framework, the less capacity we have to inspect the quality of education and whether schools are properly preparing young people to succeed in modern Britain.

So, I really hope you can see that we are living that commitment to be a force for improvement in all we do. Nowhere is that more so than in our work to develop the new education inspection framework for 2019.

My starting point for that work is that we have a good education system. Almost 90% of schools are rated good or outstanding. I want the new framework to reflect that level of performance, allowing improvement support to be mainly directed at where it is most needed.

Inspection grading

That leads me on to the question of grading in general. I know that there are some who would like Ofsted to abandon grades altogether or to move to a pass/fail model. For me, that is a decision which must squarely be decided on the basis of whether the current grading system meets our mission of being a force for improvement. We will keep this under regular review. But we've concluded, on balance, that it is right to maintain the current grading system in the new framework and that is the basis of the discussion I'm having with ministers now as we engage with them on the new framework as a whole. Let me tell you why:

First, our teacher polling conducted by YouGov, indicates that the profession prefers a 4 point grading system to a pass/fail one. Many teachers have told us directly that a pass/fail would make the system even more high stakes — it

would de facto turn Requires Improvement into a 'fail'. That could risk deterring more teachers from working in challenging schools.

Secondly, parents tell us that they want to keep the current grading system. They like the clarity of 4 grades in helping them to make informed choices, and as a marker of how well their child's school is performing.

When it comes to the outstanding grade in particular, a number of school leaders and others from the sector have persuasively lobbied me, and others, to keep it. Their argument is that by losing outstanding we'd send the wrong message about aspiration and excellence in the system. And excellence really matters.

For these reasons I am not yet convinced of the case for change.

However, if we are to keep the grading system, I have to be sure that people can have confidence in grades. That is why I would like to see the removal of the outstanding exemption. I entirely understand why the exemption was brought in. My starting point is always that we should trust our best leaders and teachers to get on with the job. But there are now almost 300 schools that have gone a decade or more without inspection. And regardless of what the quality of education in these schools is today, there is no doubt that the long gap since inspection has undermined parental confidence. From our perspective, it also means our inspectors are getting to see fewer examples of outstanding practice. That makes it more difficult to award the grade to others. I have also heard from many teachers that it is the exemption itself that drives workload because of the understandable pressure to achieve and maintain it. I am pleased to say we are engaging constructively with the department on this issue and hope to say more in the future.

Education quality and data

A second area of framework development is one you've heard me talk about before. How do we make our inspections and reports complement, rather than reinforce, performance data?

It would be entirely perverse if there were no correlation between what we find about the quality of education on inspection and what the data says about a school's performance. They are, one hopes, inextricably related. But inspection asks a different question. We want to know how schools are achieving a good education, not just what the results are.

Those of you who are avid readers of our annual report — and at Wellington, if nowhere else, there are probably a few — will know we have compared our inspection judgements with Progress 8 outcomes. Despite what some say, that analysis does disprove the charge that 'data is all'. It shows the significant overlap between the Progress 8 scores of good, outstanding and requires improvement schools. In the new framework, we're thinking about how we can go further in dispelling this myth, demonstrating through our judgements that we are just as interested in why and what schools are teaching, along with the outcomes.

Behaviour in schools

I also want us to have a clearer focus on behaviour. We welcomed <u>Tom</u>

<u>Bennett's 2017 behaviour review</u> and are looking at how we can incorporate the recommendations relating to Ofsted in the new framework.

Pupil behaviour is the number one concern that parents raise with us: the first question they want answered in a report is 'what the behaviour is like?', 'is the school a safe environment?' and 'will they be protected from bullying?' We also know that behaviour is a primary driver of low morale in the profession. My position is that I want to see behaviour get the attention it deserves in our inspections, probably through a separate behaviour and attitudes judgement.

And when I talk about behaviour, I'm not just talking about serious disruption or bullying, important as these are. I want us to look just as hard at low-level disruption, which stops pupils learning and which can make the job of classroom management miserable.

I fundamentally disagree with those who say that taking a tough stance on behaviour is unfair to children. Quite the opposite, there is nothing kind about letting a few pupils spoil school for everyone else. That is why we expect heads to put in place strong policies that support their staff in tackling poor behaviour. And I think it's entirely appropriate to use sanctions, such as writing lines, 'community service' in the school grounds, such as picking up litter, and school detentions. And where they are part of a school's behaviour policy, they'll have our full support.

There's no doubt that technology has made the challenge of low-level disruption even worse, which by the way is why I also support recent calls to back heads who have decided that the way to improve behaviour is to ban mobile phones in their schools. I'm not the target audience, but nevertheless I am yet to be convinced of the educational benefits of all day access to 'Snapchat' and the like; and the place of mobile phones in the classroom seems to me dubious at best.

There are obvious limitations in what we're able to observe about behaviour in a single day. But we are looking to overcome them. As Tom suggests, there is scope for more dialogue with a wider range of staff — such as trainees and lunchtime supervisors — who are more likely to witness poor behaviour. We're establishing an expert advisory panel of heads and teachers who have taken a strong and successful approach to clamping down on poor behaviour to give us their advice. Alongside that, we fully support Tom's proposal of a national behaviour survey. Such a survey would allow pupils and staff to give us their honest, anonymous appraisal of behaviour in their schools before an inspection takes place. Finally, I want to address, once and for all, the cacophony of rumours we hear about badly behaved children being hidden, perhaps on a conveniently timed spontaneous school trip, during inspections. My research and analysis teams are currently designing a study to try and assess the extent of the problem and what we might do about it.

We will be airing more concrete proposals for consultation on the framework

shortly. In the interests of expectation management, I should point out that it will be an evolution not a revolution. Schools rightly expect stability, and policy makers need a degree of comparability to make informed intervention and policy decisions.

Nor do I expect Ofsted to be doubling its budget any time soon. But within the envelope I do have, I want to be sure we use our resources to maximum effect. I've spoken before about the amount of positive feedback I have had about the professional dialogue between inspectors and schools. Many heads find it to be invaluable CPD and a real driver of school improvement. So, a key priority is rebalancing inspector time, so that there's more time on site engaging with you and less time spent on the less visible activities.

Curriculum

That approach of dialogue and professional conversation is exactly how I see our curriculum work translating into practice. It's reassuring that since we announced our new focus on the curriculum I haven't heard any real disagreement with my thesis that it is an area that has been given too little attention for too long.

I suppose that shouldn't be a surprise. In my 17 years working in education, I've never met a teacher who went into the job to maximise Progress 8 scores. Teachers go into teaching because they want to inspire young people through 'the best that has been thought and said', and to give them the best possible chance in life. A focus on the curriculum will be a return to doing just that.

On the other hand, I know that whenever Ofsted announces a new approach, it triggers a degree of anxiety. So let me try and address those anxieties now:

First, we are not rushing into this. When I arrived as Chief Inspector, the default assumption was that I would want a new framework for 2018. I pushed that back to 2019, to give us the chance to do the research, and debate, and testing and training to get it right.

That extra year has let us carry out a thorough, research-based, curriculum review, before going anywhere near inspection practice. Last year, we conducted an overview study of the state of the curriculum in primary and secondary schools. We built on that work this spring, through workshops with schools who had really invested in curriculum development. We're now in the third stage of the project. This involves testing out really broad range of indicators, to see what they might tell us about the quality of a school's curriculum. Based on the results of that testing, through visits this summer, we will narrow down to a workable basket of curriculum indicators and shape the inspection practice and evidence collection methods that will sit alongside them.

Alongside our research work, we've already built more thinking about the curriculum into the inspector training that I talked about earlier. Alongside the general training, we've also piloted a new approach through a team of inspector reading champions.

This team was born out of concerns that there is a not insignificant group of schools, that are generally doing well, but where there are signs that early reading is not as well embedded as it could be. We know this has a disproportionately negative impact on disadvantaged children who might not get the same reading opportunities at home. To address this, we trained a group of inspectors to look specifically at whether schools are getting the teaching of systematic synthetic phonics right from the start, and whether this is well joined-up with subsequent literacy teaching. These inspectors have then been deployed on standard primary inspections. Our initial evaluation of this approach has been encouraging and it is a model we will pilot more broadly to assess other areas of education quality.

I also believe that a focus on curriculum will help to tackle excessive and unsustainable workload. For me, a curricular focus moves inspection more towards being a conversation about what actually happens in the day-to-day life of schools. As opposed to school leaders feeling that they must justify their actions with endless progress and performance metrics. To that end, inspecting the curriculum will help to undo the 'Pixlification' of education in recent years, and make irrelevant the dreaded Mocksted consultants. Those who are bold and ambitious for their pupils will be rewarded as a result.

That is why I am also confident that our work on the curriculum will not be susceptible to political pressure or the latest educational fads. Anyone who knows me, or who has seen my actions since becoming Chief Inspector, knows that I guard our independence vigorously.

I want to reassure you that there will not be an Ofsted-approved curriculum. Instead, we are interested in why you make the decisions, whether your decisions are translating into practice, and how you know they are having the intended effect. The starting point for many schools is the National Curriculum. For those using academy freedoms to go beyond it, we'll want to talk about what that looks like.

There will be practices we will want you to justify in that conversation. We will want, for example, to know why you've shortened Key Stage 3, what has been lost as well as what has been gained, and whether that trade-off is really justified for all children. We will want you to tell us why you're entering so many pupils for ECDL, or whatever new qualification has risen from the grave to replace it. Where there is settled evidence that a practice is bad, we won't hesitate to point that out, but none of this is the same as an ideological preference. I cannot stress enough, what we want is a dialogue to understand your thinking and how you're making sure that the curriculum gives every child a full, deep, rich education.

Areas of underperformance

And by that I do mean every child. I was struck last week by the debate about Ofsted inspection judgements and demographics — particularly the underperformance of some schools with high proportions of white working class children.

I want to be clear on the context of this analysis. Data was provided to a

member of the public in response to a specific query. It wasn't the result of an in depth investigation by Ofsted into the confounding effects of deprivation and ethnicity. Five years ago, we published a detailed report 'Unseen children' to dig in to the relationship between deprivation and outcomes. Clearly, this isn't something that can be adequately explained in a handful of charts. Sean Harford, will be publishing a blog about this with further detail shortly.

But that aside, we can't pretend that Ofsted judgements are not lower in certain areas — many of them with a high proportion of white working class children. But that shouldn't surprise us. Over the past few years, there has been a long overdue debate about white working class communities in England, and why they have fallen behind. That debate hasn't been limited to the UK and our coastal towns. It has also echoed throughout continental Europe and across the Atlantic. We are having to grapple with the unhappy fact that many local working class communities have felt the full brunt of economic dislocation in recent years, and, perhaps as a result, can lack the aspiration and drive seen in many migrant communities.

DfE's analysis plainly shows that schools in these areas face challenges in terms of their pupil intake, and that there are also real capacity issues. Schools in these areas struggle with teacher recruitment; there are fewer local academy sponsors; and there is less access to leadership support through national leaders of education and through teaching schools. Just this month, analysis from the OECD showed that England is one of a handful of countries that shows marked differences in teacher qualifications and experience between advantaged and disadvantaged schools. And, although there isn't time to go into it now, that OECD analysis does leave us with a difficult question: is the extra resource provided through the funding formula and through pupil premium in particular always spent on the things that make the most difference?

Our job is to report without fear or favour on the quality of education as we see it in these areas. That is explicitly not the same as saying that teachers in these areas are putting in any less effort or that the leadership is worse. There is no doubt that these schools have a harder job to do than others. And we should be just as interested in why some schools in more affluent areas aren't doing better. I have nothing but admiration for the teachers who make it their mission to tackle disadvantage. But the overall effectiveness of a school is not an effort grade.

However, that is not the same as the inspectorate being biased against certain schools. What our inspection outcomes do is to act as a call for action in these areas — a call for the right kind of support and intervention. Part of the reason there is this welcome debate about neglected communities, Brexit and Trump aside, is because organisations like Ofsted have highlighted how national policies can fail to reach these communities. To give just one example — our judgements have helped the DfE in its major programme of work to tackle underperformance, not least with the identification of their flagship Opportunity Areas. That wouldn't be possible if we were to pretend that everything is rosy when it is not.

My stance continues to be that our job is to provide an objective assessment of the quality of education. And I say 'continues' because this is a question that has been asked and answered before — as long ago as 1854. So to finish, I will repeat what my distinguished predecessor, Matthew Arnold HMI wrote in his general report for that year:

I constantly hear it urged that consideration for local difficulties and peculiar circumstances should induce him [the inspector] to withhold the notice in his report of shortcomings and failures, because these may have been caused by circumstances for which neither managers nor teacher were to blame, and because the statement of them may unfavourably affect a struggling school. There is some plausibility in this plea for silence; but it is based, I feel sure, on a misconception of what the peculiar province and duty of an inspector is.

If, for fear of discouraging voluntary efforts, inspectors are silent respecting the deficiencies of schools — respecting the feeble support given to this school, the imperfect accommodation in another, the faulty discipline or instruction in a third, and the failure of all alike to embrace the poorest class of children — if everything is represented as hopeful and prosperous, lest a manager should be disappointed or a subscriber estranged — then a delusion is prolonged in the public mind as to the real character of the present state of things, a delusion which it is the very object of a system of public inspection, exercised by agents of the government on behalf of the country at large, to dispel and remove. Inspection exists for the sake of finding out and reporting the truth, and for this above all.

Thank you.

News story: £10 billion Immingham and Grimsby ports can be gateways to prosperity

The Chief Secretary used a visit to Immingham Port to unveil new figures that showed more than £10.6 billion of goods were cleared through Grimsby and Immingham Ports in 2017, with goods entering and leaving Lincolnshire from all over the world.

The figures show that exports from Grimsby and Immingham ports to the Middle East and North Africa, and Latin America were at an all-time high.

Chief Secretary to the Treasury Elizabeth Truss said:

We've already seen exports from Grimsby and Immingham top £1 billion in the first three months of 2018.

And it's important that local businesses take advantage of the opportunities available to them and expand their exports. It's good for business, good for jobs and good for people working and living in the area.

It's impressive to hear that there are over 87,000 more businesses across all of Yorkshire and Humberside than in 2010.

I've heard from some local businesses today about their deep desire to trade with the rest of the world and, having also just returned from Latin America, I know they want to trade with us.

Latest figures show that:

- goods exports from Yorkshire and Humberside in 2017 were worth £16.8 billion, up on 2016 when exports valued £14.7 billion
- exports to Asia topped £2 billion, up from £1.6 billion the year before
- machinery and transport goods remain the biggest source of exports from the region

The government is delivering for Yorkshire and the Humber with the unemployment rate falling by over 5 per cent since 2010, more than any other region in the UK.

Employment in the area is now close to an all time high, with 2.59 million people in work.

News story: PM announces committee to

ensure fitting legacy for Windrush generation

Prime Minister Theresa May has today announced the establishment of a Windrush Commemoration Committee to consider how best to create a permanent, fitting tribute to the Windrush generation and their descendants.

Chaired by Liberal Democrat peer Baroness Floella Benjamin, the cross-party and community-led group will explore a range of options for commemorating the Windrush generation and honouring their legacy.

Options could include a museum exhibition, a naming ceremony or a Windrush statue in an area of the UK which has particular links to Caribbean history.

The committee will be a supported by a secretariat and funding from the Ministry of Housing, Communities and Local Government.

Today marks 70 years since Empire Windrush docked at Tilbury Docks carrying nearly 500 men and women who arrived in Britain from the Caribbean in response to labour shortages in the UK. The ship's image has since come to symbolise the UK's diversity — and the huge contribution the Windrush generation has made to all aspects of British life.

The Prime Minister's announcement follows the government's announcement of an annual Windrush Day earlier this week, and comes ahead of a day of Windrush celebrations including a National Service of Thanksgiving at Westminster Abbey this morning, and a Downing Street Windrush reception later today.

Prime Minister Theresa May said:

Many aspects of British society today would be simply unrecognisable without the contributions of the Windrush generation, from our health and transport services to our politics, businesses, literature and culture.

The work of the Windrush Commemoration Committee will ensure that the legacy of Caribbean migrants who arrived here 70 years ago to help rebuild our country and build their lives here, will never be forgotten.

Baroness Floella Benjamin, Chair of the Windrush Commemoration Committee, said:

It's an honour to have been asked by Prime Minister Theresa May to Chair the Windrush Commemoration Committee. This a significant step in recognising the contribution made to Britain by Caribbean people, and this Committee will make sure the work and sacrifices

of the Windrush pioneers will live on in the hearts and minds of future generations.

News story: Lord Duncan hails golden age of agricultural innovation at Royal Highland Show

UK Government Minister Lord Duncan will today [22 June 2018] attend a series of engagements at the Royal Highland Show as he reflects on his first year in office and the importance of scientific innovation in farming and agriculture to help grow this vital sector.

Speaking ahead of the show, Lord Duncan said:

"Agriculture is part of the lifeblood of the UK. It feeds us, fuels us, pumps in billions of pounds to the UK economy, and supports nearly 400,000 jobs in Scotland alone. Indeed 80% of Scotland's land mass is involved in agricultural production.

"It is also an area which is at the cutting edge of science and technology. Anyone who thinks that farming is tweedy and dusty would be astounded at the level of technology and scientific precision involved in modern day agriculture. "From robotics to genetics and feeding the world, the UK is a pioneer in technological innovation.

"We know that this work in innovation is key to increasing productivity and sustainability in agriculture and will allow the UK to continue to compete globally, meeting the growing demand for British food around the world.

"The UK Government is helping pioneering Scottish scientists lead the way in tackling problems such as pests and disease. The Department for International Development (DFID) is funding new cutting-edge research to allow farmers to grow crops that are more nutritious, more resistant to disease and better able to withstand severe floods or drought in Africa.

"This is being carried out by scientists at the University of Edinburgh, who are also leading ground-breaking work on devastating diseases which cause huge economic losses for African farmers.

"DFID is also contributing £4m funding to the Centre for Tropical Livestock Genetics and Health, which is based in both Edinburgh and Nairobi and progresses scientific advances in genetics and genomics that help smallholder dairy and poultry farmers in sub-Saharan Africa.

"In February, Business Secretary Greg Clark announced £90 million of new funding through the UK Government's modern Industrial Strategy, to support agricultural technology through Artificial Intelligence, robotics and earth observation to improve supply chain resilience in the agri-food sector. He highlighted how new technology is boosting farmers' earning power and making agri-businesses more productive and profitable than ever before.

"The funding, delivered as part of the new the Industrial Strategy Challenge Fund, will make it easier for food and agri-business to embrace technology and innovation that will be critical to meeting the increasing food demands of a growing population, fuel rural growth and create high-skilled jobs.

"While at the Royal Highland Show I'll be having a 'superfood breakfast' at the James Hutton Institute tent, and hearing about their ground breaking work in developing science to help feed the world — from right here in Scotland. They are key partners in the developing Tay Cities Deal — which will see the UK Government working in tandem with the Scottish Government and partners to develop projects which will impact the Tay Valley and the world.

"It's been one year since I became a UK Government minister, and in that time I have put championing innovation and agriculture at the heart of my priorities, travelling the length and breadth of Scotland to visit farmers, scientists and stakeholders, and I look forward to seeing even more of the exciting future that agriculture has at the Royal Highland Show."

Examples of UK Government work in supporting technological and scientific development in agriculture:

UK Aid: Super-Crops

- In January International Development Secretary Penny Mordaunt announced UK aid research, which is being carried out by international organisation, CGIAR, during a joint visit to the University of Edinburgh with Bill Gates into super-crops.
- UK scientists are leading new cutting-edge research to allow farmers to grow crops that are more nutritious, more resistant to disease and better able to withstand severe floods or drought in Africa, in addition to developing medicines to protect farmers' livestock from devastating disease.
- At the University of Edinburgh, scientists are also leading ground-breaking work on diseases which cause huge economic losses for African farmers, including Animal African Trypanosomiasis (AAT), a disease which kills over 3 million cattle a year, has been estimated to cost over \$4bn a year in total to African economies and can cause sleeping sickness in people.
- Ms Mordaunt also announced plans to develop the Centre for Tropical Livestock Genetics and Health, which is based in both Edinburgh and Nairobi.
- DFID will support CGIAR with funding of £90m over 3 years. CGIAR' was originally the acronym for the 'Consultative Group on International Agricultural Research'. In 2008, CGIAR redefined itself as a global partnership. To reflect this transformation and yet retain its roots, 'CGIAR'

was retained as a name. CGIAR is now a global research partnership for a food-secure future. The role of CGIAR is to deliver new agricultural technologies to support food and nutrition security and growth. Access to high-yielding, drought, heat and disease-resistant crops and livestock underpins the livelihoods and incomes of poor farmers and is essential to combat hunger and reduce the risks of crop failure.

- Technology developed by CGIAR was at the heart of the green revolution, tripling yields and lifting millions out of poverty and hunger. CGIAR-developed varieties of the 10 main food crops are now grown on over 200 million ha in developing countries.
- This new funding will support the development and deployment of: crop varieties that are climate resilient, more resistant to heat, drought and flooding; crop varieties that are more nutritious, with elevated levels of essential micronutrients; agronomic practices that boost resilience and reduce the use of costly inputs; new livestock varieties, diagnostics, vaccines and medicines, to reduce the risks faced by livestock farmers.
- The Centre for Tropical Livestock Genetics and Health (CTLGH) will receive £4 million through funding by DFID. It is a joint venture launched by three partners the Roslin Institute of the University of Edinburgh, Scotland's Rural College (SRUC) and CGIAR International Livestock Research Institute (ILRI), who have created a new, multidisciplinary Centre for Tropical Livestock Genetics and Health, with two main nodes, one in Edinburgh and one in Nairobi.
- The Centre will mobilise the most recent scientific advances in genetics and genomics that have led to substantial gains in livestock productivity in temperate zones and apply these to improve livestock productivity in tropical environments, for the benefit of smallholder dairy and poultry farmers in sub-Saharan Africa.

Agri-Tech

- Global demand for food is projected to grow 60% by 2050 we want Britain, with its scientific know-how and flair for innovation and quality, to be in a superb position to take advantage.
- Technological innovation is key to compete globally, unlocking the potential of farming by improving productivity and tackling problems such as pests and disease.
- UK Government investment will help build on the strengths of the UK's booming agri-food sector, which employs around 4 million people across the UK, and support it by:
 - bringing together businesses, farmers and academics to take forward priority research projects through new Challenge Platforms
 - supporting Innovation Accelerators which will be responsible for exploring the commercial potential of new tech ideas at pace

- demonstrating innovative agri-tech projects and how they will work in practice
- launching a new bilateral research programme that will identify and accelerate shared international priorities and help build export opportunities for pioneering agricultural-technologies and innovations overseas
- UK farmers, agri-tech companies and research centres are already leading the way in this area, using technology like data, robotics and AI to help create new technologies and herald innovative new approaches, including:
 - the Agricultural Engineering and Precision Innovation (Agri-EPI) Centre is bringing together leading organisations in the food supply chain to become a world-leading centre for excellence in engineering and precision agriculture
 - the mobile app and website CROPROTECT, developed by Rothamsted Research, is helping farmers to protect their crops with farmers and agronomists using it to exchange best practice and tips on smart management of pest, weed and diseases
 - Ordnance Survey have used their satellites to accurately map 232,342 miles of England's farmland hedges to create a new digital dataset and use planes with fixed state-of-the-art digital cameras to record thousands of individual photos that can map out farms and entire green landscapes

News story: Lord Duncan hails golden age of agricultural innovation at Royal Highland Show

UK Government Minister Lord Duncan will today [22 June 2018] attend a series of engagements at the Royal Highland Show as he reflects on his first year in office and the importance of scientific innovation in farming and agriculture to help grow this vital sector.

Speaking ahead of the show, Lord Duncan said:

"Agriculture is part of the lifeblood of the UK. It feeds us, fuels us, pumps

in billions of pounds to the UK economy, and supports nearly 400,000 jobs in Scotland alone. Indeed 80% of Scotland's land mass is involved in agricultural production.

"It is also an area which is at the cutting edge of science and technology. Anyone who thinks that farming is tweedy and dusty would be astounded at the level of technology and scientific precision involved in modern day agriculture. "From robotics to genetics and feeding the world, the UK is a pioneer in technological innovation.

"We know that this work in innovation is key to increasing productivity and sustainability in agriculture and will allow the UK to continue to compete globally, meeting the growing demand for British food around the world.

"The UK Government is helping pioneering Scottish scientists lead the way in tackling problems such as pests and disease. The Department for International Development (DFID) is funding new cutting-edge research to allow farmers to grow crops that are more nutritious, more resistant to disease and better able to withstand severe floods or drought in Africa.

"This is being carried out by scientists at the University of Edinburgh, who are also leading ground-breaking work on devastating diseases which cause huge economic losses for African farmers.

"DFID is also contributing £4m funding to the Centre for Tropical Livestock Genetics and Health, which is based in both Edinburgh and Nairobi and progresses scientific advances in genetics and genomics that help smallholder dairy and poultry farmers in sub-Saharan Africa.

"In February, Business Secretary Greg Clark announced £90 million of new funding through the UK Government's modern Industrial Strategy, to support agricultural technology through Artificial Intelligence, robotics and earth observation to improve supply chain resilience in the agri-food sector. He highlighted how new technology is boosting farmers' earning power and making agri-businesses more productive and profitable than ever before.

"The funding, delivered as part of the new the Industrial Strategy Challenge Fund, will make it easier for food and agri-business to embrace technology and innovation that will be critical to meeting the increasing food demands of a growing population, fuel rural growth and create high-skilled jobs.

"While at the Royal Highland Show I'll be having a 'superfood breakfast' at the James Hutton Institute tent, and hearing about their ground breaking work in developing science to help feed the world — from right here in Scotland. They are key partners in the developing Tay Cities Deal — which will see the UK Government working in tandem with the Scottish Government and partners to develop projects which will impact the Tay Valley and the world.

"It's been one year since I became a UK Government minister, and in that time I have put championing innovation and agriculture at the heart of my priorities, travelling the length and breadth of Scotland to visit farmers, scientists and stakeholders, and I look forward to seeing even more of the

exciting future that agriculture has at the Royal Highland Show."

Examples of UK Government work in supporting technological and scientific development in agriculture:

UK Aid: Super-Crops

- In January International Development Secretary Penny Mordaunt announced UK aid research, which is being carried out by international organisation, CGIAR, during a joint visit to the University of Edinburgh with Bill Gates into super-crops.
- UK scientists are leading new cutting-edge research to allow farmers to grow crops that are more nutritious, more resistant to disease and better able to withstand severe floods or drought in Africa, in addition to developing medicines to protect farmers' livestock from devastating disease.
- At the University of Edinburgh, scientists are also leading ground-breaking work on diseases which cause huge economic losses for African farmers, including Animal African Trypanosomiasis (AAT), a disease which kills over 3 million cattle a year, has been estimated to cost over \$4bn a year in total to African economies and can cause sleeping sickness in people.
- Ms Mordaunt also announced plans to develop the Centre for Tropical Livestock Genetics and Health, which is based in both Edinburgh and Nairobi.
- DFID will support CGIAR with funding of £90m over 3 years. CGIAR' was originally the acronym for the 'Consultative Group on International Agricultural Research'. In 2008, CGIAR redefined itself as a global partnership. To reflect this transformation and yet retain its roots, 'CGIAR' was retained as a name. CGIAR is now a global research partnership for a food-secure future. The role of CGIAR is to deliver new agricultural technologies to support food and nutrition security and growth. Access to high-yielding, drought, heat and disease-resistant crops and livestock underpins the livelihoods and incomes of poor farmers and is essential to combat hunger and reduce the risks of crop failure. Technology developed by CGIAR was at the heart of the green revolution, tripling yields and lifting millions out of poverty and hunger. CGIAR-developed varieties of the 10 main food crops are now grown on over 200 million ha in developing countries.
- This new funding will support the development and deployment of: crop varieties that are climate resilient, more resistant to heat, drought and flooding; crop varieties that are more nutritious, with elevated levels of essential micronutrients; agronomic practices that boost resilience and reduce the use of costly inputs; new livestock varieties, diagnostics, vaccines and medicines, to reduce the risks faced by livestock farmers.
- The Centre for Tropical Livestock Genetics and Health (CTLGH) will receive £4 million through funding by DFID. It is a joint venture launched by three partners the Roslin Institute of the University of Edinburgh, Scotland's Rural College (SRUC) and CGIAR International Livestock Research Institute (ILRI), who have created a new, multidisciplinary Centre for Tropical

Livestock Genetics and Health, with two main nodes, one in Edinburgh and one in Nairobi.

• The Centre will mobilise the most recent scientific advances in genetics and genomics that have led to substantial gains in livestock productivity in temperate zones and apply these to improve livestock productivity in tropical environments, for the benefit of smallholder dairy and poultry farmers in sub-Saharan Africa.

Agri-Tech

- Global demand for food is projected to grow 60% by 2050 we want Britain, with its scientific know-how and flair for innovation and quality, to be in a superb position to take advantage.
- Technological innovation is key to compete globally, unlocking the potential of farming by improving productivity and tackling problems such as pests and disease.
- UK Government investment will help build on the strengths of the UK's booming agri-food sector, which employs around 4 million people across the UK, and support it by:
 - bringing together businesses, farmers and academics to take forward priority research projects through new Challenge Platforms
 - supporting Innovation Accelerators which will be responsible for exploring the commercial potential of new tech ideas at pace
 - demonstrating innovative agri-tech projects and how they will work in practice
 - launching a new bilateral research programme that will identify and accelerate shared international priorities and help build export opportunities for pioneering agricultural-technologies and innovations overseas
- UK farmers, agri-tech companies and research centres are already leading the way in this area, using technology like data, robotics and AI to help create new technologies and herald innovative new approaches, including:
 - the Agricultural Engineering and Precision Innovation (Agri-EPI) Centre is bringing together leading organisations in the food supply chain to become a world-leading centre for excellence in engineering and precision agriculture
 - the mobile app and website CROPROTECT, developed by Rothamsted Research,

is helping farmers to protect their crops with farmers and agronomists using it to exchange best practice and tips on smart management of pest, weed and diseases

• Ordnance Survey have used their satellites to accurately map 232,342 miles of England's farmland hedges to create a new digital dataset and use planes with fixed state-of-the-art digital cameras to record thousands of individual photos that can map out farms and entire green landscapes