



The magazine of Cambridge Vets *treating all animals large and small*

September 2017

## MATING TIPS AND REMINDERS

**Cidrs / CueMates** - Cidrs can be used to synchronize a mob, or for non-cyclers. Cidrs give the best return on investment if cows are treated 10 days before PSM. This year it is a very positive cost-benefit for both owners and share-milkers; we can calculate this for your farm.

**Heat Detection** - Are your team trained and motivated? It is vital that oestrus is being actively monitored and identified accurately. Would a bit of in-farm competition for a meal out focus everyone's attention?

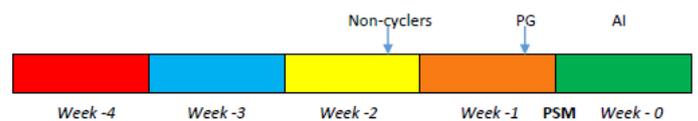
**BCS** -Body condition is the most important way of reducing non-cyclers. Scoring your herd ahead of time is critical to know where you're at. Aim to minimize BCS loss between calving and mating so it does not dip below 4.0. Heifers are most at risk and may benefit from being run in a separate mob and fed preferentially.

**Bulls** - Ensure bulls are well grown and healthy, sound of limb and foot, wormed, and both tested and vaccinated for BVD. Don't stint on bull numbers - 1 bull per 30 empty cows, and 1 bull per 20 heifer yearlings and double to allow 2 teams for rest/rotation and heifer mobs. Training bulls to stay in the paddock and off the yard is well worth the effort in reducing lameness in both bulls and cows.

**Metri-checking** A cow won't conceive if her uterus is infected or inflamed! Metri-checking the herd pre-mating is a simple and cost-effective way of minimizing the impact of metritis – any dirty cows can be treated straight away with a nil milk WH irrigation. Don't leave it too late – early intervention gives best results. Often it is best to target the known at-risk cows early (RFMs, hard calvings, twins, milk fever), or to do the early calvers first and then the later calvers in a second mob. From a cost-benefit perspective In a herd of 250 cows, approximately 25 will develop endometritis. Of these, it is likely that 5 will fail to conceive (cost of empties), and 20 cows will be 2-3 weeks late to calve, resulting in lost milk production as well. Irrigating minimizes these losses. Cows should be checked 2-4 weeks after calving and one month before mating.



**Tail paint** - Getting an idea of pre-mating heats will either reassure you all is on track, or give you fair warning if it is not. Aim to get tailpaint on the herd a month before the planned Start of Mating.



**Synchrony** - The Why Wait Program can be used to condense the first round of mating; we simply PG the yellow tail paint cows on day 0 (PSM) to bring them on a week early. Orange cows can be PG'd on day 7. PG shots can also be used for heifers; 2 shots given 10-14 days apart will bring them on in 2-4 days. They will need tail painting and monitoring though. Alternatively they can be cidr'd and fixed time AI'd all on the same day.



**White line disease**, footrot and sole penetration/ulcers all have different causes, although there are common elements. White line disease is the most common disease of the foot in NZ, and occurs when twisting on concrete separates the sole from the wall. Stones and dirt can then penetrate the weak point and introduce an infection. These can often be trimmed out, but may need antibiotics if the infection is going deeper to the joint. Ensure the herd has enough space in the yard and are not being rushed up the race. Let them come up at their own pace – no dogs! Cows need enough time and space to place their feet carefully, and to move past one another without twisting and turning on the yard.

## LAMENESS

With another wet spring, we can anticipate more lame cows – peaking over mating, which is the worst possible timing!

Because lameness has such an impact on reproductive performance, it is critical to:

- Identify lame cows early
- Treat lame cows promptly
- Work out the risk factors and address them to reduce lameness

### **Bovine Digital Dermatitis**

is a disease common throughout the world, and we are beginning to see it in NZ. A recent study in Taranaki (NZVJ 65,5) discovered that 64% of surveyed farms had the disease, but although it was widespread, on average only 1-2% of cows within a herd had it. Presents as raw patch between the heel bulbs, or stinky WLD. This disease is a major problem overseas, so we need to keep an eye out for it!

### **DISLOCATED HIP**

A dislocated hip is not an uncommon problem over mating, when cows are mounting each other on slippery concrete yards. They may well be seen doing the splits, otherwise you may just suddenly notice them lame on a back leg, or even down and unable to rise. The thing to look out for is a back leg that sticks out to the side with the toes pointing out. It may look shorter than the other side, with a swelling over the rump. It is critical that we get called out asap, because there is a 24 hour window when it is possible to get the hip back in. Beyond that day, it gets increasingly unlikely to be fixable. Because she cannot be trucked like that, options are limited. If things go well, we can sedate the cow, pull the leg and manipulate it back into the socket with a satisfying bang! She may well get straight up and wander off to eat. However, it is not always possible to get the hip back into its socket. Sometimes there may be a fracture there, or the socket may be destabilized. There is always a chance of it popping out again as the joint capsule and ligaments will have been ruptured. Sometimes the femur ends up in weird places around the [pelvis or through muscle! We have done surgical corrections on some young cows when we could not manipulate the hip back in. This can be very successful, but again not always. Aftercare includes pain relief and keeping her away from slippery surfaces and bulling cows!

The take home point is – call us asap for the best result.

**Footrot** is an infection between the toes, generally caused by mud and stones squidding up between.

How is the condition of the gateways and race?



**Sole penetration** is when stones are stood on square and poke through the sole to cause an infection and separation of the sole. Again, give cows space and time when moving them to place their feet carefully. How stony are the tracks? If you want to learn how to trim cows' feet, or staff training on cow flow, or help to identify and address the causes of lameness, please give the clinic a call – we can help!

# MYCOPLASMA

Last month's discovery of *Mycoplasma bovis* on farms in the South Island was a bit of a wake-up call! It is a common disease widespread around the world, but it is the first time it has been found in NZ, although bulk milk samples were tested in 2009, with none found. MPI are still investigating how far it may have spread, and how it may have entered in the first place, but it underlines the importance of biosecurity for both the country and each individual farm.

- Have you got buckets of disinfectant and brushes for visitors onto your property?
- Do you change clothes after visiting another farm?
- Do you isolate all bought-in animals for a period to monitor them for any signs of ill health?
- Do you ensure all bought-in animals are tested for BVD, and vaccinated for BVD and leptospirosis?

So what is Mycoplasma anyway? It is a bacterium which has no cell wall, and is consequently quite hard to grow, and refractory to treatment in the animal with antibiotics which target the cell wall. Semen from AI companies, however, is treated with antibiotics which can kill it. There are no effective vaccines. It is spread by cow-to-cow transmission, but does not have the contagious quality of something like FMD which can spread for miles via the wind. It cannot be spread to people.

**Signs to look out for are often chronic, debilitating and unresponsive to antibiotics.**

**PLEASE CALL US IF YOU SEE 2 OR MORE OF THESE:**

- Mastitis that does not respond to treatment
- Arthritis in cows / calves
- Pneumonia in calves
- Otitis media in calves (inner ear infection)
- Abortions / premature calves

**Other consequences of Mycoplasma could include:**

- Calf mortality
- Weight loss in calves
- Milk drop



## BIOSECURITY

The Mycoplasma incident has highlighted the importance of biosecurity on farms. This is not the only disease you want to avoid bringing onto your property and into your herd! Other examples are BVD, Theileria, and drench resistant worms.

**Strategies to minimize these risks include:**

- ♦ Provide a bucket of clean water and disinfectant and a brush for all visitors to clean their boots and gear. Check cleanliness for all visitors, including equipment.
- ♦ Have a different set of boots and overalls for your farm/ other properties.
- ♦ Test and vaccinate all new stock for leptospirosis and BVD (including bulls).
- ♦ If stock are grazing away and mixing with other stock, ensure all stock are vaccinated, and monitor for health.
- ♦ Isolate and monitor all new stock for a week.
- ♦ Quarantine drench

**Professor Jenny Weston of Massey Vet School also recommends:**

- Movements should be minimised and preferably minimise the number of sources of livestock. Record all movements (even between your own properties with multiple farms and grazing blocks) through the National Animal Identification and Tracing (NAIT) programme.
- Ideally, look to coordinate grazing rotations with the neighbours so that your animals aren't "over the fence" from the neighbour's animals.



**YOU CAN'T BEAT A CLASSIC**

**WITH DECADES OF RESULTS - TIME DOES PROVE EVERYTHING**

With decades of experience in delivering New Zealand's hardest working and most trusted drenches, we know what works - just like you. As well as our tried and trusted range, we're proud to bring you another classic - this oilskin vest. It's like your old oilskin vest, but with a brand new look. Get yours with qualifying products.

**OILSKIN VEST QUALIFYING PRODUCTS:** ECLIPSE Pour-on 2.5L, ECLIPSE E Injection 4x 500mL, EPRINOX Pour-on 5L, EXODUS Pour-on 5L, GENESIS Injection 4x 500mL, GENESIS Injection 2L, GENESIS Pour-on 2.5L, GENESIS Ultra Pour-on 5L, HOMERIX Plus Injection 4x 500mL, MATRIXX 2.5L, MATRIXX 5L, 10L, 20L, SWITCHER Pour-on 2.5L, CALF PACK (KAREER'S C 5L + ECLIPSE Pour-on 2.5L + 30mL gels w/ 2 nozzles), IVER MATRIXX CALF PACK (IVER MATRIXX Calf 5L + ECLIPSE Pour-on 2.5L + 30mL gels w/ 2 nozzles).

**OILSKIN JACKET QUALIFYING PRODUCTS:** ECLIPSE Pour-on 2.5L, ECLIPSE E Injection 4x 500mL, PROMOTION RUNS FROM 01/08/17 - 31/10/17

Boehringer Ingelheim

## AG DAY CALF CLUB HEALTH NOTES

The best treatment is always prevention. Keeping a calf well fed, dry, warm and clean will minimise the chance of them getting sick. Your calf shed should tick these boxes! However, here are some health tips:

**Calf scours** (diarrhoea) is the most common disease. It can be very serious as calves are only babies still and cannot cope with being ill and dehydrated. In addition to losing fluid in the diarrhoea, they also lose electrolytes which are needed for the muscles to work. If your calf has diarrhoea, it will need more fluids (more feeds) and electrolytes. Often they need to be cut down to 1 feed (2 litres) of milk and given 2 or 3 feeds of electrolytes in addition for a day or more. To reduce the risk of nutritional scours, make sure any change in feed (eg going from cow's milk to milk powder) is done gradually; mix the 2 together for the first few feeds. The amount of powder and volume recommended depends on age, weight and can generally be found on the bag. Some scours are caused by infections which may need extra medicines. There are several different causes and they need different treatment. If your calf is slow and sad, or its poos are very watery, please contact your vet.



**Disbudding** Calves with horns may need these removing for safety. It is easiest to do between two and six weeks old. For welfare reasons I recommend the use of pain relief (local anaesthetic) and a hot disbudding iron. We can do this under sedation for an easy and pain-free option!

**Navel Ill** this is when bacteria get up the tummy button (navel or umbilicus) and cause it to be hot and swollen. This can make the calf very sick, and you will need to contact your vet for medicines.

**Joint ill** can be a result of bacteria going up the navel and round the body in the blood. The calf will have sore or swollen and hot joints (knees) and may be quite lame. Again, contact your vet promptly for treatment options.

**Lice** not very common, but these little insects are visible to the eye, and often cause rubbing around the neck as they itch.

**Vaccinations** Calves should get a 5in 1 vaccine to prevent diseases such as tetanus. These clostridial infections are common and fatal. Lepto is also recommended to reduce the chance of people catching this horrible disease, as well as for calf health. The bacteria hide in the kidney and can be spread in the calf's wee. Both vaccines require 2 injections a month apart.

**Feeding** To help develop the rumen (one of their four stomach compartments) calves should have access to calf meal and fibre (eg hay) from an early age. Water should be freely available, and powders such as zeolite may also help with gut health.

**Worms** Once calves are grazing grass they may eat worm eggs in the pasture. These then grow into worms in their tummy which can make them grow poorly, have a pot belly, and diarrhoea. There are many worm drenches available from your vet or rural supplier who should be able to advise you regarding best choice.



With decades of local research, development and international learning behind all of our products, when it comes to finding the right treatment for your stock we can offer you the perfect match. Like these high tech Point6 socks, made from another Kiwi success story - merino wool.

Tough and comfortable, perfect for long days on the land, and a great addition to any sock drawer. Get yours with qualifying purchases while stocks last.

QUALITY PRODUCTS FOR FARMERS TODAY  
 ANKLETS 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064, 1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234, 1236, 1238, 1240, 1242, 1244, 1246, 1248, 1250, 1252, 1254, 1256, 1258, 1260, 1262, 1264, 1266, 1268, 1270, 1272, 1274, 1276, 1278, 1280, 1282, 1284, 1286, 1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318, 1320, 1322, 1324, 1326, 1328, 1330, 1332, 1334, 1336, 1338, 1340, 1342, 1344, 1346, 1348, 1350, 1352, 1354, 1356, 1358, 1360, 1362, 1364, 1366, 1368, 1370, 1372, 1374, 1376, 1378, 1380, 1382, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1404, 1406, 1408, 1410, 1412, 1414, 1416, 1418, 1420, 1422, 1424, 1426, 1428, 1430, 1432, 1434, 1436, 1438, 1440, 1442, 1444, 1446, 1448, 1450, 1452, 1454, 1456, 1458, 1460, 1462, 1464, 1466, 1468, 1470, 1472, 1474, 1476, 1478, 1480, 1482, 1484, 1486, 1488, 1490, 1492, 1494, 1496, 1498, 1500, 1502, 1504, 1506, 1508, 1510, 1512, 1514, 1516, 1518, 1520, 1522, 1524, 1526, 1528, 1530, 1532, 1534, 1536, 1538, 1540, 1542, 1544, 1546, 1548, 1550, 1552, 1554, 1556, 1558, 1560, 1562, 1564, 1566, 1568, 1570, 1572, 1574, 1576, 1578, 1580, 1582, 1584, 1586, 1588, 1590, 1592, 1594, 1596, 1598, 1600, 1602, 1604, 1606, 1608, 1610, 1612, 1614, 1616, 1618, 1620, 1622, 1624, 1626, 1628, 1630, 1632, 1634, 1636, 1638, 1640, 1642, 1644, 1646, 1648, 1650, 1652, 1654, 1656, 1658, 1660, 1662, 1664, 1666, 1668, 1670, 1672, 1674, 1676, 1678, 1680, 1682, 1684, 1686, 1688, 1690, 1692, 1694, 1696, 1698, 1700, 1702, 1704, 1706, 1708, 1710, 1712, 1714, 1716, 1718, 1720, 1722, 1724, 1726, 1728, 1730, 1732, 1734, 1736, 1738, 1740, 1742, 1744, 1746, 1748, 1750, 1752, 1754, 1756, 1758, 1760, 1762, 1764, 1766, 1768, 1770, 1772, 1774, 1776, 1778, 1780, 1782, 1784, 1786, 1788, 1790, 1792, 1794, 1796, 1798, 1800, 1802, 1804, 1806, 1808, 1810, 1812, 1814, 1816, 1818, 1820, 1822, 1824, 1826, 1828, 1830, 1832, 1834, 1836, 1838, 1840, 1842, 1844, 1846, 1848, 1850, 1852, 1854, 1856, 1858, 1860, 1862, 1864, 1866, 1868, 1870, 1872, 1874, 1876, 1878, 1880, 1882, 1884, 1886, 1888, 1890, 1892, 1894, 1896, 1898, 1900, 1902, 1904, 1906, 1908, 1910, 1912, 1914, 1916, 1918, 1920, 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, 1940, 1942, 1944, 1946, 1948, 1950, 1952, 1954, 1956, 1958, 1960, 1962, 1964, 1966, 1968, 1970, 1972, 1974, 1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2024, 2026, 2028, 2030, 2032, 2034, 2036, 2038, 2040, 2042, 2044, 2046, 2048, 2050, 2052, 2054, 2056, 2058, 2060, 2062, 2064, 2066, 2068, 2070, 2072, 2074, 2076, 2078, 2080, 2082, 2084, 2086, 2088, 2090, 2092, 2094, 2096, 2098, 2100, 2102, 2104, 2106, 2108, 2110, 2112, 2114, 2116, 2118, 2120, 2122, 2124, 2126, 2128, 2130, 2132, 2134, 2136, 2138, 2140, 2142, 2144, 2146, 2148, 2150, 2152, 2154, 2156, 2158, 2160, 2162, 2164, 2166, 2168, 2170, 2172, 2174, 2176, 2178, 2180, 2182, 2184, 2186, 2188, 2190, 2192, 2194, 2196, 2198, 2200, 2202, 2204, 2206, 2208, 2210, 2212, 2214, 2216, 2218, 2220, 2222, 2224, 2226, 2228, 2230, 2232, 2234, 2236, 2238, 2240, 2242, 2244, 2246, 2248, 2250, 2252, 2254, 2256, 2258, 2260, 2262, 2264, 2266, 2268, 2270, 2272, 2274, 2276, 2278, 2280, 2282, 2284, 2286, 2288, 2290, 2292, 2294, 2296, 2298, 2300, 2302, 2304, 2306, 2308, 2310, 2312, 2314, 2316, 2318, 2320, 2322, 2324, 2326, 2328, 2330, 2332, 2334, 2336, 2338, 2340, 2342, 2344, 2346, 2348, 2350, 2352, 2354, 2356, 2358, 2360, 2362, 2364, 2366, 2368, 2370, 2372, 2374, 2376, 2378, 2380, 2382, 2384, 2386, 2388, 2390, 2392, 2394, 2396, 2398, 2400, 2402, 2404, 2406, 2408, 2410, 2412, 2414, 2416, 2418, 2420, 2422, 2424, 2426, 2428, 2430, 2432, 2434, 2436, 2438, 2440, 2442, 2444, 2446, 2448, 2450, 2452, 2454, 2456, 2458, 2460, 2462, 2464, 2466, 2468, 2470, 2472, 2474, 2476, 2478, 2480, 2482, 2484, 2486, 2488, 2490, 2492, 2494, 2496, 2498, 2500, 2502, 2504, 2506, 2508, 2510, 2512, 2514, 2516, 2518, 2520, 2522, 2524, 2526, 2528, 2530, 2532, 2534, 2536, 2538, 2540, 2542, 2544, 2546, 2548, 2550, 2552, 2554, 2556, 2558, 2560, 2562, 2564, 2566, 2568, 2570, 2572, 2574, 2576, 2578, 2580, 2582, 2584, 2586, 2588, 2590, 2592, 2594, 2596, 2598, 2600, 2602, 2604, 2606, 2608, 2610, 2612, 2614, 2616, 2618, 2620, 2622, 2624, 2626, 2628, 2630, 2632, 2634, 2636, 2638, 2640, 2642, 2644, 2646, 2648, 2650, 2652, 2654, 2656, 2658, 2660, 2662, 2664, 2666, 2668, 2670, 2672, 2674, 2676, 2678, 2680, 2682, 2684, 2686, 2688, 2690, 2692, 2694, 2696, 2698, 2700, 2702, 2704, 2706, 2708, 2710, 2712, 2714, 2716, 2718, 2720, 2722, 2724, 2726, 2728, 2730, 2732, 2734, 2736, 2738, 2740, 2742, 2744, 2746, 2748, 2750, 2752, 2754, 2756, 2758, 2760, 2762, 2764, 2766, 2768, 2770, 2772, 2774, 2776, 2778, 2780, 2782, 2784, 2786, 2788, 2790, 2792, 2794, 2796, 2798, 2800, 2802, 2804, 2806, 2808, 2810, 2812, 2814, 2816, 2818, 2820, 2822, 2824, 2826, 2828, 2830, 2832, 2834, 2836, 2838, 2840, 2842, 2844, 2846, 2848, 2850, 2852, 2854, 2856, 2858, 2860, 2862, 2864, 2866, 2868, 2870, 2872, 2874, 2876, 2878, 2880, 2882, 2884, 2886, 2888, 2890, 2892, 2894, 2896, 2898, 2900, 2902, 2904, 2906, 2908, 2910, 2912, 2914, 2916, 2918, 2920, 2922, 2924, 2926, 2928, 2930, 2932, 2934, 2936, 2938, 2940, 2942, 2944, 2946, 2948, 2950, 2952, 2954, 2956, 2958, 2960, 2962, 2964, 2966, 2968, 2970, 2972, 2974, 2976, 2978, 2980, 2982, 2984, 2986, 2988, 2990, 2992, 2994, 2996, 2998, 3000, 3002, 3004, 3006, 3008, 3010, 3012, 3014, 3016, 3018, 3020, 3022, 3024, 3026, 3028, 3030, 3032, 3034, 3036, 3038, 3040, 3042, 3044, 3046, 3048, 3050, 3052, 3054, 3056, 3058, 3060, 3062, 3064, 3066, 3068, 3070, 3072, 3074, 3076, 3078, 3080, 3082, 3084, 3086, 3088, 3090, 3092, 3094, 3096, 3098, 3100, 3102, 3104, 3106, 3108, 3110, 3112, 3114, 3116, 3118, 3120, 3122, 3124, 3126, 3128, 3130, 3132, 3134, 3136, 3138, 3140, 3142, 3144, 3146, 3148, 3150, 3152, 3154, 3156, 3158, 3160, 3162, 3164, 3166, 3168, 3170, 3172, 3174, 3176, 3178, 3180, 3182, 3184, 3186, 3188, 3190, 3192, 3194, 3196, 3198, 3200, 3202, 3204, 3206, 3208, 3210, 3212, 3214, 3216, 3218, 3220, 3222, 3224, 3226, 3228, 3230, 3232, 3234, 3236, 3238, 3240, 3242, 3244, 3246, 3248, 3250, 3252, 3254, 3256, 3258, 3260, 3262, 3264, 3266, 3268, 3270, 3272, 3274, 3276, 3278, 3280, 3282, 3284, 3286, 3288, 3290, 3292, 3294, 3296, 3298, 3300, 3302, 3304, 3306, 3308, 3310, 3312, 3314, 3316, 3318, 3320, 3322, 3324, 3326, 3328, 3330, 3332, 3334, 3336, 3338, 3340, 3342, 3344, 3346, 3348, 3350, 3352, 3354, 3356, 3358, 3360, 3362, 3364, 3366, 3368, 3370, 3372, 3374, 3376, 3378, 3380, 3382, 3384, 3386, 3388, 3390, 3392, 3394, 3396, 3398, 3400, 3402, 3404, 3406, 3408, 3410, 3412, 3414, 3416, 3418, 3420, 3422, 3424, 3426, 3428, 3430, 3432, 3434, 3436, 3438, 3440, 3442, 3444, 3446, 3448, 3450, 3452, 3454, 3456, 3458, 3460, 3462, 3464, 3466, 3468, 3470, 3472, 3474, 3476, 3478, 3480, 3482, 3484, 3486, 3488, 3490, 3492, 3494, 3496, 3498, 3500, 3502, 3504, 3506, 3508, 3510, 3512, 3514, 3516, 3518, 3520, 3522, 3524, 3526, 3528, 3530, 3532, 3534, 3536, 3538, 3540, 3542, 3544, 3546, 3548, 3550, 3552, 3554, 3556, 3558, 3560, 3562, 3564, 3566, 3568, 3570, 3572, 3574, 3576, 3578, 3580, 3582, 3584, 3586, 3588, 3590, 3592, 3594, 3596, 3598, 3600, 3602, 3604, 3606, 3608, 3610, 3612, 3614, 3616, 3618, 3620, 3622, 3624, 3626, 3628, 3630, 3632, 3634, 3636, 3638, 3640, 3642, 3644, 3646, 3648, 3650, 3652, 3654, 3656, 3658, 3660, 3662, 3664, 3666, 3668, 3670, 3672, 3674, 3676, 3678, 3680, 3682, 3684, 3686, 3688, 3690, 3692, 3694, 3696, 3698, 3700, 3702, 3704, 3706, 3708, 3710, 3712, 3714, 3716, 3718, 3720, 3722, 3724, 3726, 3728, 3730, 3732, 3734, 3736, 3738, 3740, 3742, 3744, 3746, 3748, 3750, 3752, 3754, 3756, 3758, 3760, 3762, 3764, 3766, 3768, 3770, 3772, 3774, 3776, 3778, 3780, 3782, 3784, 3786, 3788, 3790, 3792, 3794, 3796, 3798, 3800, 3802, 3804, 3806, 3808, 3810, 3812, 3814, 3816, 3818, 3820, 3822, 3824, 3826, 3828, 3830, 3832, 3834, 3836, 3838, 3840, 3842, 3844, 3846, 38